



**A G E N D A**

**MIDDLE FORK PROJECT  
FINANCE AUTHORITY**

**Thursday, January 16, 2020  
10:00 a.m., Regular Meeting**

American River Room  
Placer County Water Agency  
144 Ferguson Road  
Auburn, California

Members of the Board of Directors:

***PLACER COUNTY WATER AGENCY***

Primo Santini, District 2, Vice-Chair  
Mike Lee, District 3

***COUNTY OF PLACER***

Robert Weygandt, District 2  
Jim Holmes, District 3, Chair

A. Call to Order

1. Roll call
2. Pledge of Allegiance
3. Election of Chair and Vice-Chair for 2020

B. Public Comment: This is the time for any member of the public to address the Board of Directors on any matter not on the agenda that is within the subject matter jurisdiction of the Agency. Members of the public are requested to come to the podium and use the microphone.

C. Agenda Review and Changes

D. Consent Calendar: All items listed under the consent calendar are considered to be routine and may be approved by one motion.

Pg. 1 1. Consider approving October 10 and 11, 2019, minutes.

Pg. 9 2. Receive and file Check Register 20-01 expenses disbursed.

Pg. 11 3. Receive and file Treasurer's Investment Reports for months ended September 30, October 31, November 30, and December 31, 2019.

- Pg. 39 4. Receive and file PCWA's Energy Risk Management Policy.
- Pg. 63 5. Consider adopting **Resolution 20-\_\_ adopting the Authority's Investment Policy.**

E. General Items

- Pg. 83 1. Receive Energy Marketing update report.
- Pg. 89 2. Receive 2019 Budget and Preliminary schedules for the fiscal year-end December 31, 2019.
- Pg. 103 3. Consider approving \$140,000 budget amendment from the Middle Fork Project Finance Authority (MFPFA) Operating Reserve for purchase of a utility work vessel.
- Pg. 105 4. Consider approving a budget amendment for the Project Wide Communications Upgrade Project in the amount of \$350,000 from the MFPFA Project Adjustment Fund.
- Pg. 107 5. Receive report regarding emergency Middle Fork penstock coupling repair.
- Pg. 113 6. Consider the following for debt refinancing:
- a. **Adopt Resolution 20-\_\_ authorizing issuance and sale of refunding bonds, authorizing the execution and delivery of an indenture, a bond purchase contract, and a continuing disclosure certificate; approving the form of an official statement and the related distributions thereof and approving other actions related thereto.**
  - b. Consider approving agreement for tax counsel services related to the refunding of the 2006 Revenue Bond with Orrick, Herrington & Sutcliffe LLP in an amount not to exceed \$45,000, payable at closing.
7. Receive report regarding Federal Energy Regulatory Commission relicense of Middle Fork American River Project.
- Pg. 381 8. Receive report regarding French Meadows Forest Restoration Project 2019 Operations.

F. Reports by Directors: In accordance with Government Code § 54954.2(a), Directors may make brief announcements or brief reports on their own activities. They may ask questions for clarification, make a referral to staff or take action to have staff place a matter of business on a future agenda.

G. Reports by Legal Counsel

H. Reports by Secretary

I. Reports by Executive Director

J. Adjournment: Adjourn to February 20, 2020, 11:00 a.m., Regular meeting.

**THE NEXT RESOLUTION NUMBER IS 20-01.**

The administrative affairs of the MFP Finance Authority are managed by PCWA. Inquiries regarding the MFP Finance Authority should be directed to the PCWA General Manager's office (530) 823-4860 for reply.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact PCWA at (530) 823-4860. Notification by Friday noon preceding the meeting will enable the Authority to make reasonable arrangements to ensure accessibility to this meeting. [28 CFR 35.102-35.104 ADA Title II]

In accordance with Government Code Sec. 54954.2(a) this notice and agenda were posted in the Agency's outdoor bulletin board at the Placer County Water Agency Business Center at 144 Ferguson Road, Auburn, California, on or before January 10, 2020.

Any writing that is a public record under the Public Records Act that relates to an agenda item for an open session of the Board meeting that is distributed less than 72 hours prior to the meeting will be made available for public inspection at the time the writing is distributed to any Board members. Also, any such writing will be available for public inspection at the Agency's office located at 144 Ferguson Road, Auburn, California, during normal business hours.

**Tentative Schedule of Upcoming Middle Fork Project Finance Authority Board Meeting**

- **Thursday, February 20, 2020, 11:00 a.m.** – Regular Board of Directors' meeting at Placer County Water Agency Business Center, 144 Ferguson Road, Auburn, California.
- **Thursday, April 16, 2020, 10:00 a.m.** – Regular Board of Directors' meeting at Placer County Water Agency Business Center, 144 Ferguson Road, Auburn, California.



MIDDLE FORK PROJECT  
FINANCE AUTHORITY

## MINUTES

### MIDDLE FORK PROJECT FINANCE AUTHORITY

#### Special Meeting

Thursday, October 10, 2019, 8:30 a.m.

and

Friday, October 11, 2019, 8:00 a.m.

Board Members Present: Chairman Jim Holmes, Vice-Chair Primo Santini, Robert Weygandt, and Graham “Gray” Allen, alternate for Mike Lee

Board Members Absent: Mike Lee

Agency Personnel Present: Einar Maisch, Executive Director; Andy Fecko, Director of Strategic Affairs; Jannet Hendrix, Deputy Director of Financial Services; Shelley Langan, Human Resource Manager; Jay L’Estrange, Director of Power Generation; Scott Morris, General Counsel; Joseph Parker, Director of Financial Services; Darin Reintjes, Energy Marketing Manager; Ben Ransom, Senior Environmental Scientist; Cheri Sprunck, Clerk; Katie Swanberg, Energy Marketing Manager; Michael Willihnganz, Director of Administrative Services; Lori Young, Deputy Clerk

County Personnel Present: Todd Leopold, County Executive Officer and Middle Fork Project (MFP) Finance Authority Secretary; Jaren Deck, Program Manager; Dave Defanti, Deputy County Executive Officer; Shanti Landon, District 2 Director for Supervisor Robert Weygandt; Beverly Roberts, District 3 Director for Supervisor Jim Holmes; Brett Storey, Senior Management Analyst

A. Call to Order; 8:30 a.m. at Placer County Water Agency

1. Roll call

Chairman Holmes called the special meeting of the MFP Finance Authority Board of Directors to order at 8:01 a.m. in the American River Room, Placer County Water Agency Business Center, 144 Ferguson Road, Auburn, California.

The Clerk conducted roll call.

2. Pledge of Allegiance

Led by Chair Holmes.

B. Public Comment:

The Chair invited the public to comment. No comments received.

C. Agenda Review and Changes

There were no changes.

D. Consent Calendar:

1. Consider approving July 18, 2019, minutes.
2. Receive and file Check Register 19-04 expenses disbursed.
3. Receive and file Treasurer's Investment Reports for months ended July 31 and August 31, 2019.

Motion by Director Santini approving items 1, 2, and 3; motion seconded by Director Weygandt and adopted by unanimous vote of Directors present.

E. General Items:

1. Consider approving contract with Davis Farr LLP to provide financial statement auditing services for the year ending December 31, 2019.

Joseph Parker noted the Finance Authority uses the same auditor as PCWA. The contract is being extended based on the contract we entered into a few years ago at a reasonable price of \$6,400.

Motion by Director Allen approving item E.1.; motion seconded by Director Weygandt and adopted by unanimous vote of Directors present.

2. Receive report on the potential refinancing of the Authority's 2006 Revenue bond:
  - a. Authorize staff to perform due diligence for a refinancing of the Authority's Revenue Bond;
  - b. Consider approving agreements for financial and legal services related to the refunding of the 2006 Revenue Bond with Montague DeRose & Associates in an amount not to exceed \$150,000; Kronick, Moskovitz, Tiedemann & Girard (Bond Counsel) in an amount not to exceed \$70,000; and Jones Hall (Disclosure Counsel) in an amount not to exceed \$40,000.

- c. Authorize staff to prepare an independent financial feasibility study and report in support of the debt refinancing:
  - i. Consider approving an agreement with Thomas R. Johnson LLC for work associated with the feasibility study in an amount not to exceed \$8,000;
  - ii. Authorize the Executive Director, or his designee, to execute a contract for a financial feasibility study and report in an amount not to exceed \$150,000.

Joseph Parker explained the bonds are owned by the County Investment Pool and were structured to be able to fund the relicensing and certain betterments with capitalized interest through April 2015. The total amount of the bond, when capitalized in 2015, was \$84.4 million. It began a 20 year amortization due April 1, 2036, at a fixed interest rate of 3.47 percent. Outstanding on the bond is a little over \$71 M. Staff researched various ways to refinance and will move forward with a public sale. He communicated with the County Treasurer and she is supportive of the refinancing. Bond insurance will be used because the Authority has not been to the market before. An independent financial feasibility study is also needed and staff is in the process of selecting a firm.

Motion by Director Allen approving all items in E.2.; motion seconded by Director Weygandt and adopted by unanimous vote of Directors present.

- 3. Receive report on 2019 Budget and Actual Schedules for the period ended August 31, 2019.

Joseph Parker highlighted the budget schedules, revenue schedules, and capital plan.

- 4. Consider approving the proposed 2020 MFP Finance Authority Budget.

Joseph Parker highlighted the proposed budget.

Motion by Director Santini approving item E.4.; motion seconded by Director Weygandt and adopted by unanimous vote of Directors present.

- 5. Adopt **Resolution 19-06 approving a revised Energy Marketing Oversight Policy.**

Brett Storey explained the changes in the proposed revised Energy Marketing Oversight policy.

Motion by Director Weygandt approving item E.2.; motion seconded by Director Allen and adopted by unanimous roll call vote of Directors present.

- 6. Receive and file draft revised Placer County Water Agency Energy Risk Management Policy. Information only.

Joseph Parker reported on the proposed changes in the draft policy.

F. RECESS TO BEGIN MIDDLE FORK AMERICAN RIVER PROJECT (MFARP) TOUR – OCTOBER 10 & 11:

The Chair recessed the meeting at 9:08 a.m. to begin a driving tour to MFARP.

The Chair reconvened the meeting at 10:06 a.m. at the Foresthill Community Fire Project, Baltimore Mine Maintenance site in Foresthill.

Brett Storey explained the site was one of the original from a fuel reduction management program from grants the Authority provided in 2014. The Authority has provided over \$1 M to Auburn and Foresthill fire safe communities. The \$1 M enabled over \$2 M in outside matching funds. (Two handouts provided-map and the Middle Fork Project Fuel Reduction Grant Status.) He introduced Luana Dowling, Placer Firewise Communities' Coordinator.

Ms. Dowling showed an area maintained and area that still need work. The project is to create a buffer between the middle school, Foresthill Road, and the Middle Fork of the American River canyon. She pointed out other projects that have been on the map for 20 years. She and the Fire Safe Council in Foresthill have constantly applied for grant funding. Until the recent fires, grant funding was sparse. Since they now have a long-term source of funding, they can maintain the areas and keep the projects in motion. She works with 90 fire wise communities in Placer County. They are working with the Forest Service, Bureau of Land Management, PG&E, and CalFire to work with the community to protect and install fuel break areas. She spoke about interaction with private landowners to be allowed to do the work on their properties.

The Chair recessed the meeting at 10:33 a.m. to travel to French Meadows campground overlook.

The Chair reconvened the meeting at 11:51 a.m. at the French Meadows campground overlook.

Robert Galliano, forester on the project, reported about the areas burned in the 2001 Star Fire and that were subsequently replanted. Since then, brush has become a fire hazard and limits the growth of trees. He pointed out areas before and after clearing was done. The area is approximately 100 acres and there is another treated 100 acres on the other side of the reservoir. Once the brush starts to decompose, the Forest Service can come in and do a prescribed fire. They use a masticating machine to do some of the work. He explained how the roads have been improved because of the work on the Forest Service prescription.

Brett Storey explained where funding is coming from.

The Chair recessed the meeting at 12:03 a.m. to travel to French Meadows campground.

The Chair reconvened the meeting at 12:41 p.m. at French Meadows Campground.

Ben Ransom provided a handout of the license implementation deadline schedule. Everything is based on the Federal Energy Regulatory Commission (FERC) license issuance date. That includes recreation commitments, new operating conditions, and some infrastructure improvement. A lot of the land the MFARP is on is U.S. National Forest land—both Tahoe and Eldorado. We partner with them to operate and maintain recreation facilities, but ultimately the obligation is on PCWA. He reported on the recreation facilities rehabilitation commitments, some of which includes improving the French Meadows campground by converting some of the 75 single family sites to group sites; making sites ADA compliant; enlarging turnarounds to accommodate recreational vehicles; replacing the water distribution system, faucets, and toilets; leveling and expanding tent pads; creating a couple of trails; extending boat ramps; and upgrading the Indian Bar whitewater boating put-in. He provided a map of the campsites.

Brett Storey reported on who the French Meadows Project partners are and their roles. He provided a handout of a map of the French Meadows Restoration Project and explained who the contractors are and what they are doing. He provided a handout of the names of the people they are hiring. He explained the bidding process. \$12 M has been raised and \$18 M total is needed.

The Chair recessed the meeting at 1:15 p.m. to travel to the French Meadows Forest Management Project site, Mosquito Ridge Road at entrance to Gates Group Campsite.

The Chair reconvened the meeting at 1:30 p.m. at Gates Group Campsite.

Brett Storey introduced Chase Dowling, owner/operator of the unit that is doing the work there.

Robert Galliano explained the type of equipment used on the job. He noted thinning is balancing fire safety with not opening up campgrounds so much that campers feel exposed. In addition to the understory trees, they will also take out the hazard trees. They chip the wood and use it for biomass. Small trees are masticated. He reported on meadow restoration which is being done by mechanical thinning. Areas of mechanical thinning allow for the most economic recovery. Trees up to 30" in diameter and those that are most dangerous to roads are being removed. They start with about 300 trees and aim for a 50-80 density range. Logs go to mills in Oroville and Lincoln. Meadow restoration is being paid for by the National Forest Foundation from Coca Cola.

Andy Fecko noted the forest starts to impinge on meadows and uses up water. So trees are taken down to restore meadows.

The Chair recessed the meeting at 1:54 p.m. to travel to PCWA's Hell Hole dormitory at 20900 Soda Springs Road, Foresthill, California.

G. RECONVENE AND CALL TO ORDER, October 10, 2019, 3:00 p.m. (approximate), at Hell Hole Dormitory:

1. Board workshop to discuss strategic planning initiatives for the next year.

The Chair reconvened the meeting at 2:59 p.m. at PCWA's Hell Hole dormitory.

Darin Reintjes reported on participation in forward markets, 2019 summer strategy, and 2019 revenue. PCWA has been trying for years to get into the forward market to maximize revenue. In the summer different market factors cause the forward markets to go upward and the Agency wanted to take advantage of those. We now have the policy that allows staff to enter into the forward market. He explained the trading strategy that staff developed for summer 2019. He reported on 2019 summer performance. Staff also relies on the day-ahead market to maximize revenue.

He reported on the 2019 revenue and operating plan. Because of a mild summer, energy prices dropped 37% from what they were in February. The revenue forecast dropped by \$20 million; the current revenue forecast is \$60 million. Staff changed trading strategy slightly to add more flexibility for market expertise.

Einar Maisch noted the trading strategy was to make sure staff didn't get hurt. However, if we would have given staff more leeway, we would have made more money. So we are allowing staff more flexibility.

Andy Fecko reported on the FERC license timeline. The application was filed in 2011. The Agency asked for a declaratory order that one year actually means one year. The FERC granted our request. The State Water Resources Control Board filed a request for rehearing. Staff believes the FERC will grant our license soon. Even if there are legal challenges to the license, we are bound to the terms and conditions of the license. There are new minimum instream flows, new reservoir spill ramp-down, new pulse flows, new recreational river flows, and reservoir elevation targets. Required capital improvements include outlet works modifications, small diversion modifications, Hell Hole seasonal storage improvement project, and road management. Duration of the new license is expected to be at least 40 years.

A way you get certainty of a license is to agree to keep eyes on changing environmental conditions, such as water quality and fisheries. Operations is annual. Ongoing costs are approximate \$1 M annually. Operations have been \$9 M. The 2020 five year budget, with a license, will be bumped up \$1 M and the capital almost doubled.

Joseph Parker reported on what is in the five year budget, which includes operating and capital components. He explained how FERC information fits into the budget. He pointed out FERC license implementation projects.

Jay L'Estrange gave a capital improvement projects expense summary 2000-2019 of the MFARP. Capital Improvement Projects are planned, prioritized, and funded based on employee and public safety, maintaining reliability and safety of project facilities, meeting regulatory requirements, and maximizing generation revenue.

In the past, PG&E paid for all the O&M and routine capital. He pointed out source of funding over the years. He reported on the projects PG&E had paid for since 2000.

Joseph Parker reported on the Middle Fork Project's financial strength from May 2013 through 2018. He noted power sales, operating expenses and debt services, capital project appropriations, and reserve funding and ending balance, during those years. Next steps are to obtain the FERC license, refinance debt in 2020 and implement the projects for the FERC license improvements. The reserves could possibly be filled in 2019 depending on power sales revenue and favorable variance in operating expense.

Einar Maisch spoke about distribution of excess funds once reserves are met rather than increasing reserves.

Joseph Parker spoke about the timing of refinancing the bond.

H. RECESS

The Chair recessed the meeting at 4:38 p.m.

I. RECONVENE AND CALL TO ORDER, October 11, 2019, 8:00 a.m. (approximate), at Hell Hole Dormitory

1. Board workshop to discuss strategic planning initiatives for the next year.

The Chair reconvened the meeting at 8:02 a.m.

Jay L'Estrange reported on the Hell Hole Dam Core Raise Project status. The objective of the project was to raise the core and add spillway gates to the uncontrolled spillway. The Department of Safety of Dams (DSOD) discovered the core wasn't what it was supposed to be. Filter core material had to be excavated 24-28 feet. Contractor Keiwit created an impervious clay core stockpile from material from dredging projects from small diversion dams. A rock crusher was brought in to create materials needed for general fill and coarse filter from onsite materials. Keiwit started excavating July 17, 2019. A boring program was done to determine fine and coarse filter materials. The FERC and DOSD inspected excavation. The new core raise was completed September 19. Fine and coarse filters and general fill is being replaced. Operations end October 31. The remaining 40% of work will be completed in 2020.

The Chair recessed the meeting at 8:21 a.m. to tour the Hell Hole Dam Core Raise Project.

The Chair reconvened the meeting at 8:31 a.m. at a Hell Hole Dam overlook.

Kiewit Supervisor Adam McNutt said they are done with the clay core raise and are now placing general fill. They have another 1½ foot to complete this season. They overbuilt the general fill to make sure there was compaction to the edge and will pull back the slope and then place rip-rap. They will then demobilize for the season.

J. Adjournment

The Chair adjourned the meeting at 8:45 a.m.

ATTEST:

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Cheri Sprunck  
Clerk to the Board

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**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**Check Register # 20-01**

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The Board of Directors of the Middle Fork Project Finance Authority as of this date 1/16/2020, do hereby receive and file the following check register listing for the period from 9/28/2019 to 1/03/2020 from the MFP Finance Authority Checking Account.

PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Oct 4, 2019	533,008.01
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Oct 11, 2019	1,520,217.99
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Oct 18, 2019	287,017.84
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Oct 25, 2019	663,132.51
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Nov 1, 2019	112,268.41
THOMAS R JOHNSON LLC	PROFESSIONAL SERVICES	Nov 1, 2019	2,242.50
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Nov 8, 2019	439,494.19
UNION BANK	ADMINISTRATION FEES	Nov 8, 2019	875.00
TENASKA POWER SERVICES CO.	RESOURCE ADEQUACY	Nov 13, 2019	454,850.00
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Nov 15, 2019	472,498.83
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Nov 22, 2019	824,157.17
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Nov 27, 2019	190,500.00
THOMAS R JOHNSON LLC	PROFESSIONAL SERVICES	Nov 27, 2019	3,217.50
KRONICK MOSKOVITZ TIEDEMANN GIRARD	LEGAL SERVICES	Dec 6, 2019	825.00
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Dec 6, 2019	2,938,318.61
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Dec 13, 2019	328,027.83
KRONICK MOSKOVITZ TIEDEMANN GIRARD	LEGAL SERVICES	Dec 20, 2019	6,072.00
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Dec 20, 2019	1,422,115.31
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Dec 27, 2019	194,828.97
PLACER COUNTY WATER AGENCY	MFP REIMBURSEMENT	Dec 31, 2019	477,543.76
<b>CHECK REGISTER TOTAL</b>			<b>\$10,871,211.43</b>

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Office of  
**Joseph H. Parker, CPA**  
Middle Fork Project Finance Authority - Treasurer



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# Middle Fork Project Finance Authority

## Treasurer's Investment Report September 30, 2019

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144 Ferguson Road • Auburn, California 95604  
Telephone: (530) 823-4875

## Treasurer's Discussion

### Middle Fork Project Finance Authority Treasurer's Report

September 30, 2019

This Treasurer's Report includes three sections: 1. Portfolio Summary, 2. Portfolio Details – Investments, and 3. Activity by Type for the prior month.

For the purpose of clarification, the following definitions of investment terms are provided:

**Book Value** is the purchase price of a security plus amortization of any premium or discount. This may be more or less than face value depending upon whether the security was purchased at a premium or at a discount.

**Par (Face) Value** is the principal amount of a security and the amount of principal that will be paid at maturity.

**Market Value** is the value at which a security can be sold at the time it is priced including accrued interest. Individual securities market prices are obtained from Union Bank, (safekeeper and third party custodian). Market values are only relevant if the investment is sold prior to maturity. A gain or loss would be realized only if the specific investment were to be sold. It is the Authority's practice to hold to maturity.

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The investments held in the portfolio are in accordance with the Investment Policy of Middle Fork Project Finance Authority and California Government Code.



**MFP Finance Authority  
Portfolio Management  
Portfolio Summary  
September 30, 2019**

<b>Investments</b>	<b>Par Value</b>	<b>Market Value</b>	<b>Book Value</b>	<b>% of Portfolio</b>	<b>Term</b>	<b>Days to Mat./Call</b>	<b>YTM 365 Equiv.</b>
Local Agency Investment Funds	51,501,591.30	51,501,591.30	51,501,591.30	44.08	1	1	2.341
Checking Accounts	4,632,179.57	4,632,179.57	4,632,179.57	3.96	1	1	0.010
Medium Term Notes	12,000,000.00	12,220,950.00	12,008,707.49	10.28	1,377	1,115	2.555
Federal Agency Coupon Securities	37,000,000.00	37,053,550.00	36,968,965.66	31.64	908	489	2.046
Treasury Coupon Securities	9,000,000.00	9,063,060.00	9,072,415.07	7.77	666	374	2.032
Miscellaneous Coupon Securities	2,700,000.00	2,723,625.00	2,649,727.88	2.27	1,400	1,141	2.681
	<b>116,833,770.87</b>	<b>117,194,955.87</b>	<b>116,833,586.97</b>	<b>100.00%</b>	<b>513</b>	<b>325</b>	<b>2.161</b>
<b>Investments</b>							
<b>Cash and Accrued Interest</b>							
Accrued Interest at Purchase *		0.00	0.00				
Ending Accrued Interest		598,042.50	598,042.50				
Subtotal		598,042.50	598,042.50				
	<b>116,833,770.87</b>	<b>117,792,998.37</b>	<b>117,431,629.47</b>		<b>513</b>	<b>325</b>	<b>2.161</b>
<b>Total Cash and Investments Value</b>							

<b>Total Earnings</b>	<b>September 30 Month Ending</b>	<b>Fiscal Year To Date</b>	
Current Year	218,247.96	1,791,214.87	* 12,458.33 Accrued at Purchase is Included in Book Value.

<b>Average Daily Balance</b>	<b>117,483,604.67</b>	<b>103,760,580.55</b>
<b>Effective Rate of Return</b>	<b>2.26%</b>	<b>2.31%</b>

The investments held in portfolio are in accordance with the Investment Policy of the Middle Fork Project Finance Authority.

*Joseph H. Parker*  
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Joseph H. Parker, CPA

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
September 30, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365	Maturity Date
<b>Local Agency Investment Funds</b>												
LAIF	10001	Local Agency Investment Fund			51,501,591.30	51,501,591.30	51,501,591.30	2.341	1	1	2.341	
<b>Subtotal and Average</b>			<b>58,993,257.97</b>		<b>51,501,591.30</b>	<b>51,501,591.30</b>	<b>51,501,591.30</b>		<b>1</b>	<b>1</b>	<b>2.341</b>	
<b>Checking Accounts</b>												
5616-OPERATIONS	10000	Union Bank of California			4,632,179.57	4,632,179.57	4,632,179.57	0.010	1	1	0.010	
<b>Subtotal and Average</b>			<b>1,289,832.00</b>		<b>4,632,179.57</b>	<b>4,632,179.57</b>	<b>4,632,179.57</b>		<b>1</b>	<b>1</b>	<b>0.010</b>	
<b>Medium Term Notes</b>												
037833AR1	10072	Apple Inc.		05/03/2018	3,000,000.00	3,046,920.00	2,996,989.61	2.850	1,099	583	2.916	05/06/2021
13063DDG0	10078	State of California		01/31/2019	3,000,000.00	3,039,090.00	2,934,942.86	2.250	1,704	1,461	2.832	10/01/2023
459058GH0	10085	INTL BK BECON & DEVELOP		02/26/2019	3,000,000.00	3,055,530.00	3,012,498.55	2.750	878	661	2.511	07/23/2021
742651DP4	10092	Private Export Funding		07/15/2019	3,000,000.00	3,079,410.00	3,064,276.47	2.450	1,827	1,749	1.978	07/15/2024
<b>Subtotal and Average</b>			<b>12,008,795.05</b>		<b>12,000,000.00</b>	<b>12,220,950.00</b>	<b>12,008,707.49</b>		<b>1,377</b>	<b>1,115</b>	<b>2.555</b>	
<b>Federal Agency Coupon Securities</b>												
3133EFDT1	10063	Federal Farm Credit Bank		09/28/2017	1,000,000.00	998,650.00	1,000,000.00	1.660	1,085	352	1.658	09/17/2020
3133EKL61	10094	Federal Farm Credit Bank		09/04/2019	3,000,000.00	2,988,810.00	2,998,575.00	1.550	547	520	1.584	03/04/2021
3133EKP75	10095	Federal Farm Credit Bank		09/17/2019	3,000,000.00	2,990,910.00	2,998,571.20	1.600	1,827	1,813	1.610	09/17/2024
3133EKP67	10096	Federal Farm Credit Bank		09/17/2019	3,000,000.00	2,992,410.00	2,997,764.33	1.625	731	717	1.664	09/17/2021
3130AF2D8	10075	Federal Home Loan Bank		01/31/2019	3,000,000.00	3,030,390.00	3,007,181.53	2.860	623	380	2.621	10/15/2020
313378WG2	10086	Federal Home Loan Bank		03/20/2019	3,000,000.00	3,061,800.00	3,004,708.12	2.500	1,087	892	2.433	03/11/2022
3130ADN32	10088	Federal Home Loan Bank		06/07/2019	3,000,000.00	3,002,160.00	3,000,000.00	2.125	249	133	2.123	02/11/2020
3130AGH99	10089	Federal Home Loan Bank		06/04/2019	3,000,000.00	3,007,110.00	3,003,245.69	2.250	353	234	2.197	05/22/2020
3137EAEF2	10068	Federal Home Loan Mtg Corp		01/31/2018	3,000,000.00	2,991,270.00	2,987,589.27	1.375	810	202	2.145	04/20/2020
3134GTYP2	10090	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,001,350.00	3,000,000.00	2.000	1,005	183	2.000	04/01/2022
3134GTWG4	10091	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,005,220.00	3,000,833.33	2.000	1,822	269	2.000	06/26/2024
3135G0D75	10069	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,991,630.00	2,986,304.32	1.500	873	265	2.149	06/22/2020
3135G0T60	10070	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,991,840.00	2,984,192.87	1.500	911	303	2.155	07/30/2020
<b>Subtotal and Average</b>			<b>33,469,629.79</b>		<b>37,000,000.00</b>	<b>37,053,550.00</b>	<b>36,968,965.66</b>		<b>908</b>	<b>489</b>	<b>2.046</b>	
<b>Treasury Coupon Securities</b>												
9128283N8	10071	U.S. Treasury		01/31/2018	3,000,000.00	2,999,640.00	2,998,476.82	1.875	699	91	2.084	12/31/2019
9128284C1	10074	U.S. Treasury		01/31/2019	3,000,000.00	3,005,280.00	2,995,503.53	2.250	425	182	2.556	03/31/2020
9128285V8	10093	U.S. Treasury		08/30/2019	3,000,000.00	3,058,140.00	3,078,434.72	2.500	869	837	1.472	01/15/2022
<b>Subtotal and Average</b>			<b>9,073,010.51</b>		<b>9,000,000.00</b>	<b>9,063,060.00</b>	<b>9,072,415.07</b>		<b>666</b>	<b>374</b>	<b>2.032</b>	

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
September 30, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Days to Term Mat./Call	YTM 365	Maturity Date	
<b>Miscellaneous Coupon Securities</b>												
742651DR0	10073	Private Export Funding		01/15/2019	2,700,000.00	2,723,625.00	2,649,727.88	2.050	1,400	1,141	2.681	11/15/2022
		<b>Subtotal and Average</b>	<b>2,649,079.35</b>		<b>2,700,000.00</b>	<b>2,723,625.00</b>	<b>2,649,727.88</b>		<b>1,400</b>	<b>1,141</b>	<b>2.681</b>	
		<b>Total and Average</b>	<b>117,483,604.67</b>		<b>116,833,770.87</b>	<b>117,194,955.87</b>	<b>116,833,586.97</b>		<b>513</b>	<b>325</b>	<b>2.161</b>	

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Cash  
September 30, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365
		<b>Average Balance</b>	<b>0.00</b>	Accrued Interest at Purchase *		0.00	0.00		<b>0</b>	<b>0</b>	
				Ending Accrued Interest		598,042.50	598,042.50				
				Subtotal		598,042.50	598,042.50				
		<b>Total Cash and Investment Value</b>	<b>117,483,604.67</b>		<b>116,833,770.87</b>	<b>117,792,998.37</b>	<b>117,431,629.47</b>		<b>513</b>	<b>325</b>	<b>2.161</b>

\* 12,458.33 Accrued at Purchase is Included in Book and Market Values

**MFP Finance Authority  
Portfolio Management  
Activity By Type  
September 1, 2019 through September 30, 2019**

CUSIP	Investment #	Issuer	Stated Rate	Transaction Date	Purchases or Deposits	Redemptions or Withdrawals	Balance
<b>Local Agency Investment Funds (Monthly Summary)</b>							
LAIF	10001	Local Agency Investment Fund	2.341		0.00	7,750,000.00	
<b>Subtotal</b>					<b>0.00</b>	<b>7,750,000.00</b>	<b>51,501,591.30</b>
<b>Checking Accounts (Monthly Summary)</b>							
5616-OPERATIONS	10000	Union Bank of California	0.010		14,642,233.35	11,184,632.42	
<b>Subtotal</b>					<b>14,642,233.35</b>	<b>11,184,632.42</b>	<b>4,632,179.57</b>
<b>Medium Term Notes</b>							
<b>Subtotal</b>							<b>12,008,707.49</b>
<b>Federal Agency Coupon Securities</b>							
3133EKL61	10094	Federal Farm Credit Bank	1.550	09/04/2019	2,998,500.00	0.00	
3133EKP75	10095	Federal Farm Credit Bank	1.600	09/17/2019	2,998,560.00	0.00	
3133EKP67	10096	Federal Farm Credit Bank	1.625	09/17/2019	2,997,720.00	0.00	
<b>Subtotal</b>					<b>8,994,780.00</b>	<b>0.00</b>	<b>36,968,965.66</b>
<b>Treasury Coupon Securities</b>							
<b>Subtotal</b>							<b>9,072,415.07</b>
<b>Miscellaneous Coupon Securities</b>							
<b>Subtotal</b>							<b>2,649,727.88</b>
<b>Total</b>					<b>23,637,013.35</b>	<b>18,934,632.42</b>	<b>116,833,586.97</b>



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# Middle Fork Project Finance Authority

## Treasurer's Investment Report October 31, 2019

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144 Ferguson Road • Auburn, California 95604  
Telephone: (530) 823-4875

## Treasurer's Discussion

### Middle Fork Project Finance Authority Treasurer's Report

October 31, 2019

This Treasurer's Report includes three sections: 1. Portfolio Summary, 2. Portfolio Details – Investments, and 3. Activity by Type for the prior month.

For the purpose of clarification, the following definitions of investment terms are provided:

**Book Value** is the purchase price of a security plus amortization of any premium or discount. This may be more or less than face value depending upon whether the security was purchased at a premium or at a discount.

**Par (Face) Value** is the principal amount of a security and the amount of principal that will be paid at maturity.

**Market Value** is the value at which a security can be sold at the time it is priced including accrued interest. Individual securities market prices are obtained from Union Bank, (safekeeper and third party custodian). Market values are only relevant if the investment is sold prior to maturity. A gain or loss would be realized only if the specific investment were to be sold. It is the Authority's practice to hold to maturity.

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The investments held in the portfolio are in accordance with the Investment Policy of Middle Fork Project Finance Authority and California Government Code.



MFP Finance Authority  
Portfolio Management  
Portfolio Summary  
October 31, 2019

Investments	Par Value	Market Value	Book Value	% of Portfolio	Term	Days to Mat./Call	YTM 365 Equiv.
Local Agency Investment Funds	51,095,018.25	51,095,018.25	51,095,018.25	44.38	1	1	2.190
Checking Accounts	348,096.13	348,096.13	348,096.13	0.30	1	1	0.010
Medium Term Notes	12,000,000.00	12,224,640.00	12,008,526.32	10.43	1,377	1,084	2.555
Federal Agency Coupon Securities	40,000,000.00	40,099,850.00	39,953,539.29	34.70	976	559	2.016
Treasury Coupon Securities	9,000,000.00	9,069,780.00	9,071,142.08	7.88	666	343	2.032
Miscellaneous Coupon Securities	2,700,000.00	2,727,000.00	2,651,069.66	2.30	1,400	1,110	2.681
	<b>115,143,114.38</b>	<b>115,564,384.38</b>	<b>115,127,391.73</b>	<b>100.00%</b>	<b>568</b>	<b>360</b>	<b>2.160</b>
<b>Investments</b>							
<b>Cash and Accrued Interest</b>							
Accrued Interest at Purchase *		0.00	0.00				
Ending Accrued Interest		350,338.05	350,338.05				
Subtotal		350,338.05	350,338.05				
	<b>115,143,114.38</b>	<b>115,914,722.43</b>	<b>115,477,729.78</b>		<b>568</b>	<b>360</b>	<b>2.160</b>
<b>Total Cash and Investments Value</b>							

Total Earnings	October 31 Month Ending	Fiscal Year To Date	
Current Year	211,374.61	2,003,628.28	* 12,708.33 Accrued at Purchase is Included in Book Value.

Average Daily Balance	118,030,430.42	105,215,729.72
Effective Rate of Return	2.11%	2.29%

The investments held in portfolio are in accordance with the Investment Policy of the Middle Fork Project Finance Authority.

*Joseph H. Parker*

Joseph H. Parker, CPA

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
October 31, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365	Maturity Date
<b>Local Agency Investment Funds</b>												
LAIF	10001	Local Agency Investment Fund			51,095,018.25	51,095,018.25	51,095,018.25	2.190	1	1	2.190	
<b>Subtotal and Average</b>			<b>51,488,476.04</b>		<b>51,095,018.25</b>	<b>51,095,018.25</b>	<b>51,095,018.25</b>		<b>1</b>	<b>1</b>	<b>2.190</b>	
<b>Checking Accounts</b>												
5616-OPERATIONS	10000	Union Bank of California			348,096.13	348,096.13	348,096.13	0.010	1	1	0.010	
<b>Subtotal and Average</b>			<b>4,493,983.33</b>		<b>348,096.13</b>	<b>348,096.13</b>	<b>348,096.13</b>		<b>1</b>	<b>1</b>	<b>0.010</b>	
<b>Medium Term Notes</b>												
037833AR1	10072	Apple Inc.		05/03/2018	3,000,000.00	3,048,390.00	2,997,146.68	2.850	1,099	552	2.916	05/06/2021
13063DDG0	10078	State of California		01/31/2019	3,000,000.00	3,036,720.00	2,936,298.21	2.250	1,704	1,430	2.832	10/01/2023
459058GH0	10085	INTL BK BECON & DEVELOP		02/26/2019	3,000,000.00	3,057,450.00	3,011,923.46	2.750	878	630	2.511	07/23/2021
742651DP4	10092	Private Export Funding		07/15/2019	3,000,000.00	3,082,080.00	3,063,157.97	2.450	1,827	1,718	1.978	07/15/2024
<b>Subtotal and Average</b>			<b>12,008,611.06</b>		<b>12,000,000.00</b>	<b>12,224,640.00</b>	<b>12,008,526.32</b>		<b>1,377</b>	<b>1,084</b>	<b>2.555</b>	
<b>Federal Agency Coupon Securities</b>												
3133EFDT1	10063	Federal Farm Credit Bank		09/28/2017	1,000,000.00	1,000,640.00	1,000,000.00	1.660	1,085	321	1.658	09/17/2020
3133EKL61	10094	Federal Farm Credit Bank		09/04/2019	3,000,000.00	2,994,210.00	2,998,658.33	1.550	547	489	1.584	03/04/2021
3133EKP75	10095	Federal Farm Credit Bank		09/17/2019	3,000,000.00	3,003,840.00	2,998,595.20	1.600	1,827	1,782	1.610	09/17/2024
3133EKP67	10096	Federal Farm Credit Bank		09/17/2019	3,000,000.00	3,001,050.00	2,997,859.33	1.625	731	686	1.664	09/17/2021
3133EK3B0	10097	Federal Farm Credit Bank		10/18/2019	3,000,000.00	2,989,080.00	2,980,205.98	1.500	1,825	1,811	1.641	10/16/2024
3130AF2D8	10075	Federal Home Loan Bank		01/31/2019	3,000,000.00	3,034,320.00	3,006,605.47	2.860	623	349	2.621	10/15/2020
313378WG2	10086	Federal Home Loan Bank		03/20/2019	3,000,000.00	3,063,930.00	3,004,547.62	2.500	1,087	861	2.433	03/11/2022
3130ADN32	10088	Federal Home Loan Bank		06/07/2019	3,000,000.00	3,003,810.00	3,000,000.00	2.125	249	102	2.123	02/11/2020
3130AGH99	10089	Federal Home Loan Bank		06/04/2019	3,000,000.00	3,010,590.00	3,003,116.38	2.250	353	203	2.197	05/22/2020
3137EAEF2	10068	Federal Home Loan Mtg Corp		01/31/2018	3,000,000.00	2,996,670.00	2,989,460.24	1.375	810	171	2.145	04/20/2020
3134GTYP2	10090	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,001,740.00	3,000,000.00	2.000	1,005	152	2.000	04/01/2022
3134GTWG4	10091	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,005,220.00	3,000,833.33	2.000	1,822	238	2.000	06/26/2024
3135G0D75	10069	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,997,510.00	2,987,878.54	1.500	873	234	2.149	06/22/2020
3135G0T60	10070	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,997,240.00	2,985,778.87	1.500	911	272	2.155	07/30/2020
<b>Subtotal and Average</b>			<b>38,317,159.89</b>		<b>40,000,000.00</b>	<b>40,099,850.00</b>	<b>39,953,539.29</b>		<b>976</b>	<b>559</b>	<b>2.016</b>	
<b>Treasury Coupon Securities</b>												
9128283N8	10071	U.S. Treasury		01/31/2018	3,000,000.00	3,000,270.00	2,998,995.71	1.875	699	60	2.084	12/31/2019
9128284C1	10074	U.S. Treasury		01/31/2019	3,000,000.00	3,007,860.00	2,996,269.41	2.250	425	151	2.556	03/31/2020
9128285V8	10093	U.S. Treasury		08/30/2019	3,000,000.00	3,061,650.00	3,075,876.96	2.500	869	806	1.472	01/15/2022

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
October 31, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Days to Term Mat./Call	YTM 365	Maturity Date
<b>Subtotal and Average</b>			<b>9,071,758.04</b>		<b>9,000,000.00</b>	<b>9,069,780.00</b>	<b>9,071,142.08</b>		<b>666 343</b>	<b>2.032</b>	
<b>Miscellaneous Coupon Securities</b>											
742651DR0	10073	Private Export Funding		01/15/2019	2,700,000.00	2,727,000.00	2,651,069.66	2.050	1,400 1,110	2.681	11/15/2022
<b>Subtotal and Average</b>			<b>2,650,442.05</b>		<b>2,700,000.00</b>	<b>2,727,000.00</b>	<b>2,651,069.66</b>		<b>1,400 1,110</b>	<b>2.681</b>	
<b>Total and Average</b>			<b>118,030,430.42</b>		<b>115,143,114.38</b>	<b>115,564,384.38</b>	<b>115,127,391.73</b>		<b>568 360</b>	<b>2.160</b>	

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Cash  
October 31, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365
		<b>Average Balance</b>	<b>0.00</b>	Accrued Interest at Purchase *		0.00	0.00		<b>0</b>	<b>0</b>	
				Ending Accrued Interest		350,338.05	350,338.05				
				Subtotal		350,338.05	350,338.05				
		<b>Total Cash and Investment Value</b>	<b>118,030,430.42</b>		<b>115,143,114.38</b>	<b>115,914,722.43</b>	<b>115,477,729.78</b>		<b>568</b>	<b>360</b>	<b>2.160</b>

\* 12,708.33 Accrued at Purchase is Included in Book and Market Values

**MFP Finance Authority  
Portfolio Management  
Activity By Type  
October 1, 2019 through October 31, 2019**

CUSIP	Investment #	Issuer	Stated Rate	Transaction Date	Purchases or Deposits	Redemptions or Withdrawals	Balance
<b>Local Agency Investment Funds (Monthly Summary)</b>							
LAIF	10001	Local Agency Investment Fund	2.190		343,426.95	750,000.00	
		<b>Subtotal</b>			<b>343,426.95</b>	<b>750,000.00</b>	<b>51,095,018.25</b>
<b>Checking Accounts (Monthly Summary)</b>							
5616-OPERATIONS	10000	Union Bank of California	0.010		4,544,831.27	8,828,914.71	
		<b>Subtotal</b>			<b>4,544,831.27</b>	<b>8,828,914.71</b>	<b>348,096.13</b>
<b>Medium Term Notes</b>							
		<b>Subtotal</b>					<b>12,008,526.32</b>
<b>Federal Agency Coupon Securities</b>							
3133EK3B0	10097	Federal Farm Credit Bank	1.500	10/18/2019	2,979,810.00	0.00	
		<b>Subtotal</b>			<b>2,979,810.00</b>	<b>0.00</b>	<b>39,953,539.29</b>
<b>Treasury Coupon Securities</b>							
		<b>Subtotal</b>					<b>9,071,142.08</b>
<b>Miscellaneous Coupon Securities</b>							
		<b>Subtotal</b>					<b>2,651,069.66</b>
		<b>Total</b>			<b>7,868,068.22</b>	<b>9,578,914.71</b>	<b>115,127,391.73</b>



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# Middle Fork Project Finance Authority

## Treasurer's Investment Report November 30, 2019

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144 Ferguson Road • Auburn, California 95604  
Telephone: (530) 823-4875

## Treasurer's Discussion

### Middle Fork Project Finance Authority Treasurer's Report

November 30, 2019

This Treasurer's Report includes three sections: 1. Portfolio Summary, 2. Portfolio Details – Investments, and 3. Activity by Type for the prior month.

For the purpose of clarification, the following definitions of investment terms are provided:

**Book Value** is the purchase price of a security plus amortization of any premium or discount. This may be more or less than face value depending upon whether the security was purchased at a premium or at a discount.

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The investments held in the portfolio are in accordance with the Investment Policy of Middle Fork Project Finance Authority and California Government Code.



**MFP Finance Authority  
Portfolio Management  
Portfolio Summary  
November 30, 2019**

<b>Investments</b>	<b>Par Value</b>	<b>Market Value</b>	<b>Book Value</b>	<b>% of Portfolio</b>	<b>Term</b>	<b>Days to Mat./Call</b>	<b>YTM 365 Equiv.</b>
Local Agency Investment Funds	50,345,018.25	50,345,018.25	50,345,018.25	43.75	1	1	2.103
Checking Accounts	1,031,037.44	1,031,037.44	1,031,037.44	0.90	1	1	0.010
Medium Term Notes	12,000,000.00	12,203,310.00	12,008,345.15	10.44	1,377	1,054	2.555
Federal Agency Coupon Securities	40,000,000.00	40,061,890.00	39,955,993.79	34.73	976	529	2.016
Treasury Coupon Securities	9,000,000.00	9,060,090.00	9,069,910.14	7.88	666	313	2.032
Miscellaneous Coupon Securities	2,700,000.00	2,720,034.00	2,652,411.44	2.31	1,400	1,080	2.681
<b>Investments</b>	<b>115,076,055.69</b>	<b>115,421,379.69</b>	<b>115,062,716.21</b>	<b>100.00%</b>	<b>568</b>	<b>344</b>	<b>2.109</b>
<b>Cash and Accrued Interest</b>							
Accrued Interest at Purchase *		0.00	0.00				
Ending Accrued Interest		449,124.81	449,124.81				
Subtotal		449,124.81	449,124.81				
<b>Total Cash and Investments Value</b>	<b>115,076,055.69</b>	<b>115,870,504.50</b>	<b>115,511,841.02</b>		<b>568</b>	<b>344</b>	<b>2.109</b>

<b>Total Earnings</b>	<b>November 30 Month Ending</b>	<b>Fiscal Year To Date</b>	
Current Year	205,383.10	2,208,976.94	* 10,458.33 Accrued at Purchase is Included in Book Value.

<b>Average Daily Balance</b>	<b>115,126,875.25</b>	<b>106,105,952.37</b>
<b>Effective Rate of Return</b>	<b>2.17%</b>	<b>2.28%</b>

The investments held in portfolio are in accordance with the Investment Policy of the Middle Fork Project Finance Authority.

Joseph H. Parker, CPA

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
November 30, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365	Maturity Date
<b>Local Agency Investment Funds</b>												
LAIF	10001	Local Agency Investment Fund			50,345,018.25	50,345,018.25	50,345,018.25	2.103	1	1	2.103	
<b>Subtotal and Average</b>			<b>51,070,018.25</b>		<b>50,345,018.25</b>	<b>50,345,018.25</b>	<b>50,345,018.25</b>		<b>1</b>	<b>1</b>	<b>2.103</b>	
<b>Checking Accounts</b>												
5616-OPERATIONS	10000	Union Bank of California			1,031,037.44	1,031,037.44	1,031,037.44	0.010	1	1	0.010	
<b>Subtotal and Average</b>			<b>370,860.84</b>		<b>1,031,037.44</b>	<b>1,031,037.44</b>	<b>1,031,037.44</b>		<b>1</b>	<b>1</b>	<b>0.010</b>	
<b>Medium Term Notes</b>												
037833AR1	10072	Apple Inc.		05/03/2018	3,000,000.00	3,046,080.00	2,997,303.74	2.850	1,099	522	2.916	05/06/2021
13063DDG0	10078	State of California		01/31/2019	3,000,000.00	3,041,130.00	2,937,653.57	2.250	1,704	1,400	2.832	10/01/2023
459058GH0	10085	INTL BK BECON & DEVELOP		02/26/2019	3,000,000.00	3,051,390.00	3,011,348.37	2.750	878	600	2.511	07/23/2021
742651DP4	10092	Private Export Funding		07/15/2019	3,000,000.00	3,064,710.00	3,062,039.47	2.450	1,827	1,688	1.978	07/15/2024
<b>Subtotal and Average</b>			<b>12,008,432.71</b>		<b>12,000,000.00</b>	<b>12,203,310.00</b>	<b>12,008,345.15</b>		<b>1,377</b>	<b>1,054</b>	<b>2.555</b>	
<b>Federal Agency Coupon Securities</b>												
3133EFDT1	10063	Federal Farm Credit Bank		09/28/2017	1,000,000.00	1,000,120.00	1,000,000.00	1.660	1,085	291	1.658	09/17/2020
3133EKL61	10094	Federal Farm Credit Bank		09/04/2019	3,000,000.00	2,997,750.00	2,998,741.67	1.550	547	459	1.584	03/04/2021
3133EKP75	10095	Federal Farm Credit Bank		09/17/2019	3,000,000.00	2,994,960.00	2,998,619.20	1.600	1,827	1,752	1.610	09/17/2024
3133EKP67	10096	Federal Farm Credit Bank		09/17/2019	3,000,000.00	2,997,870.00	2,997,954.33	1.625	731	656	1.664	09/17/2021
3133EK3B0	10097	Federal Farm Credit Bank		10/18/2019	3,000,000.00	2,980,710.00	2,980,542.85	1.500	1,825	1,781	1.641	10/16/2024
3130AF2D8	10075	Federal Home Loan Bank		01/31/2019	3,000,000.00	3,030,270.00	3,006,029.41	2.860	623	319	2.621	10/15/2020
313378WG2	10086	Federal Home Loan Bank		03/20/2019	3,000,000.00	3,055,800.00	3,004,387.11	2.500	1,087	831	2.433	03/11/2022
3130ADN32	10088	Federal Home Loan Bank		06/07/2019	3,000,000.00	3,002,550.00	3,000,000.00	2.125	249	72	2.123	02/11/2020
3130AGH99	10089	Federal Home Loan Bank		06/04/2019	3,000,000.00	3,008,130.00	3,000,737.07	2.250	353	173	2.197	05/22/2020
3137EAEF2	10068	Federal Home Loan Mtg Corp		01/31/2018	3,000,000.00	2,996,430.00	2,991,331.20	1.375	810	141	2.145	04/20/2020
3134GTY2	10090	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,000,450.00	3,000,000.00	2.000	1,005	122	2.000	04/01/2022
3134GTWG4	10091	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,002,790.00	3,000,833.33	2.000	1,822	208	2.000	06/26/2024
3135G0D75	10069	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,997,120.00	2,989,452.75	1.500	873	204	2.149	06/22/2020
3135G0T60	10070	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,996,940.00	2,987,364.87	1.500	911	242	2.155	07/30/2020
<b>Subtotal and Average</b>			<b>39,955,294.96</b>		<b>40,000,000.00</b>	<b>40,061,890.00</b>	<b>39,955,993.79</b>		<b>976</b>	<b>529</b>	<b>2.016</b>	
<b>Treasury Coupon Securities</b>												
9128283N8	10071	U.S. Treasury		01/31/2018	3,000,000.00	3,000,300.00	2,999,497.85	1.875	699	30	2.084	12/31/2019
9128284C1	10074	U.S. Treasury		01/31/2019	3,000,000.00	3,005,400.00	2,997,010.59	2.250	425	121	2.556	03/31/2020
9128285V8	10093	U.S. Treasury		08/30/2019	3,000,000.00	3,054,390.00	3,073,401.70	2.500	869	776	1.472	01/15/2022

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
November 30, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Days to Term Mat./Call	YTM 365	Maturity Date
<b>Subtotal and Average</b>			<b>9,070,505.58</b>		<b>9,000,000.00</b>	<b>9,060,090.00</b>	<b>9,069,910.14</b>		<b>666 313</b>	<b>2.032</b>	
<b>Miscellaneous Coupon Securities</b>											
742651DR0	10073	Private Export Funding		01/15/2019	2,700,000.00	2,720,034.00	2,652,411.44	2.050	1,400 1,080	2.681	11/15/2022
<b>Subtotal and Average</b>			<b>2,651,762.92</b>		<b>2,700,000.00</b>	<b>2,720,034.00</b>	<b>2,652,411.44</b>		<b>1,400 1,080</b>	<b>2.681</b>	
<b>Total and Average</b>			<b>115,126,875.25</b>		<b>115,076,055.69</b>	<b>115,421,379.69</b>	<b>115,062,716.21</b>		<b>568 344</b>	<b>2.109</b>	

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Cash  
November 30, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365
		<b>Average Balance</b>	<b>0.00</b>	Accrued Interest at Purchase *		0.00	0.00		<b>0</b>	<b>0</b>	
				Ending Accrued Interest		449,124.81	449,124.81				
				Subtotal		449,124.81	449,124.81				
		<b>Total Cash and Investment Value</b>	<b>115,126,875.25</b>		<b>115,076,055.69</b>	<b>115,870,504.50</b>	<b>115,511,841.02</b>		<b>568</b>	<b>344</b>	<b>2.109</b>

\* 10,458.33 Accrued at Purchase is Included in Book and Market Values

**MFP Finance Authority  
Portfolio Management  
Activity By Type  
November 1, 2019 through November 30, 2019**

CUSIP	Investment #	Issuer	Stated Rate	Transaction Date	Purchases or Deposits	Redemptions or Withdrawals	Balance
<b>Local Agency Investment Funds (Monthly Summary)</b>							
LAIF	10001	Local Agency Investment Fund	2.103		0.00	750,000.00	
		<b>Subtotal</b>			<b>0.00</b>	<b>750,000.00</b>	<b>50,345,018.25</b>
<b>Checking Accounts (Monthly Summary)</b>							
5616-OPERATIONS	10000	Union Bank of California	0.010		3,179,917.45	2,496,976.14	
		<b>Subtotal</b>			<b>3,179,917.45</b>	<b>2,496,976.14</b>	<b>1,031,037.44</b>
<b>Medium Term Notes</b>							
		<b>Subtotal</b>					<b>12,008,345.15</b>
<b>Federal Agency Coupon Securities</b>							
		<b>Subtotal</b>					<b>39,955,993.79</b>
<b>Treasury Coupon Securities</b>							
		<b>Subtotal</b>					<b>9,069,910.14</b>
<b>Miscellaneous Coupon Securities</b>							
		<b>Subtotal</b>					<b>2,652,411.44</b>
		<b>Total</b>			<b>3,179,917.45</b>	<b>3,246,976.14</b>	<b>115,062,716.21</b>



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# Middle Fork Project Finance Authority

## Treasurer's Investment Report December 31, 2019

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144 Ferguson Road • Auburn, California 95604  
Telephone: (530) 823-4875

## Treasurer's Discussion

### Middle Fork Project Finance Authority Treasurer's Report

December 31, 2019

This Treasurer's Report includes three sections: 1. Portfolio Summary, 2. Portfolio Details – Investments, and 3. Activity by Type for the prior month.

For the purpose of clarification, the following definitions of investment terms are provided:

**Book Value** is the purchase price of a security plus amortization of any premium or discount. This may be more or less than face value depending upon whether the security was purchased at a premium or at a discount.

**Par (Face) Value** is the principal amount of a security and the amount of principal that will be paid at maturity.

**Market Value** is the value at which a security can be sold at the time it is priced including accrued interest. Individual securities market prices are obtained from Union Bank, (safekeeper and third party custodian). Market values are only relevant if the investment is sold prior to maturity. A gain or loss would be realized only if the specific investment were to be sold. It is the Authority's practice to hold to maturity.

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The investments held in the portfolio are in accordance with the Investment Policy of Middle Fork Project Finance Authority and California Government Code.



**MFP Finance Authority  
Portfolio Management  
Portfolio Summary  
December 31, 2019**

<b>Investments</b>	<b>Par Value</b>	<b>Market Value</b>	<b>Book Value</b>	<b>% of Portfolio</b>	<b>Term</b>	<b>Days to Mat./Call</b>	<b>YTM 365 Equiv.</b>
Local Agency Investment Funds	47,845,018.25	47,845,018.25	47,845,018.25	42.18	1	1	2.103
Checking Accounts	4,885,876.73	4,885,876.73	4,885,876.73	4.31	1	1	0.007
Medium Term Notes	12,000,000.00	12,183,990.00	12,008,163.99	10.59	1,377	1,023	2.555
Federal Agency Coupon Securities	40,000,000.00	40,031,000.00	39,959,865.00	35.23	976	498	2.016
Treasury Coupon Securities	6,000,000.00	6,058,500.00	6,068,620.40	5.35	650	421	2.008
Miscellaneous Coupon Securities	2,700,000.00	2,721,141.00	2,653,753.23	2.34	1,400	1,049	2.681
	<b>113,430,894.98</b>	<b>113,725,525.98</b>	<b>113,421,297.60</b>	<b>100.00%</b>	<b>558</b>	<b>331</b>	<b>2.038</b>
<b>Investments</b>							
<b>Cash and Accrued Interest</b>							
Accrued Interest at Purchase *		0.00	0.00				
Ending Accrued Interest		568,446.31	568,446.31				
Subtotal		568,446.31	568,446.31				
	<b>113,430,894.98</b>	<b>114,293,972.29</b>	<b>113,989,743.91</b>		<b>558</b>	<b>331</b>	<b>2.038</b>
<b>Total Cash and Investments Value</b>							

<b>Total Earnings</b>	<b>December 31 Month Ending</b>	<b>Fiscal Year To Date</b>	<b>Fiscal Year Ending</b>	
Current Year	203,691.65	2,412,674.54	2,412,674.54	* 9,625.00 Accrued at Purchase is Included in Book Value.

<b>Average Daily Balance</b>	<b>115,334,528.37</b>	<b>106,889,749.24</b>
<b>Effective Rate of Return</b>	<b>2.08%</b>	<b>2.26%</b>

The investments held in portfolio are in accordance with the Investment Policy of the Middle Fork Project Finance Authority.

*Joseph H. Parker*  
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Joseph H. Parker, CPA

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
December 31, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Mat./Call	YTM 365	Maturity Date
<b>Local Agency Investment Funds</b>												
LAIF	10001	Local Agency Investment Fund			47,845,018.25	47,845,018.25	47,845,018.25	2.103	1	1	2.103	
<b>Subtotal and Average</b>			<b>50,264,373.09</b>		<b>47,845,018.25</b>	<b>47,845,018.25</b>	<b>47,845,018.25</b>		<b>1</b>	<b>1</b>	<b>2.103</b>	
<b>Checking Accounts</b>												
5616-OPERATIONS	10000	Union Bank of California			3,554,331.49	3,554,331.49	3,554,331.49	0.010	1	1	0.010	
1265-OPERATIONS	10100	US Bank		12/11/2019	1,331,545.24	1,331,545.24	1,331,545.24		1	1	0.000	
<b>Subtotal and Average</b>			<b>1,477,967.74</b>		<b>4,885,876.73</b>	<b>4,885,876.73</b>	<b>4,885,876.73</b>		<b>1</b>	<b>1</b>	<b>0.007</b>	
<b>Medium Term Notes</b>												
037833AR1	10072	Apple Inc.		05/03/2018	3,000,000.00	3,046,290.00	2,997,460.80	2.850	1,099	491	2.916	05/06/2021
13063DDG0	10078	State of California		01/31/2019	3,000,000.00	3,031,080.00	2,939,008.93	2.250	1,704	1,369	2.832	10/01/2023
459058GH0	10085	INTL BK BECON & DEVELOP		02/26/2019	3,000,000.00	3,049,890.00	3,010,773.29	2.750	878	569	2.511	07/23/2021
742651DP4	10092	Private Export Funding		07/15/2019	3,000,000.00	3,056,730.00	3,060,920.97	2.450	1,827	1,657	1.978	07/15/2024
<b>Subtotal and Average</b>			<b>12,008,248.73</b>		<b>12,000,000.00</b>	<b>12,183,990.00</b>	<b>12,008,163.99</b>		<b>1,377</b>	<b>1,023</b>	<b>2.555</b>	
<b>Federal Agency Coupon Securities</b>												
3133EFDT1	10063	Federal Farm Credit Bank		09/28/2017	1,000,000.00	1,000,910.00	1,000,000.00	1.660	1,085	260	1.658	09/17/2020
3133EKL61	10094	Federal Farm Credit Bank		09/04/2019	3,000,000.00	2,999,550.00	2,998,825.00	1.550	547	428	1.584	03/04/2021
3133EKP75	10095	Federal Farm Credit Bank		09/17/2019	3,000,000.00	2,977,500.00	2,998,643.20	1.600	1,827	1,721	1.610	09/17/2024
3133EKP67	10096	Federal Farm Credit Bank		09/17/2019	3,000,000.00	3,003,150.00	2,998,049.33	1.625	731	625	1.664	09/17/2021
3133EK3B0	10097	Federal Farm Credit Bank		10/18/2019	3,000,000.00	2,962,590.00	2,980,879.73	1.500	1,825	1,750	1.641	10/16/2024
3130AF2D8	10075	Federal Home Loan Bank		01/31/2019	3,000,000.00	3,027,930.00	3,005,453.36	2.860	623	288	2.621	10/15/2020
313378WG2	10086	Federal Home Loan Bank		03/20/2019	3,000,000.00	3,056,310.00	3,004,226.61	2.500	1,087	800	2.433	03/11/2022
3130ADN32	10088	Federal Home Loan Bank		06/07/2019	3,000,000.00	3,001,590.00	3,000,000.00	2.125	249	41	2.123	02/11/2020
3130AGH99	10089	Federal Home Loan Bank		06/04/2019	3,000,000.00	3,006,780.00	3,000,607.76	2.250	353	142	2.197	05/22/2020
3137EAEF2	10068	Federal Home Loan Mtg Corp		01/31/2018	3,000,000.00	2,997,600.00	2,993,202.17	1.375	810	110	2.145	04/20/2020
3134GTYP2	10090	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,000,360.00	3,000,000.00	2.000	1,005	91	2.000	04/01/2022
3134GTWG4	10091	Federal Home Loan Mtg Corp		07/01/2019	3,000,000.00	3,001,620.00	3,000,000.00	2.000	1,822	177	2.000	06/26/2024
3135G0D75	10069	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,997,900.00	2,991,026.97	1.500	873	173	2.149	06/22/2020
3135G0T60	10070	Federal National Mtg Assn		01/31/2018	3,000,000.00	2,997,210.00	2,988,950.87	1.500	911	211	2.155	07/30/2020
<b>Subtotal and Average</b>			<b>39,958,334.82</b>		<b>40,000,000.00</b>	<b>40,031,000.00</b>	<b>39,959,865.00</b>		<b>976</b>	<b>498</b>	<b>2.016</b>	
<b>Treasury Coupon Securities</b>												
9128284C1	10074	U.S. Treasury		01/31/2019	3,000,000.00	3,004,230.00	2,997,776.47	2.250	425	90	2.556	03/31/2020
9128285V8	10093	U.S. Treasury		08/30/2019	3,000,000.00	3,054,270.00	3,070,843.93	2.500	869	745	1.472	01/15/2022

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Investments  
December 31, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Days to Term Mat./Call	YTM 365	Maturity Date
<b>Subtotal and Average</b>			<b>8,972,478.37</b>		<b>6,000,000.00</b>	<b>6,058,500.00</b>	<b>6,068,620.40</b>		<b>650 421</b>	<b>2.008</b>	
<b>Miscellaneous Coupon Securities</b>											
742651DR0	10073	Private Export Funding		01/15/2019	2,700,000.00	2,721,141.00	2,653,753.23	2.050	1,400 1,049	2.681	11/15/2022
<b>Subtotal and Average</b>			<b>2,653,125.62</b>		<b>2,700,000.00</b>	<b>2,721,141.00</b>	<b>2,653,753.23</b>		<b>1,400 1,049</b>	<b>2.681</b>	
<b>Total and Average</b>			<b>115,334,528.37</b>		<b>113,430,894.98</b>	<b>113,725,525.98</b>	<b>113,421,297.60</b>		<b>558 331</b>	<b>2.038</b>	

**MFP Finance Authority  
Portfolio Management  
Portfolio Details - Cash  
December 31, 2019**

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Days to Term Mat./Call	YTM 365	
		<b>Average Balance</b>	<b>0.00</b>	Accrued Interest at Purchase *		0.00	0.00		<b>0</b>	<b>0</b>	
				Ending Accrued Interest		568,446.31	568,446.31				
				Subtotal		568,446.31	568,446.31				
		<b>Total Cash and Investment Value</b>	<b>115,334,528.37</b>		<b>113,430,894.98</b>	<b>114,293,972.29</b>	<b>113,989,743.91</b>		<b>558</b>	<b>331</b>	<b>2.038</b>

\* 9,625.00 Accrued at Purchase is Included in Book and Market Values

**MFP Finance Authority  
Portfolio Management  
Activity By Type  
December 1, 2019 through December 31, 2019**

CUSIP	Investment #	Issuer	Stated Rate	Transaction Date	Purchases or Deposits	Redemptions or Withdrawals	Balance
<b>Local Agency Investment Funds (Monthly Summary)</b>							
LAIF	10001	Local Agency Investment Fund	2.103		0.00	2,500,000.00	
		<b>Subtotal</b>			<b>0.00</b>	<b>2,500,000.00</b>	<b>47,845,018.25</b>
<b>Checking Accounts (Monthly Summary)</b>							
5616-OPERATIONS	10000	Union Bank of California	0.010		8,394,340.14	5,871,046.09	
1265-OPERATIONS	10100	US Bank			1,331,593.24	48.00	
		<b>Subtotal</b>			<b>9,725,933.38</b>	<b>5,871,094.09</b>	<b>4,885,876.73</b>
<b>Medium Term Notes</b>							
		<b>Subtotal</b>					<b>12,008,163.99</b>
<b>Federal Agency Coupon Securities</b>							
		<b>Subtotal</b>					<b>39,959,865.00</b>
<b>Treasury Coupon Securities</b>							
9128283N8	10071	U.S. Treasury	1.875	12/31/2019	0.00	3,000,000.00	
		<b>Subtotal</b>			<b>0.00</b>	<b>3,000,000.00</b>	<b>6,068,620.40</b>
<b>Miscellaneous Coupon Securities</b>							
		<b>Subtotal</b>					<b>2,653,753.23</b>
		<b>Total</b>			<b>9,725,933.38</b>	<b>11,371,094.09</b>	<b>113,421,297.60</b>



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M E M O R A N D U M

**TO:** Board of Directors

**FROM:** Joseph Parker, CPA  
Authority Treasurer

**DATE:** January 7, 2020

**RE:** PCWA Energy Risk Management Policy Unchanged

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**RECOMMENDATION:**

For informational purposes only.

**DISCUSSION:**

PCWA's Energy Risk Management Policy (ERM Policy) was last updated and adopted on October 17, 2019 by the PCWA Board. This revised ERM Policy was provided to the Authority Board at its October 10, 2019 meeting. In accordance with PCWA's policy, the Energy Risk Management Policy is required to be submitted to the Board annually for review and adoption for use during the year.

# Placer County Water Agency

# Energy Risk Management Policy

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Chapter 3, Article 14  
of the Personnel and Administrative Manual

Section 3600

Initially Adopted: October 16, 2014

Prior Revised: January 17, 2019

Adopted October 17, 2019

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# Energy Risk Management Policy

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### OVERVIEW

Placer County Water Agency (Agency) is the owner and operator of the Middle Fork American River Hydroelectric Project (MFP, Middle Fork Project or Project) (FERC Project No. 2079), which has a rated capacity of 224 MW.

This Energy Risk Management Policy (ERM Policy) provides a framework for the prudent management of risks and delegation of authorities governing the Agency's energy transaction activities in the CAISO, bilateral and forward energy markets.

This ERM Policy identifies energy market risks and corresponding risk management objectives, and details key organizational control structures and policy matters, providing prudent risk management processes based upon sound energy risk management principles.

### AUTHORITY

This ERM Policy operates under the authority of the Agency's Board of Directors and shall become effective upon approval of the Board.

Any amendments to this ERM Policy require the approval of the Agency's Board.

### SCOPE

This ERM Policy applies to all energy marketing activities, which includes the purchase and sale of physical energy products and related financial instruments. This ERM Policy applies to all Agency employees and authorized agents engaged directly or indirectly in transactions involving MFP energy products.

This ERM Policy summarizes the Agency's risk management framework to consistently and comprehensively apply risk management and internal control practices to risks encountered in its business.

### PURPOSE

The purpose of this ERM Policy is to formally establish an Energy Risk Management Program, and document the organizational structure utilized by the Agency to maximize energy product revenue in recognition of the risk inherent in California's energy markets.

# Energy Risk Management Policy

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### MFP ENERGY RISK MANAGEMENT OBJECTIVES

- Market Risk Management Objectives: Understand, prioritize and manage inherent California energy market risk factors:
  - Identify, evaluate and track risk factors;
  - Minimize uncertainty regarding operational reliability, internal coordination and water supply; and
  - Engage in energy product transactions via participation in authorized markets with authorized strategies.
- Control Objectives:
  - Mitigate operational risk through coordination and investment policies that seek to maximize generation availability and operational flexibility;
  - Mitigate transactional risk by monitoring compliance with the Agency's Energy Risk Management Policy, Strategies and Procedures; and
  - Mitigate regulatory risk by monitoring all regulatory agencies for potential changes that may affect MFP performance, developing adaptation strategies, as needed.

### GENERAL AND POTENTIAL RISKS

The energy risk management process involves the identification, evaluation, and management of energy marketing risks, and is comprised of six key energy risk elements: identification, measurement, monitoring, control, reporting and corrective action. Subsequent sections of this ERM Policy, coupled with associated energy marketing strategies and procedures, provide guidance for each aspect of the risk management process.

The effectiveness of this ERM Policy in managing energy risk will be systematically reviewed and, when appropriate, modified through the Board approval process.

Energy market risks addressed in this ERM Policy are: Energy Price Volatility and Liquidity, Counterparty Credit Exposure and Contractual Performance, MFP Operational Performance, and Regulatory, Legislative and Market Rule Changes.

# Energy Risk Management Policy

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Descriptions and management techniques for each element are as follows:

### ***Energy Price Volatility and Liquidity Risk***

- Description: The price of energy products in CAISO, bilateral and forward markets can be unpredictable and volatile. Extended periods of low energy prices can expose the Agency to outcomes inconsistent with the Agency's financial objectives, while periods of elevated prices offer the opportunity to lock-in attractive value and revenue through bilateral and/or forward sales.
- Risk Management Techniques:
  - Invest in maximizing the physical generation capability, operational flexibility, and reliability of the MFP;
  - Invest in best practice hydrological and forecast information, optimizing the available fuel (i.e. water) supply;
  - Develop and implement an energy marketing strategy that leverages MFP generation, attributes and ancillary service capabilities;
  - Remain abreast of all market rules to maximize opportunities via appropriate bid strategies;
  - Develop and implement bilateral and/or forward energy market strategies that maximize MFP revenue, while adhering to prudent risk management techniques; and
  - Maintain high levels of coordination among MFP marketing, operations, and finance staff, enabling timely market responses to favorable energy prices and/or unanticipated outages.
- Description: Illiquidity and lack of price transparency in CAISO, bilateral and forward energy markets may lead to sub-optimal prices for MFP energy products.
- Risk Management Techniques:
  - Maintain capabilities to sell a range of MFP energy products in multiple markets;
  - Develop access to multiple counterparties;
  - Develop fundamental energy market outlooks; and
  - Access real-time product price data through third parties, energy trading platforms, price reports and/or other sources, as necessary, to assess market prices.

# Energy Risk Management Policy

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### ***Counterparty Credit Exposure and Contractual Performance Risk***

- Description: Exposure to economic loss resulting from counterparty non-performance or default on their financial obligations to the Agency.
- Risk Management Techniques:
  - Establish and maintain credit criteria for all counterparties; and
  - Actively monitor Agency exposures to each counterparty, ensuring that aggregate Agency obligations and exposures are within pre-established limits.

### ***MFP Operational Performance Risk***

- Description: The risk the Agency defaults on its contractual obligations to a counterparty, potentially exposing the Agency to lost revenue and/or penalties.
- Risk Management Techniques:
  - Manage the Agency's financial exposure to performance risk using contractual tools (e.g. unit contingent obligations);
  - Require active engagement between Agency marketing and operations staff, ensuring timely communication and a mutual understanding of MFP operational capabilities and contractual obligations;
  - Access bilateral and forward markets to preserve options to quickly resolve outstanding obligations;
  - Invest in best practice hydrological and forecast information to optimally dispatch the available water supply; and
  - Have access to adequate financial reserves in order to manage the impact of performance interruptions.

### ***Regulatory, Legislative and Market Rules Risk***

- Description: The risk that regulatory and/or legislative actions adversely impact MFP operations and/or the marketing of MFP energy and energy related products.
- Risk Management Techniques:
  - Monitor regulatory proceedings and legislative initiatives impacting the MFP;
  - Where appropriate, participate in regulatory or legislative proceedings to mitigate adverse impacts to the MFP, and to advance outcomes favorable to the Project;

## Energy Risk Management Policy

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- Collaborate with similarly situated merchant power generators to mitigate the impacts of regulations and/or legislation adverse to the Project, and to promote and/or support regulations and legislation favorable to the MFP;
- Monitor and participate in CAISO Market Initiatives; and
- Undertake routine internal review of bidding and optimization strategies in light of dynamic regulatory and market conditions.

### **GOVERNANCE AND ORGANIZATION STRUCTURE**

The risk governance structure follows a top-down approach whereby the Board of Directors considers and adopts an ERM Policy establishing objectives, organizational structure, authority and guidelines, implemented by the General Manager and his/her designated staff.

This ERM Policy sets forth distinct roles and responsibilities, and establishes controls and procedures to be implemented by designated staff to ensure the adequate functioning of the risk management control environment.

Appendix E provides an organizational chart summarizing structure and functionality within this Energy Risk Management Policy.

The principles of good risk management policy embodied herein shall be emphasized throughout all aspects of the Agency's energy marketing business.

At the operational level, marketing activities and risk monitoring activities shall be separated to ensure sufficient and appropriate checks and balances between these functions, such that oversight of energy transactions is independent of marketing activities.

Formal delineation and delegation of authority are required and shall clearly define the permissions granted to employees and agents making decisions and taking actions on behalf of the Agency.

#### ***Board of Directors***

The Board of Directors is responsible for considering and approving the ERM Policy.

# Energy Risk Management Policy

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### *General Manager*

The General Manager shall:

- Implement this ERM Policy, including enforcement of the risk management organizational structure outlined herein, and oversee the development of procedures for the administration of the energy risk management program;
- Authorize individuals (employees or agents) to execute energy marketing transactions on behalf of the Agency;
- Ensure there is a clear separation of duties and activities among and between (a) the Energy Risk Oversight Committee, (b) the Front Office, (c) the Middle Office and Back Office;
- Adopt or reject energy marketing strategy recommendations endorsed by the Energy Risk Oversight Committee;
- Review the effectiveness of this ERM Policy; and
- Undertake actions as necessary to resolve issues with ERM Policy compliance.

### *Front, Middle and Back Office Functions*

Based on industry best practices, the responsibilities of the Front Office and Middle/Back Offices shall be separate business functions (i.e. transacting and monitoring/settlement functions). Appropriate segregation of duties should be established and maintained throughout the system of controls over financial and operational risks. However, based on the nature and volume of transaction activity, the Middle and Back Office functions may be performed by the same departmental personnel. Within the Agency, energy marketing and risk oversight shall be performed by departmental personnel as outlined below and further detailed in the Procedures documents.

- **Front Office** – The Front Office is primarily responsible for resource planning, market assessment, energy marketing, and revenue optimization, which includes identifying and developing energy marketing opportunities and strategies for consideration by the Energy Risk Oversight Committee and General Manager. The Front Office is also responsible for implementing approved strategies and advancing the Agency’s goal of maximizing MFP revenue, while transacting within the authorized limits.

# Energy Risk Management Policy

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- **Middle Office** – The Middle Office institutes, supervises, and reviews all energy risk monitoring activities, is responsible for reporting to the GM and Energy Risk Oversight Committee on energy risk management issues, and provides recommendations when changes in policy or operating procedures are warranted.
- **Back Office** – The Back Office is responsible for invoice settlements, transaction recording, bookkeeping and accounting, and contract administration.

### ***Energy Risk Oversight Committee***

The Agency's General Manager shall establish an Energy Risk Oversight Committee ("ROC") to serve in an advisory capacity to the General Manager. The ROC shall be a management level committee tasked with assisting the General Manager in evaluating and monitoring energy risk management processes, controls, functions, implementation and compliance with this ERM Policy, as well as sharing knowledge and information.

ROC membership shall be comprised of the following four Agency staff:

- Director of Financial Services (Chairman)
- Director of Energy Marketing
- Director of Strategic Affairs
- Director of Power Generation Services

Outside advisors with specific expertise in energy risk or performance metrics, energy marketing best management practices, energy marketing strategies, forward markets and forward trading, or similar relevant expertise may be approved by the General Manager to participate in the ROC.

The ROC shall meet, at a minimum, each quarter or more often as opportunity or need dictates.

The ROC has no authority to act independently. Its role is to monitor, investigate and report compliance with the ERM Policy. The ROC shall report to the General Manager.

In its function, the ROC shall:

- Review the Agency's risk exposures.
- Review operational performance metrics and operational outlooks as they relate to energy marketing;

# Energy Risk Management Policy

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- Review marketing strategies developed by the Agency's energy marketing team and, where appropriate, recommend those strategies to the General Manager;
- Review risk exposure control, monitoring and reporting procedures and requirements;
- Review the internal control infrastructure supporting this ERM Policy and ensure it provides adequate risk oversight and compliance;
- Assess the adequacy and functioning of system controls supporting energy marketing risk assessment, measurement, and compliance regarding this ERM Policy;
- Receive and review risk management reports prepared by staff regarding the Agency's compliance with the ERM Policy, including deviations, exclusions, exceptions and violations;
- Review the Agency's ERM Policy annually and make recommendations to the General Manager;
- Ensure that energy marketing and risk management staff have the necessary training, skills, abilities, and experience to execute their duties;
- Review bilateral contract provisions (e.g. unit contingency, Force Majeure, payments, material adverse change, financial margining, etc...) for the sale of energy products and make recommendations to the General Manager;
- Review potential counterparties for bilateral transactions and make recommendations to the General Manager;
- Review and recommend credit limits for each counterparty to the General Manager; and
- Review the overall effectiveness of energy risk controls in accordance with this ERM Policy, recommending improvements, as appropriate, to the General Manager.

### ***Director of Energy Marketing***

The Director of Energy Marketing shall:

- Be responsible for managing Front Office activities;

# Energy Risk Management Policy

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- Undertake the daily administration and management of marketing the Agency's energy products in accordance with this ERM Policy;
- Develop and maintain a resource (hydrology) plan, summarizing projected monthly energy and energy-related attribute sales for the then current water year, and fundamental energy market outlooks;
- Identify and develop energy marketing strategies for consideration by the ROC and GM;
- Maintain regular communication with Operational staff, exchanging information regarding MFP operations and maintenance and the Agency's energy market obligations;
- Maintain regular communication with the Middle Office regarding marketing activities (such as new transactions, new products, counterparty positions, credit and risk exposures, and updated price curves);
- Maintain regular communication with the Back Office regarding energy price settlements, invoice true-ups, and dispute resolution;
- Ensure all transactions are captured in the designated deal-entry system timely and accurately;
- Mitigate the Agency's energy market financial exposures using contractual tools to minimize risk;
- Develop multiple counterparties for energy trades, and ensure new energy related contracts are reviewed by Risk Management, Finance and Legal;
- Report periodically to the ROC, General Manager or Board of Directors regarding energy marketing performance and strategies;
- Proactively disclose to the ROC any material issues that arise in the course of business that encroach on ERM Policy restrictions, or involve significant risk; and
- Monitor regulatory proceeding and legislative initiatives and engage legal counsel when appropriate. Collaborate with other power generators to mitigate the impacts of regulations, while monitoring and participating in CAISO Market Initiatives.

# Energy Risk Management Policy

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### ***Director of Financial Services***

The Director of Financial Services shall:

- Manage Middle and Back Office activities;
- Administer and manage the energy risk management program;
- Serve as Chairman of the ROC;
- Acquire and implement an energy deal capture system (designated system), supporting deal entry and risk reporting to maintain a system of records of all energy transactions;
- Develop counterparty risk tolerances, and establish and maintain criteria for counterparties credit limits, including monitoring exposure;
- Establish and maintain an active financial review process for all counterparties;
- Review all energy contract vehicles (i.e. WSPP, EEI, ISDA, etc...) prior to execution;
- Maintain regular communication with the Front Office regarding energy trading activities;
- Provide reports to the ROC, General Manager and Board of Directors regarding adherence to this ERM Policy; and
- Proactively disclose to the ROC any material issues that arise in the course of business that encroach on the ERM Policy restrictions, or carry material implications for the effective administration of the energy risk management program.

### ***Director of Power Generation Services***

The Director of Power Generation Services shall:

- Manage operation and maintenance of the MFP generation assets;
- Maintain regular communication with the Front Office regarding MFP current and forthcoming operations, operational availability, and planned maintenance that could impact the Agency's energy market obligations;
- Provide analysis of the MFP's operational reliability as information for the ROC; and

## Energy Risk Management Policy

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- Provide recommendations for increasing the MFP's operational capacity and reliability as it may impact energy marketing activities.

### **MARKETING AND TRANSACTING AUTHORITY AND GUIDELINES**

Energy marketing activities shall be limited to the products, quantities, and term limits specified below and in Appendix C.

#### ***General Transacting Guidelines***

Agency staff and authorized agents shall comply with this ERM Policy, all applicable CAISO tariff sections, protocols and procedures, applicable counterparty credit limits, and the provisions of bilateral contracts executed with counterparties for transactions in forward markets.

All bilateral transactions shall only be executed with approved counterparties using standard contract vehicles (i.e. WSPP, EEI, ISDA, etc...) with appropriate energy risk management provisions in favor of the Agency.

All energy marketing financial transactions shall conform to the terms and limits specified within this ERM Policy, and/or be in accordance with energy marketing strategies adopted by the General Manager.

#### ***Counterparty Credit Risk***

Energy transactions shall only be executed with contractually enabled counterparties, within the credit limits established by the Director of Financial Services and approved by the General Manager.

#### ***Authorized Personnel***

Only personnel/agents authorized by the General Manager pursuant to a written "Delegation of Authority Form" (Appendix B) can negotiate, transact and execute transactions on behalf of the Agency in wholesale energy markets.

When authorized, the General Manager's Delegation of Authority Form shall be provided to the Director of Financial Services for appropriate monitoring.

## Energy Risk Management Policy

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### ***Authorized Products and Limitations***

The Agency may only transact in the energy-market products listed in Appendix C.

### ***Permissible Financial Transaction Instruments and Limits***

Permissible instruments and limits (including quantity, dollar, and term) for forward marketing shall be specified in Forward Energy Marketing Strategy proposals presented to the ROC and General Manager.

### ***Term Limits for all products***

The term or duration of sale of authorized energy products per Appendix C of this ERM Policy, shall be in accordance with the limits detailed in Appendix D of this ERM Policy.

### ***Prohibited Products and Transactions***

The following transactions are prohibited:

- Any transaction prohibited by Federal and/or State laws and regulations;
- The sale or purchase of financial options not backed by physical generation;
- The sale of energy not backed by physical generation;
- Transactions with unapproved counterparties and with counterparties where approved credit limits have been or will be exceeded;
- Transactions involving products, quantities and durations not specifically authorized by this ERM Policy; and
- The sale or purchase of energy and related products that obligate the Agency for a period of time greater than five years from the date of the agreement.

### **REPORTING**

The General Manager shall establish standard reporting protocols to keep the Board of Directors, ROC and staff with responsibilities in energy risk management apprised.

### **STANDARDS OF CONDUCT**

In accordance with this ERM Policy and California law, personnel involved in transacting and oversight of energy marketing, contract negotiation, and risk management, may not participate in decisions in which they have a financial conflict of interest. General Manager, Front Office Personnel, and ERMC members are required to complete, on an annual basis, the Form 700

## Energy Risk Management Policy

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Disclosure forms and submit these forms to the Agency Clerk to the Board. Each staff member engaged in energy transactions, risk management or energy operations has the sole responsibility of identifying and reporting any potential conflict of interest, and ensuring that he or she does not participate in decisions when a financial conflict of interest exists. If the employee has a reportable interest, it is their responsibility to disclose the interest and inform their supervisor of the potential conflict. Supervisors should ensure employees are not involved in a decision-making capacity with respect to any of their reportable interest. Annually, employees involved in transacting and oversight of energy marketing, contract negotiation, and risk management shall complete the Compliance Statement (attached in **Appendix A**) acknowledging review of the ERM Policy and compliance with its processes, terms and limitations.

# Energy Risk Management Policy

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## Appendix A – Compliance Statement

### Compliance Statement

I, the undersigned employee hereby acknowledge receipt and review of Agency’s Energy Risk Management Policy dated \_\_\_\_\_ (the “ERM Policy”).

I further acknowledge that this ERM Policy defines the process of Agency’s energy risk management efforts, I understand those processes and shall comply with those ERM Policy products, processes, terms and limits.

If I become aware of non-compliance or any potential non-compliant situation with the ERM Policy, either directly or indirectly, I will report such noncompliance or any potential non-compliance situation to any member of the ROC, other than my direct supervisor, and to the Director of Financial Services.

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Signature

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Type or Print Name

---

Title

---

Date

***Annually, this form is required to be completed and submitted to the Director of Financial Services for regulatory filing.***

# Placer County Water Agency

## Energy Risk Management Policy

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### Appendix B – Energy Marketing Delegation of Authority Memorandum

#### Energy Marketing Delegation of Authority Memorandum

By means of this memorandum, I, the General Manager of Placer County Water Agency (Agency), delegate authority, to the extent provided below, to negotiate, transact and execute on behalf of the Agency in wholesale energy markets.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

Effective ***date as of General Manager's signature below***, the aforementioned individual, while serving in said position is hereby authorized to negotiate, transact and execute on behalf of the Agency into the CAISO wholesale and bilateral energy markets:

Buy Bilateral Forward Energy	Sell Bilateral Forward Energy
Buy Physical Day-Ahead Energy	Sell Physical Day-Ahead Energy
Buy Physical Real-Time Energy	Sell Physical Real-Time Energy
Buy Resource Adequacy Capacity	Sell Resource Adequacy Capacity
Schedule Ancillary Service Products	Sell Carbon Free Energy
Sell Renewable Energy Credits	

#### Requisition Submitted:

\_\_\_\_\_  
Name [Requesting Official – Department Head]

\_\_\_\_\_  
Title

#### Acknowledged and agreed:

\_\_\_\_\_  
Name [Delegate]

\_\_\_\_\_  
Title

#### Approved:

\_\_\_\_\_  
General Manager Signature

\_\_\_\_\_  
Date

***Upon execution, this authorized form shall be provided to the Director of Financial Services.***

## Energy Risk Management Policy

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### Appendix C – Approved Energy Transaction Products

- Resource Adequacy Capacity and other capacity attributes:

This product is contracted on a term basis with qualified counterparties.
- Renewable Energy Credits:

This product is contracted on a term basis with qualified counterparties.
- Carbon Free Credits:

This product is contracted on a term basis with qualified counterparties.
- Physical Day-Ahead and Real-Time Energy Sales scheduled through the CAISO:

Transaction quantities shall not exceed the transmission or operations constrained generation potential of each MFP generator that is separately bid into the CAISO wholesale energy market.
- Physical Day-Ahead and Real-Time Energy Purchases scheduled through the CAISO:

For any given time hour, purchases shall be limited to the quantity of energy that has been awarded in the CAISO Day-ahead market, or that has been sold in a bilateral forward transaction.
- Ancillary Service Products scheduled through the CAISO:

Any type and level of Ancillary Service product that is within the safe operating range of the generating unit and is consistent with the CAISO Tariff conditions and operating protocol.
- Bilateral Forward transactions:

Shall be conducted in accordance with the forward energy marketing strategy adopted by the General Manager.

## **Energy Risk Management Policy**

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### **Appendix D – Energy Marketing Product Limits**

The Middle Fork Project Finance Authority has delegated to PCWA the authority to enter into short term agreements for the sale of energy and related products created by the Middle Fork Project, where short term is defined as a period not exceeding five years from the date of the agreement. The purpose of this delegation was to facilitate the regular conduct of business. Long term agreements for the sale of energy and related products, exceeding five years, must be approved by the Middle Fork Project Finance Authority Board of Directors.

The PCWA Board of Directors has delegated to its General Manager, or his designee, the authority to enter into short term agreements for the sale of energy and related products created by the Middle Fork Project. The purposes of this delegation are to facilitate the regular conduct of business.

The PCWA General Manager may delegate to the Director of Energy Marketing, and his staff, the authority to enter into agreements for the sale of energy and related products created by the Middle Fork Project, as detailed in the matrix below.

The following matrices summarizes the authorized personnel and product limits:

		<b>Transaction Limits (up to)</b>			
<b>Title</b>	<b>Product</b>	<b>Deliver Lead Time</b>	<b>Term</b>	<b>MW Size</b>	<b>Price</b>
PCWA Board of Directors	Resource Adequacy/Capacity	No Limit	Up to 60 months	≤ MFP Capacity Rating	No Min/Max
	Renewable Energy Credits	No Limit	Up to 60 months	≤ MFP R.E.C. Rating	No Min/Max
	Carbon Free Energy Certificates	No Limit	Up to 60 months	≤ MFP Annual Carbon Free Output	No Min/Max

		<b>Transaction Limits (up to)</b>			
<b>Title</b>	<b>Product</b>	<b>Deliver Lead Time</b>	<b>Term</b>	<b>MW Size</b>	<b>Price</b>
General Manager	Resource Adequacy/Capacity	No Limit	Up to 60 months	≤ MFP Capacity Rating	No Min/Max
	Renewable Energy Credits		Up to 60 months	≤ MFP R.E.C. Rating	No Min/Max

## Placer County Water Agency

# Energy Risk Management Policy

	Carbon Free Energy Certificates		Up to 60 months	≤ MFP Annual Carbon Free Output	No Min/Max
	Bilateral Forward Transactions		Up to 60 months	< MFP Capacity <u>Rating</u>	No Min/Max

		Transaction Limits (up to)			
Title	Product	Deliver Lead Time	Term	MW Size	Price
Director of Energy Marketing	CAISO Day Ahead Energy Sales	As Required by CAISO	≥ 1 Hour	≤ Available MFP MWs	CAISO Price Cap
	CAISO Day Ahead Energy Purchases	As Required by CAISO	≥ 1 Hour	≤ Bilateral Forward transaction	CAISO Price Cap
	CAISO Day Ahead Ancillary Services	As Required by CAISO	≥ 1 Hour	≤ Available MFP Ancillary Service MWs	CAISO Price Cap
	CAISO Real Time Energy Sales	As Required by CAISO	≤ 1 Hour	≤ Available MFP MWs	CAISO Price Cap
	CAISO Real Time Energy Purchases	As Required by CAISO	≤ 1 Hour	≤ Day Ahead Energy Sales	CAISO Price Cap
	CAISO Real Time Ancillary Services	As Required by CAISO	≤ 1 Hour	≤ Available MFP Ancillary Service MWs	CAISO Price Cap
	Resource Adequacy/Capacity	No Limit	≤ 365 days	≤ MFP Capacity Rating	No Min/Max
	Renewable Energy Credits	No Limit	≤ 365 days	≤ MFP R.E.C. Rating	No Min/Max
	Bilateral Forward transactions	No Limit	≤ 365 days	< MFP Capacity <u>Rating</u>	No Min/Max
	Carbon Free Energy Certificates	No Limit	≤ 365 days	≤ MFP Annual Carbon Free Output	No Min/Max

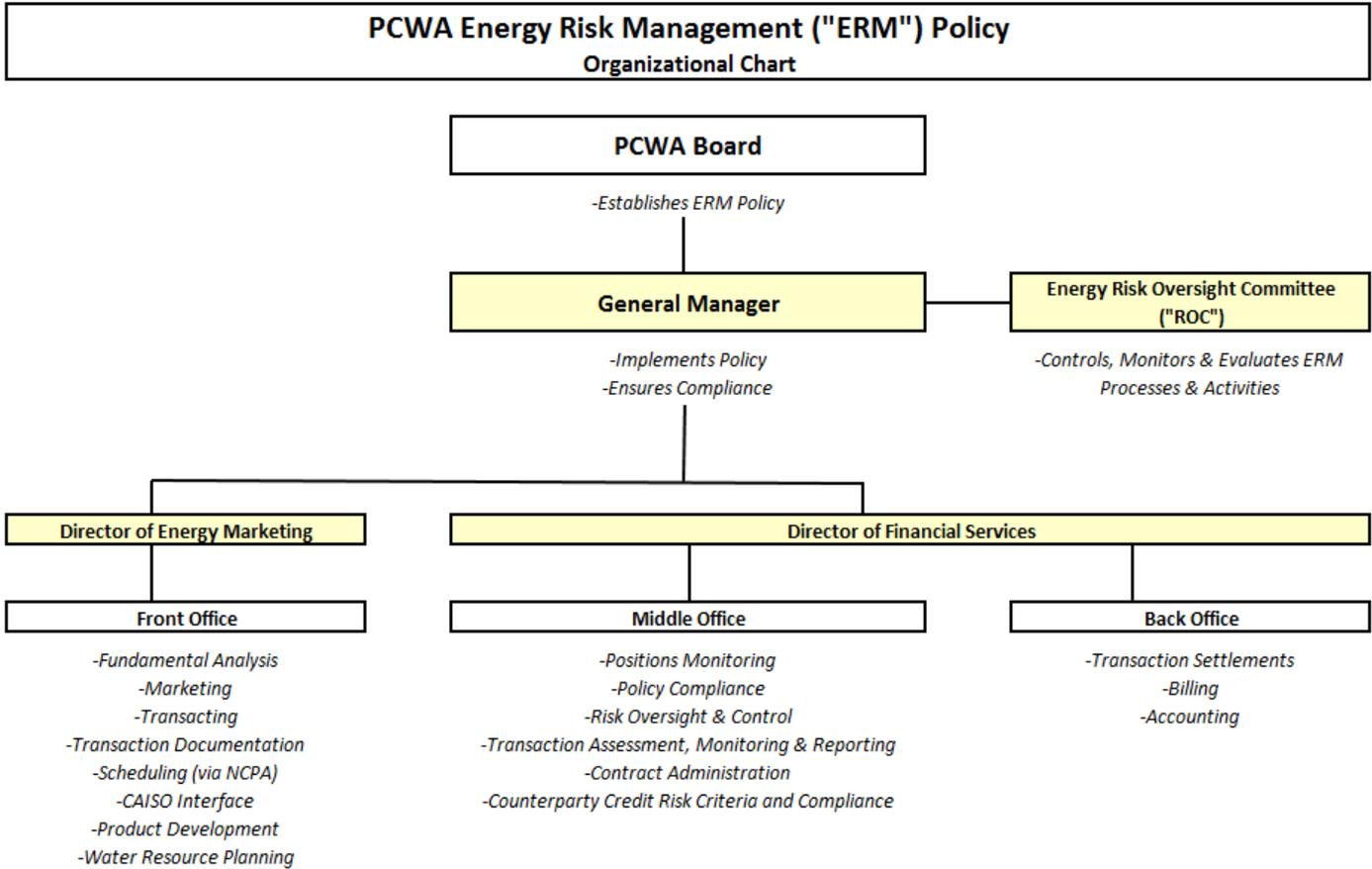
## Placer County Water Agency

# Energy Risk Management Policy

		Transaction Limits (up to)			
Title	Product	Deliver Lead Time	Term	MW Size	Price
Energy Marketing Manager	CAISO Day Ahead Energy Sales	As Required by CAISO	≥ 1 Hour	≤ Available MFP MWs	CAISO Price Cap
	CAISO Day Ahead Energy Purchases	As Required by CAISO	≥ 1 Hour	< <u>Bilateral Forward transaction</u>	CAISO Price Cap
	CAISO Day Ahead Ancillary Services	As Required by CAISO	≥ 1 Hour	≤ Available MFP Ancillary Service MWs	CAISO Price Cap
	CAISO Real Time Energy Sales	As Required by CAISO	≤ 1 Hour	≤ Available MFP MWs	CAISO Price Cap
	CAISO Real Time Energy Purchases	As Required by CAISO	≤ 1 Hour	≤ Day Ahead Energy Sales	CAISO Price Cap
	CAISO Real Time Ancillary Services	As Required by CAISO	≤ 1 Hour	≤ Available MFP Ancillary Service MWs	CAISO Price Cap
	Resource Adequacy/Capacity	No Limit	≤ 90 days	≤ MFP Capacity Rating	≥ \$1.25 kw/Month
	Renewable Energy Credits	No Limit	≤ 90 days	≤ MFP R.E.C. Rating	≥ \$10 Mw/Hour
	Bilateral Forward transactions	No Limit	≤ 90 days	< MFP Capacity <u>Rating</u>	No Min/Max
	Carbon Free Energy Certificates	No Limit	≤ 90 days	≤ MFP Annual Carbon Free Output	≥ \$.50 Mw/Hour

# Energy Risk Management Policy

## Appendix E – PCWA Energy Risk Management Organizational Structure





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M E M O R A N D U M

**TO:** Middle Fork Project Finance Authority Board of Directors

**FROM:** Joseph H. Parker, CPA, Treasurer

**DATE:** January 2, 2020

**RE:** Approve the Authority's Investment Policy for use during 2020

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**Recommendation:**

Approve Resolution 20-\_\_ adopting the Authority's Investment Policy.

**Discussion:**

In accordance with California Government Code, the Authority's Investment Policy is required to be reviewed and approved by the Board of Directors during the first quarter of each year for use during that year.

In 2014, the Authority's investment policy was revised and updated to reflect certain changes to government code, reporting requirements and other regulations, since then the Policy has been annually approved by the Board with only minor revisions in 2019.

The existing Authority Investment Policy (adopted January 17, 2019) has been reviewed by the Finance team noting no need for revisions. The 2020 Investment Policy is presented for the Board's consideration with an associated resolution for review and approval for Authority use during 2020.

1                                   **RESOLUTION NO. 20-\_\_\_\_ OF THE BOARD OF DIRECTORS**  
2                                   **OF THE MIDDLE FORK PROJECT FINANCE AUTHORITY ADOPTING**  
3                                   **AN INVESTMENT POLICY**

4           WHEREAS, Section 53646(a)(2) of the California Government Code requires the treasurer or  
5 chief fiscal officer of the local California agency to annually submit to the legislative body of that  
6 Authority a statement of investment policy for that body’s consideration; and

7           WHEREAS, the Authority’s chief fiscal officer, its Treasurer, has submitted such a statement  
8 of investment policy to the Board, which this Board has considered; and

9           WHEREAS, this Board desires to incorporate this Authority’s investment policy, which is  
10 based upon the material submitted to it by the Treasurer in the statement of investment policy;

11           NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the Middle Fork Project  
12 Finance Authority that this Board hereby adopts the investment policy for use in 2020 as set forth in  
13 the attached.

14           The foregoing resolution was duly passed at a regular meeting of the Board of Directors of the  
15 Middle Fork Project Finance Authority held on January 16, 2020 by the following vote on roll call:

- 16           AYES DIRECTORS:  
17           NOES DIRECTORS:  
18           ABSENT DIRECTORS:

19           Signed and approved by me after its passage this 16<sup>th</sup> day of January 2020.

20           \_\_\_\_\_

21           Chair, Board of Directors

22           MIDDLE FORK PROJECT FINANCE AUTHORITY

23           ATTEST:

24           \_\_\_\_\_

25           Clerk

26           MIDDLE FORK PROJECT FINANCE AUTHORITY

27

28

# **Middle Fork Project Finance Authority**

## **Investment Policy**

### **Policy Statement**

This Policy is intended to provide guidelines for the prudent investment of the Middle Fork Project Finance Authority's (Authority) funds and outline the policies for maximizing the efficiency of the Authority's cash management system. The ultimate goal is to enhance the economic status of the Authority consistent with the prudent protection of the Authority's investments. This Investment Policy has been prepared in conformance with all pertinent existing laws of the State of California including California Government Code Sections 53600, *et seq.* The Authority is a Joint Exercise of Power organization established to serve mutual interest of the County of Placer and Placer County Water Agency, approve future electrical sales, maintain appropriated reserve funds and distribute net revenues.

### **Scope**

This Policy covers all funds and investment activities of the Authority, including the proceeds of certain finance programs, which are invested in accordance with provisions of their specific indentures. These funds are defined and detailed in the Authority's Annual Financial Statements and include any new funds created unless specifically excluded by Authority management and the Board of Directors.

### **Prudent Person Standard**

The Authority operates its investment portfolio under the Prudent Investor Standard (California Government Code Section 53600.3) which states, "When investing, reinvesting, purchasing, acquiring, exchanging, selling or managing public funds, a trustee shall act with care, skill, prudence and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the agency, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the organization".

# Middle Fork Project Finance Authority

## Investment Policy

### Investment Objectives

When investing, reinvesting, purchasing, acquiring, exchanging, selling or managing the Authority's funds, the primary objective is to safeguard the principal of the funds. The secondary objective is to meet the liquidity needs of the Authority. The third objective is to achieve a market rate of return on invested funds. It is the policy of the Authority to invest public funds in a manner to maintain the maximum security and obtain the market rates of return over interest rate cycles.

#### (a) Safety of Principal

Safety of principal is the foremost objective of the Authority. Investment transactions shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio, by ensuring losses are avoided whether they arise from security defaults, institution default, broker-dealer default, or erosion of market value of securities. The Authority shall mitigate the risk to the principal of invested funds by limiting credit and interest rate risks.

Credit risk is the risk of loss due to the failure of a security's issuer or backer. Interest rate risk is the risk that the market value of the Authority's portfolio will fall due to an increase in general interest rates.

#### 1) Credit risk will be mitigated by:

- (a) Limiting investments to only the most creditworthy types of securities;
- (b) Pre-qualifying the financial institutions with which the Authority will do business; and
- (c) Diversifying the investment portfolio so that the potential failure of any one issue or issuer will not place an undue financial burden on the Authority.

#### 2) Interest rate risk will be mitigated by:

- (a) Structuring the Authority's portfolio so that securities mature to meet the Authority's cash requirements for ongoing obligations,

# **Middle Fork Project Finance Authority**

## **Investment Policy**

thereby reducing the possible need to sell securities on the open market at a loss prior to their maturity to meet those requirements; and

- (b) Managing the overall average maturity of the portfolio so as not to exceed 3 ½ years.

### **(b) Liquidity**

Availability of sufficient cash to pay for current expenditures shall be maintained. An adequate percentage of the portfolio shall be maintained in liquid short-term investment pools or securities, which can be converted to cash as necessary to meet disbursement requirements. Since cash requirements cannot always be anticipated, sufficient investments in securities with active secondary or resale markets shall be utilized. These securities will have a low sensitivity to market risk. The Local Agency Investment Fund (LAIF) and/or County Pool may also be used as liquid investments. The cash management system of the Authority shall be designed to accurately monitor and forecast expenditures and revenues to insure the investment of monies to the fullest extent possible.

### **(c) Rates of Return**

Only after the first two objectives of safety and liquidity have been met, the third objective is yield on investments. The investment portfolio shall be designed to attain a market average rate of return throughout economic cycles, taking into account the Authority's risk constraints, the composition and cash flow characteristics of the portfolio, and applicable laws.

### **Delegation of Authority**

The Board of Directors hereby delegates management authority and responsibility for implementing the Investment Policy to the Authority's Treasurer who shall establish written procedures for the operation of the investment program consistent with this Investment Policy and the requirements of applicable laws. The responsibility to

# **Middle Fork Project Finance Authority**

## **Investment Policy**

execute investment transactions may be further delegated under the direction of the Authority's Treasurer. No person may engage in an investment transaction except as provided under the terms of this Policy established by the Board of Directors. The Authority's Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the internal activities and that of any external investment advisors.

All participants in the investment process shall act, as custodians of the public trust and all investment officials shall recognize that the investment portfolio is subject to public review and evaluation. The overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust. All investment related activity shall be done in conformance with this Policy and all applicable State and Federal laws and regulations.

### **Ethics and Conflicts of Interest**

Officers and employees involved in the investment process shall refrain from personal business activity that could conflict with proper execution of the investment program, or which could impair their ability to make impartial investment decisions. Employees and investment officers shall disclose any financial interest in financial institutions that conduct business with the Authority, and they shall further disclose any personal financial / investment positions that could be related to the performance of the Authority's portfolio. Employees and officers shall subordinate their personal investment transactions to those of the Authority, particularly with regard to the timing of purchases and sales, and shall avoid transactions that might impair public confidence.

### **Authorized Institutions, Financial Brokers/Dealers and Investment Advisors**

The Authority's Treasurer shall establish and maintain a list of authorized financial institutions, brokers/dealers and investment advisors. Only those broker/dealers and investment advisors authorized by the Authority's Treasurer shall provide services to the Authority.

For authorized financial institutions providing depository and investment services to the Authority, the Authority's Treasurer or designee shall perform an annual review of the

# **Middle Fork Project Finance Authority**

## **Investment Policy**

financial condition and registrations of the authorized institutions including their annual audited financial statements.

For authorized brokers/dealers and investment advisors providing investment services to the Authority, annually, or as this Policy is updated, the Authority shall send a copy of its current investment policy to authorized broker/dealers and investment advisors requesting confirmation, in writing, that the Authority's Investment Policy has been read and reviewed by the person(s) handling the Authority's account and that they agree to comply with the Policy's provisions when recommending, selling, advising or providing service on the Authority investments.

### **(a) Depositories**

In selecting depositories (banks or savings & loans), the creditworthiness of institutions shall be considered and the Authority's Treasurer shall conduct a comprehensive review of prospective depositories' credit characteristics and financial history. Authority funds in excess of the FDIC insured amount shall be invested (deposits and/or certificates of deposit) only in commercial banks and savings & loans with a bank financial strength rating of "A" or better by Moody's Investor Service or equivalent rating by another Nationally Recognized Statistical Rating Organization (NRSRO). Qualifications and minimum requirements for depositories shall be established by the Authority's Treasurer and will be provided to any institution seeking to conduct business with the Authority.

Any institution meeting the Authority's required criteria will be eligible for placement of public deposits by the Authority, subject to approval by the Authority's Treasurer. A written depository contract is required with all institutions that will hold Authority deposits (Contract for Deposit of Moneys). As deemed necessary by the Authority's Treasurer, reviews of unaudited quarterly financial data may be conducted for institutions on the Authority's approved list. Any institution falling below the Authority's established minimum criteria shall be removed from the approved list, no new deposits may be placed with that institution and all funds remaining shall be withdrawn as the deposits mature.

# **Middle Fork Project Finance Authority**

## **Investment Policy**

The financial institution providing the Authority with its primary banking services has additional qualifications and minimum requirements based on the Authority's banking needs.

The Authority's Treasurer has established the following minimum qualifications for a financial institution providing banking services, upon which additional qualifications may be required:

- Federal or State of California charter financial institution [Member of Federal Reserve].
- Qualified depository of public funds to ensure the collateralization requirements for governmental entities are met.
- Experienced with providing banking services to similar sized and type governmental agencies to ensure the Authority's banking needs will be met and possesses familiarity with reporting and other banking requirements for governmental agencies.
- Sufficiently capitalized to accommodate the Authority's cash needs including a minimum \$1 million daylight overdraft facility.
- Electronic capabilities to meet the Authority's current banking needs.
- Access to all Federal Reserve Bank services including direct clearing with the Federal Reserve Bank.
- Banking branch in local area.
- State of California depository.

### **(b) Brokers and Dealers**

All brokers and dealers that desire to become authorized to do business with the Authority and qualified bidders for investment transactions for the Authority must complete and sign a "Broker/Dealer Questionnaire" and submit related documents relative to eligibility. This includes current audited financial statements, proof of State of California registration, proof of FINRA (Financial Industry Regulatory Authority) registration and a certification they have reviewed the Authority's Investment Policy and agree to comply with its provisions. The Authority's Treasurer may establish any additional criteria deemed appropriate to evaluate and approve any financial services provider. The selection process for broker-dealers shall be open to both "primary dealers" and

# Middle Fork Project Finance Authority

## Investment Policy

“secondary/regional dealers” that qualify under Securities and Exchange Commission Rule 15c3-1 (Uniform Net Capital Rule). The provider’s representative must be experienced in institutional trading practices and familiar with the California Government Code as it relates to investments by a public entity.

### **(c) Investment Advisors**

The Authority’s Treasurer may engage the services of outside professionals for evaluation and advice regarding the Authority’s investment program. An authorized investment advisor may provide investment services, which may include facilitating trade executions, at the specific direction of the Authority’s Treasurer or designee. Advisors (service providers) shall be subject to the provisions of this Investment Policy and must act in the best interest of the Authority in the capacity of a fiduciary.

### **Authorized and Permitted Investments**

The Authority is provided a broad spectrum of eligible investments under California Government Code Sections 53600–53609 (authorized investments), 53630-53686 (deposits and collateral) and 16429.1 (Local Agency Investment Fund). The Authority may choose to restrict its permitted investments to a smaller list of securities that more closely fits the Authority’s cash flow needs and requirements for liquidity. If a type of investment is added to the Government Code list, it shall not be added to the Authority’s Authorized Investment List until this Policy is amended and approved by the Board of Directors. If a type of investment permitted by the Authority should be removed from the Government Code list, it shall be deemed concurrently removed from the Authority’s Authorized Investment List, but existing holdings may be held until maturity.

One of the purposes of this Investment Policy is to define what investments are authorized and permitted for the Authority to purchase and hold. This Policy restricts the Authority’s investments to a subset of those eligible and allowable under California Government Code. Additionally, this Policy further restricts the maximum percentage by investment types over that allowable under California Government Code. ***If a type of security is not specifically authorized by this Policy, it is not an authorized and permitted investment.***

# Middle Fork Project Finance Authority

## Investment Policy

This subset listing of authorized and permitted securities with specific limitations is determined to more closely fit the Authority's risk tolerance and requirements for liquidity. The following table lists the Authority's authorized and permitted investments and certain limitations thereon provided by this Investment Policy:

### Authorized and Permitted Investments

Investment Type	Maximum Maturity	Maximum % Holdings	Maximum % per Issuer*	Minimum Rating**
Securities of the U.S Government	5 year	100%	100%	N/A
Securities of the U.S. Government Agencies and Instrumentalities - Primary (FFCB, FHLB, FNMA and FHLMC )	5 year	100%	50%	N/A
Securities of the U.S. Government Agencies and Instrumentalities - Secondary	5 year	50%	30%	N/A
Registered State Warrants, Treasury Notes, or Bonds of the State of California	5 year	25%	10%	N/A
Registered Treasury Notes or Bonds of Other States in the United States	5 year	25%	10%	N/A
Bonds, Notes, Warrants, or Other Evidences of Indebtedness of any Local Agency within the State of California	5 year	30%	10%	AA
Commercial Paper	270 days	25%	5%	A-1/P-1 plus A long term
Corporate or Medium-Term Notes	5 year	30%	5%	Aa or AA
Money Market Mutual Funds	N/A - 2(A)7 Eligible	20%	5%	AAA/AAA
Bonds of Supranationals	5 year	15%	5%	AA
Negotiable Certificates of Deposit	1 year	20%	5%	N/A
Repurchase Agreements	1 year	15%	5%	N/A
Bankers' Acceptance	180 days	25%	5%	A
Placer County Treasurer's Investment Pool	N/A	Max permitted by County Treasurer	Max permitted by County Treasurer	N/A
Local Agency Investment Fund	N/A	Max permitted by State Treasurer	Max permitted by State Treasurer	N/A
Collateralized Bank Deposits	5 year	100%	50%	N/A

\*Percentages will be in compliance if within limits at time of purchase.

\*\*Rating category are inclusive of rating modifiers such as "+/-" or numbers from one NRSRO unless two ratings are noted.

# **Middle Fork Project Finance Authority**

## **Investment Policy**

A description of the authorized and permitted investments, which for certain securities includes additional limitations as provided in the following:

**(a) Securities of the U.S. Government**

Obligations issued by the United States Treasury and backed by the “full faith and credit” of the Federal government. These securities are in the form of U.S. Treasury notes, bills, certificates of indebtedness and bonds. (Legal Authority - Government Code Section 53601(b))

**(b) Securities of the U.S. Government Agencies and Instrumentalities - Primary**

Obligations issued by the following four Federal Government agencies and Government Sponsored Enterprises (U.S. Instrumentalities): Federal Farm Credit Bank (FFCB), the Federal Home Loan Bank (FHLB), the Federal National Mortgage Association (FNMA), and the Federal Home Loan Mortgage Corporation (FHLMC). Such securities are obligations of the Federal agencies or United States Government-Sponsored Enterprises. (Legal Authority – Government Code Section 53601 (f)).

**(c) Securities of the U.S. Government Agencies and Instrumentalities - Secondary**

Obligations issued by Federal Government agencies and Government Sponsored Enterprises (U.S. Instrumentalities), other than those four noted as Primary in the section above (b). Such securities are obligations of the Federal agencies or United States government-sponsored enterprises. (Legal Authority – Government Code Section 53601(f)).

**(d) Registered State Warrants, Treasury Notes or Bonds of the State of California**

Registered State warrants, treasury notes or bonds issued by the State of California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by the state or by a department, board, agency, or authority of the state. (Legal Authority – Government Code Section 53601(c)).

# **Middle Fork Project Finance Authority**

## **Investment Policy**

**(e) Registered Treasury Notes or Bonds of Other States in the United States**

Registered treasury notes or bonds issued by any of the other 49 states in addition to the State of California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state or by a department, board, agency, or authority of any of the other 49 states, in addition to California. (Legal Authority – Government Code Section 53601(d)).

**(f) Bonds, Notes, Warrants, or Other Evidences of Indebtedness of any Local Agency within the State of California**

Bonds, notes, warrants, or other evidences of indebtedness of any local agency within the State of California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled or operated by a local agency, or by a department, board, agency or authority of the local agency. (Legal Authority - Government Code Section 53601(e)).

**(g) Commercial Paper**

Commercial paper issued by corporations to meet short term funding needs with a maturity date of less than 270 days from the issue date. Investments are restricted to only “prime” quality commercial paper with the highest ranking or of the highest letter and numerical rating as provided for by a NRSRO. (Legal Authority - Government Code Section 53601(h)). Per California Government Code Section 53601 (h), the entity that issues the commercial paper shall meet all of the following conditions in either A or B below:

- A. The entity shall (1) be organized and operating in the United States as a general corporation, (2) have total assets in excess of five hundred million dollars (\$500,000,000) and (3) have debt other than commercial paper, if any, that is rated “A” or higher by a NRSRO.
- B. The entity shall (1) be organized within the United States as a special purpose corporation, trust, or limited liability company, (2) have program wide credit enhancements, including, but not limited to, over

# Middle Fork Project Finance Authority

## Investment Policy

collateralization, letter of credit or surety bonds and (3) have commercial paper that is rated “A -1” or higher, or the equivalent, by a NRSRO.

### (h) Corporate or Medium-Term Notes

Corporate or medium-term notes are obligations of a domestic corporation or depository institution with a minimum credit rating of “Aa” by Moody’s Investor Service or equivalent rating by another NRSRO at the time of purchase. If the credit rating of a security is subsequently downgraded below the minimum rating level for a new investment of that security, the Authority’s Treasurer shall evaluate the downgrade on a case-by-case basis in order to determine if the security should be held or sold. The Authority’s Treasurer will apply the general objectives of safety, liquidity, yield and legality to make the decision. (Legal Authority-Government Code Section 53601(k)).

### (i) Money Market Mutual Funds

Money market mutual funds qualifying for Authority investment must restrict their portfolios to issues approved by the same state investment statute that defines investment alternatives. In addition, these money market mutual funds must adhere to Federal statutes regarding the size of the money market mutual fund and its safety, must attain the highest ranking of two of the three highest ranking NRSRO and must retain an investment advisor registered with the Securities and Exchange Commission with not less than five years’ experience investing assets of at least five hundred million dollars. The money market mutual funds must invest solely in investments, which the Authority itself could legally purchase. (Legal Authority-Government Code Section 53601(l)).

### (j) Bonds of Supranationals

Senior unsecured unsubordinated obligations (United States dollar denominated) issued by or unconditionally guaranteed by one of the three supranational banking groups: International Bank for Reconstruction and Development (World Bank or IBRD), International Finance Corporation (IFC), and Inter-American Development Bank (IADB). Supranational banks are formed by a group of countries through an international treaty with specific objectives such

# **Middle Fork Project Finance Authority**

## **Investment Policy**

as fighting poverty or promoting economic development and have been incorporated into U.S. Federal Law by Congressional Acts. Investments shall be rated “AA” or better by an NRSRO and have a remaining maturity of five years or less. (Legal Authority – Government Code Section 53601(q)).

### **(k) Negotiable Certificates of Deposit**

Negotiable certificates of deposit issued by a nationally or state-chartered bank or a federal association, a state or Federal credit union, or by a federally licensed or state licensed branch of a foreign bank. The term of negotiable certificates of deposit is restricted for a minimum of 7 days and a maximum of one year. (Legal Authority – Government Code Section 53601(i)).

### **(l) Repurchase Agreements**

Investments in repurchase agreements or securities lending agreements  
Repurchase Agreement is the purchase of a security pursuant to an agreement by which the counter party will deliver the underlying security by book entry, physical delivery or by a third party custodial agreement. Repurchase Agreements may only be made with banks and primary dealers with which the Authority has entered into a Master Repurchase Agreement modeled after the Public Securities Associations’ Master Repurchase Agreement. (Legal Authority – Government Code Section 53601 (j)).

### **(m) Bankers’ Acceptances**

Bankers’ acceptances are short-term debt instruments issued by a company that is guaranteed by a commercial bank. Bankers Acceptances limited to banks with a bank financial strength rating of “A” by Moody’s Investor Service or equivalent rating by another Nationally Recognized Statistical Rating Organization. (Legal Authority - Government Code Section 53601(g)).

# **Middle Fork Project Finance Authority**

## **Investment Policy**

### **(n) Placer County Treasurer's Investment Pool**

The Placer County Treasurer Investment Pool is governed pursuant to Government Code Sections 53600. In order to deposit investment funds into the Placer County Treasurer's Investment Pool, the Authority would have to adopt a Resolution. The deposit of funds into the pool by voluntary agencies is strictly for long-term investments purposes, funds that would remain invested for an extended period of time. With a minimum of 24-hour notice, two to four withdrawals a month are allowed, with the Authority's Treasurer having discretion over withdrawals. Withdrawals in excess of \$200,000 may need additional notice. (Legal Authority-Pursuant to Resolution).

### **(o) Local Agency Investment Fund (LAIF)**

The Local Agency Investment Fund (LAIF) is a special fund in the California State Treasury created and governed pursuant to Government Code Sections 16429.1 *et seq.* Investments in LAIF are limited to the maximum amount as specified by LAIF. Principal amount withdrawal of \$10 million or greater need 24 hour notice and less than \$10 million may be withdrawn the same day. The fees charged by LAIF are limited by statute. (Legal Authority – Government Code Section 16429.1)

### **(p) Collateralized Bank Deposits**

These are authorized by California Government Code Section 53637.

## **Master Repurchase Agreements**

The Authority may invest in overnight and term repurchase agreements (Government Code Section 53601(j)) with Primary Dealers of the Federal Reserve Bank of New York or with nationally or state chartered bank with a significant relationship with the Authority. This agreement will be modeled after the Public Securities Associations Master Repurchase Agreement.

All collateral used to secure this type of transaction is to be delivered to a third party prior to release of funds. The third party shall have an account in the name of the

# **Middle Fork Project Finance Authority**

## **Investment Policy**

Middle Fork Project Finance Authority. The market value of securities used as collateral for repurchase agreements shall be monitored on a daily basis and shall not be permitted to fall below a minimum of 102 percent of the value of the repurchase agreement. Collateral shall not have maturities in excess of five years. The right of substitution shall be granted, provided that permissible collateral is maintained.

In order to conform with provisions of the Federal Bankruptcy Code which provides for the liquidation of securities held as collateral for repurchase agreements, the only securities acceptable as collateral shall be securities that are direct obligations of and guaranteed by the U.S. Government, U.S. Government Agencies or Government Sponsored Enterprises (U.S. Instrumentalities) securities as permitted under this Policy. The Authority will maintain a first perfected security interest in the securities subject to the repurchase agreement and shall have a contractual right to liquidation of purchased securities upon the bankruptcy, insolvency or other default of the counter party.

### **Investment Pools**

An investigation of any investment pool or money market mutual fund is required prior to investing and on an annual basis. The investigation shall, at a minimum, obtain the following information:

- A description of interest calculations and how it is distributed, and how gains and losses are distributed.
- A description of how securities are safeguarded (including the settlement process) and how often the securities are marked to market and how often an audit is conducted.
- A description of who may invest in the program, how often, what size deposits and withdrawals are permitted.
- A schedule for receiving statements and portfolio listings.
- Does the pool/fund maintain a reserve or retain earnings or is all income after expenses distributed to participants?
- A fee schedule, which also discloses when and how fees are assessed.
- Determining if the pool or fund is eligible for bond proceeds and/or will it accept such proceeds.

# Middle Fork Project Finance Authority

## Investment Policy

The purpose of this investigation is to determine the suitability of a pool or fund in relation to this Investment Policy and evaluate the risk of placing funds with that pool or fund.

### **Collateralization**

A financial institution must provide coverage for at least 110 percent of all Authority deposits that are placed in the institution. Acceptable pooled collateral requirements are governed by California Government Code Section 53651. Although permitted by California Government Code (Section 53651(m)), real estate mortgages are not considered acceptable collateral for Authority deposits. All banks are required to provide the Authority with a regular statement of pooled collateral. This report will state that they are meeting the 110 percent collateral rule (Government Code Section 53652(a)), a listing of all collateral with location and market value, plus an accountability of the total amount of deposits secured by the pool.

The market value of the collateral must not fall below 110 percent of the value of the deposit(s) at any time. The Authority will maintain a first perfected security interest in the securities pledged against the deposit and shall have a contractual right to liquidation of pledged securities upon the bankruptcy, insolvency or other default of the counter party.

As per section 53638 of the California Government Code, any deposit shall not exceed the total paid-up capital and surplus of any depository bank, nor shall the deposit exceed the total net worth of the depository institution.

Deposits that are within the Federal Deposit Insurance Corporation (FDIC) insured limit amounts are exempt from the Authority's collateralization and minimum bank financial strength rating requirements.

### **Safekeeping and Custody**

All securities owned by the Authority shall be held in safekeeping by a third party bank trust department acting as agent for the Authority under the terms of a custody agreement executed by the bank and the Authority. **All securities shall be received and delivered using standard delivery versus payment (DVP) procedures.** The third party bank trustee agreement must comply with Section 53608 of the California Government

# **Middle Fork Project Finance Authority**

## **Investment Policy**

Code. No outside broker/dealer or advisor may have access to Authority funds, accounts or investments and any transfer of funds must be approved by the Authority's Treasurer or his designee. Investments in investment pools will be held by the Pool administrator.

### **Diversification and Risk**

The Authority recognizes that investment risks can result from issuer defaults, market price changes or various technical complications leading to temporary illiquidity. To minimize the Authority's exposure to these types of risk, the portfolio should be diversified among several types of institutions, instruments and maturities. The Authority's Treasurer shall minimize default risk by prudently selecting only instruments and institutions, which at the time of placement have been evaluated for their financial viability and compliance with this Policy. Risk shall also be managed by subscribing to a portfolio management philosophy that helps to control market and interest rate risk by matching investments with cash flow requirements. In the event of a default by a specific issuer, the Authority's Treasurer shall evaluate the liquidation of securities having comparable credit risks. Diversification strategies shall be established and reviewed quarterly by the Authority's Treasurer.

No individual investment transaction shall be undertaken which jeopardizes the total capital position of the overall portfolio, therefore the overall portfolio limits by issuer have been established in the Authorized and Permitted Investments section of this Policy.

### **Maximum Maturities**

Every effort will be made to match investment maturities to cash flow needs. Matching maturities with cash flow needs will reduce the need to sell securities prior to maturity, thus reducing market risk. Unless matched to a specific requirement and approved by the Board of Directors, no investment may be made with maturity greater than 5 years. If greater than 5-year maturity investments are approved and allowable by the Board of Directors, purchases of the investment instruments exceeding the five-year maturity shall not be made until after said approval.

# **Middle Fork Project Finance Authority**

## **Investment Policy**

### **Internal Control and Review**

The Authority's Treasurer will maintain a system of internal controls to address the following and is not limited to these areas:

- Maintain third-party custodial safekeeping
- Obtain written confirmation of authorized trades from appropriate parties
- Separation of transaction authority from accounting and record keeping
- Monitor for legal compliance

In accordance with California Government Code, the Authority's Treasurer shall annually submit this Investment Policy to the Board of Directors for its review and approval during the first quarter of each fiscal year.

This Investment Policy shall be reviewed periodically by the Authority's Treasurer as necessary and any recommended revisions shall be submitted as needed to the Board of Directors in order to insure consistency and its relevance to current law, and financial conditions and economic trends.

In conjunction with the annual financial statement audit, the external auditors shall review the investments and general activities associated with the investment program to evaluate compliance with this Investment Policy.

### **Reporting**

The Authority's Treasurer shall submit monthly investment reports (Treasurer's Investment Report) to the Authority's Board of Directors at their regular quarterly Board meeting. The Treasurer's Investment Report shall include information about the investment of all funds in the custody of the Authority. This report shall include all items listed in Section 53646(b) of the California Government Code.

These reports will also include the following information about the investment of all funds:

- A. Statement of the portfolio's compliance to the Authority's adopted Investment Policy or manner in which the portfolio is not in compliance.

# **Middle Fork Project Finance Authority**

## **Investment Policy**

- B. Statement regarding the ability to meet the Authority's anticipated cash flows (scheduled expense requirements) for the next six months.
- C. Portfolio summary by investment type and the percentage of each investment type's book value in relation to the portfolio total.
- D. A listing of all individual investments by type and issuer held at the end of the reporting period, including the par value, market value, book value and maturity date of each investment.
- E. The source of the individual investment market values.
- F. A listing of the dollar weighted yield to maturity of the Authority's investments.
- G. The Portfolio's effective rate of return.

The Treasurer's Investment Report shall include a monthly transaction report stating the investment transactions (purchases, deposits, redemptions or withdrawals) that occurred in the past calendar month, as required by Government Code Section 53607.



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M E M O R A N D U M

**TO:** Middle Fork Project Finance Authority

**FROM:** Ryan Cline, Director of Energy Marketing, PCWA

**DATE:** January 8, 2020

**RE:** January 16, 2020 Energy Marketing Update Report

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RECOMMENDATION

Information only, no action required.

BACKGROUND

Staff will provide a presentation to review 2019 Middle Fork Project energy market fundamentals and their associated impacts on 2019 revenue. This presentation will also report on 2020 revenue forecast.



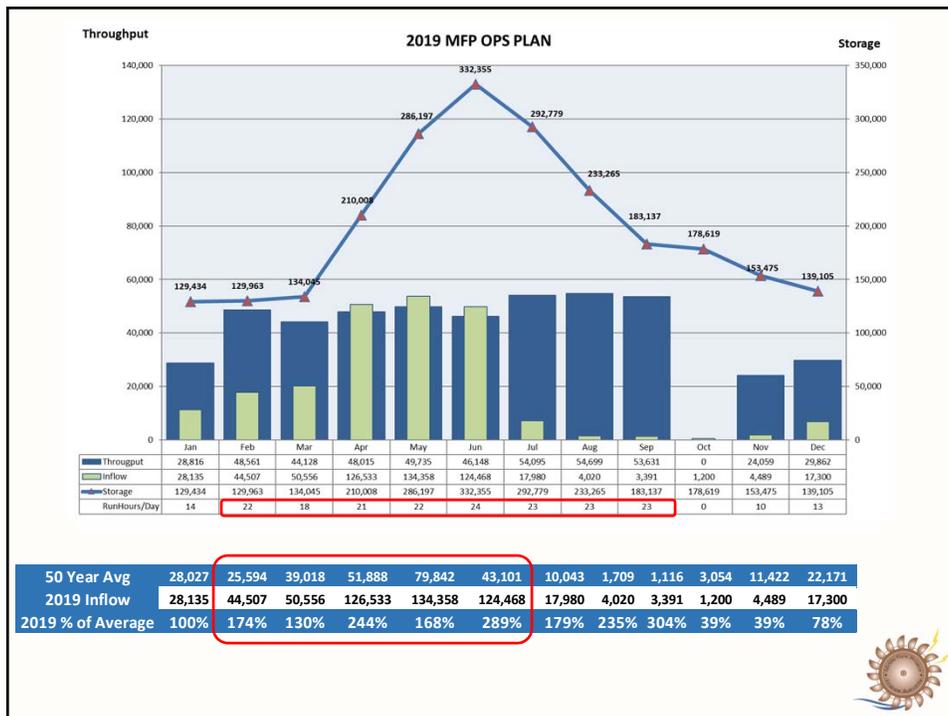
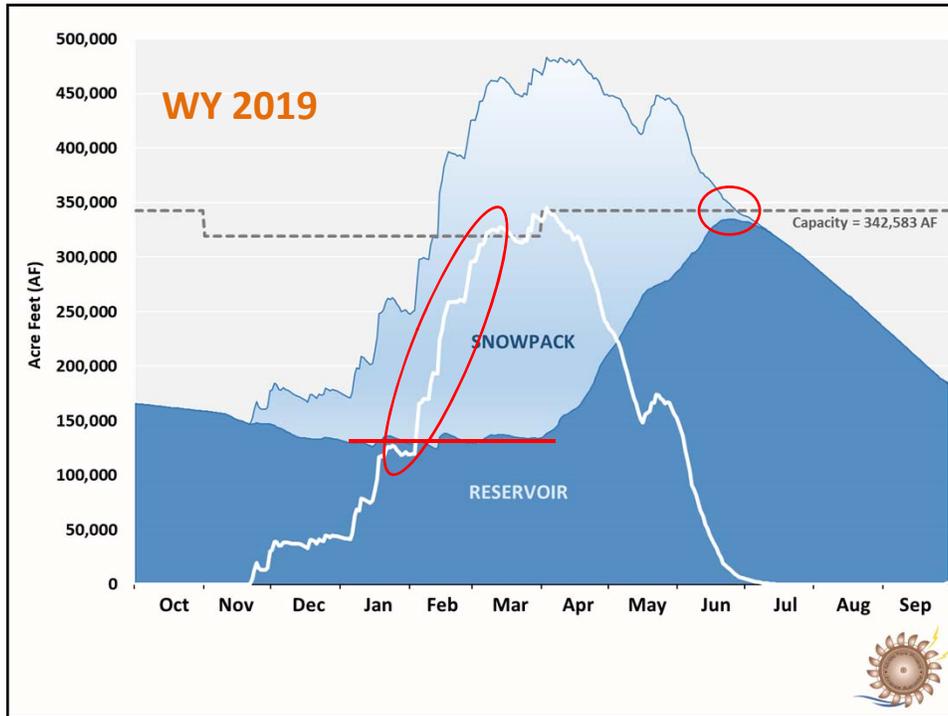
MIDDLE FORK PROJECT  
FINANCE AUTHORITY

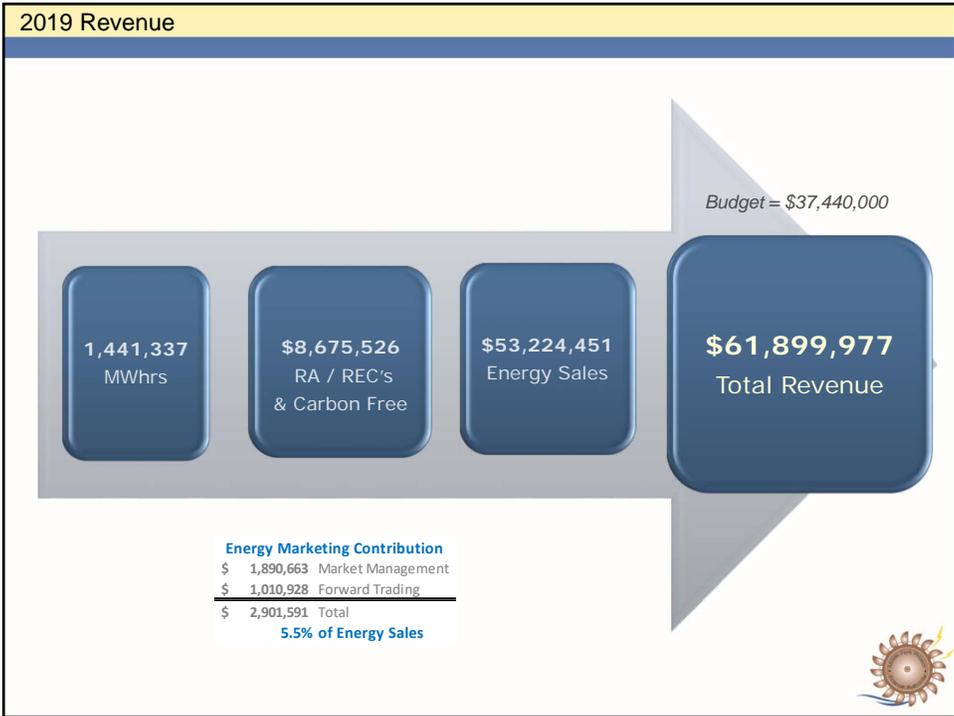
## Energy Marketing Report

January 16, 2020

# 2019







# 2020



## 2020 Energy Contracts

Resource Adequacy (100% subscribed)

• **\$5,628,304**

Renewable Energy Credits

• **\$1,225,000**

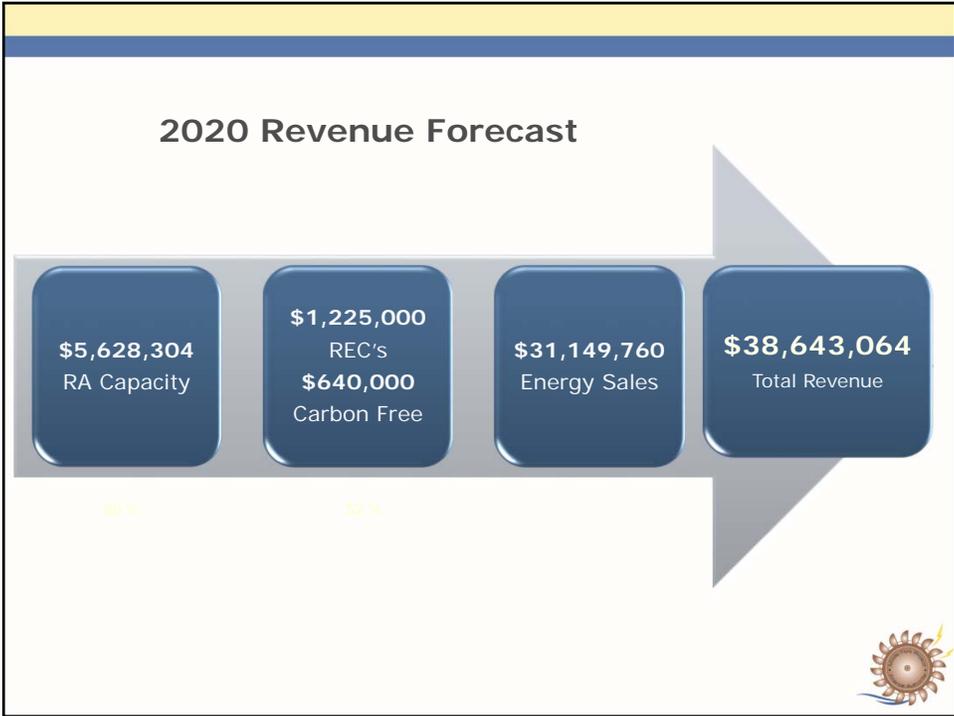
Carbon Free Energy

• **\$640,000**

Energy Contracts Total Revenue

• **\$7,493,304**







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M E M O R A N D U M

**TO:** Board of Directors

**FROM:** Joseph H. Parker, CPA, Authority Treasurer

**DATE:** January 8, 2020

**RE:** Preliminary 2019 Year-End Budget Report

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**Recommended Action:**

Receive 2019 Budget and Preliminary Schedules for the fiscal year-end December 31, 2019.

**Quarter 4 Preliminary Report**

The Authority's fiscal year-end is December 31, however, the fiscal year-end closing does not occur until early to mid-February of each year. Thus, the information presented within this report is considered "**Preliminary**" and is subject to change with the completion of the year-end accounting close process. Historically, accruals during the year-end process have resulted in the additional recording of expenditures of up to \$2 million. The Final Year-End Budget and Actual Report will be prepared and presented at the April 2020 Authority Board meeting pursuant to the Authority's General Financial Policies, Section 3.3.2 (5).

**Overview – Preliminary 2019 Actual Results**

2019 preliminary Power Sales revenue is \$61.7 million, largely an outcome of a higher than average hydrologic year and associated generation from the Middle Fork Project. Investment performance has produced an additional \$1.8 million, bringing total preliminary revenue to \$63.5 million. Preliminary operating expenditures and capital appropriations total \$44.8 million resulting in a preliminary revenue over expenditures and capital projects of \$18.7 million. In addition, since 2019 results are funded to reserves in Q1 2020 after the year-end close, the \$4.1 million 2020 adopted budget reserve use [Board action on October 10, 2019] has been appropriated per Policy to be funded prior to 2019 Capital Reserve funding, therefore reducing the preliminary revenue over expenditures and capital projects to \$14.6 million.

Based on these preliminary amounts, the \$14.6 million is sufficient to fully fund the Capital Reserve to the target level of \$20.0 million while also replenishing \$7.8 million of capital reserve use in 2019.

### **Revenue**

The year's hydrology and associated generation, coupled with higher than average energy prices early in the year resulted in the 2019 preliminary Power Sales revenue of \$61.7 million, or 65% above the \$37.4 million 2019 Power Sales budget, on generation of 1,441,000 MWh. For reference, 2019's generation totaled 20,000 MWh more than in 2017, the wettest year on record. Additionally, the Agency's Energy Marketing group began transacting in the forward energy market on behalf of the Authority. As a result, forward energy sales contributed \$1.0 million toward 2019 preliminary Power Sales revenue. In addition, interest income was \$1.8 million for a favorable variance of \$1.6 million above the budget amount. The total revenue variance is positive by \$25.9 million, compared to the budget amount of \$37.6 million.

### **Expenditures**

Over the next month or so, the year-end closing process of recording the 2019 accruals will continue, thus these preliminary amounts will be updated to the final audited amounts that will be presented at the April 2020 Board meeting.

### **Operating**

The Authority's preliminary 2019 budget to actual departmental expenditures are favorable compared to the adjusted budget by \$5.8 million, although expense accruals will reduce this favorable total as the year-end closing process continues into early 2020. Expenditure savings are most notably from the postponement of implementation costs into 2020 related to the FERC license issuance. Additionally, lower than expected costs for consulting, facilities repair & maintenance, cost share partnerships, in addition to unspent routine capital funds, are also factors which contribute to this preliminary favorable variance.

### **Capital Projects**

During 2019, the Agency's Power Division made significant progress on many projects, including the following, which contributed the most to 2019 capital project expenses (preliminary):

- Hell Hole Dam Core Raise \$3.55 million
- Communications Upgrade \$1.41 million
- Sediment Removal \$0.71 million
- Oxbow Powerhouse Governor Upgrade \$0.57 million
- Middle Fork PH Interbay Road Slope Stability \$0.49 million

### **Preliminary Year-End Reserve Analysis**

The reserve balance at the beginning of the year totaled \$45.1 million, comprised of fully funded Operating and Emergency Reserves, totaling \$25.8 and \$2.0 million, respectively, as well as \$17.3 million in Capital Reserves, approximately \$2.7 million below the target reserve level of \$20.0 million.

In April 2019, the Authority Board approved the use of the Capital Reserve totaling \$7.8 million for the Hell Hole Dam Core Raise Project's redesign and expanded scope. This brings the project's budget to \$18.9 million, an amount expected to be sufficient for the completion of the project. This use of reserves reduced the balance to \$37.3 million resulting in \$10.5 million needed to fully fund the Capital Reserve. The preliminary results of revenue over expenditures and capital projects is currently sufficient to fund the entire \$10.5 million towards the Capital Reserves, bringing it to the fully funded target level of \$20.0 million, with total reserves amounting to \$47.8 million.

### **2019 Quarter 4 Budget and Preliminary Schedules**

Attached for the Board's information are the 2019 Budget and Preliminary schedules for the year-ended December 31, 2019. As discussed above, the Actual schedules are preliminary and the 2019 final amounts will be presented at the Authority Board meeting in April 2020.

**MFP Finance Authority Budget Schedule** – This schedule summarizes the 2019 adjusted budgets, budget amendments and the adjusted December 31, 2019 year-to-date budget.

**MFP Finance Authority Budget and Preliminary Schedule with Variances & Explanations** – This schedule summarizes the MFP Authority financial activity for the year-ended December 31, 2019 with the adjusted year-to-date budget and year-to-date actual activity noting the variances between the two amounts with referenced explanations.

**MFP Finance Authority Reserve Schedule** – This schedule summarizes the MFP Finance Authority reserve account activity through December 31, 2019 with the preliminary results presented herein.

**PCWA MFP Capital Projects** – This schedule summarizes the project-to-date budget and expenses through December 31, 2019. PCWA manages and administers these projects and are included here because they are funded by the MFP Finance Authority. As the scope of

these activities is multi-year, the project-to-date budget and expense information is included.

**MFP Finance Authority Power Sales Revenue Chart** – This chart summarizes the revenue budget and the preliminary revenue by month through December 31, 2019.

**MFP Finance Authority Power Operating Expenses Chart** – This chart summarizes the expense budget and the preliminary expenses by month through December 31, 2019.

**MIDDLE FORK PROJECT FINANCE AUTHORITY**

**Budget Schedule  
For the Year Ended  
December 31, 2019**

	<b>2019 Adopted Annual Budget</b>	<b>Budget Adjustments &amp; Transfers (Note 4)</b>	<b>2019 Adjusted Annual Budget</b>
	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>Revenues and Other Financing Sources (Note 1) :</b>			
Power Sales	\$ 37,440,000	-	37,440,000
Interest Income	200,000	-	200,000
<b>Total Revenues and Other Financing Sources</b>	<b><u>37,640,000</u></b>	<b><u>-</u></b>	<b><u>37,640,000</u></b>
<b>Expenditures:</b>			
<b>Administration:</b>			
Operating Supplies/Services	2,000	-	2,000
Administration	70,000	-	70,000
Professional Services	50,000	-	50,000
Total Administrative Expenditures	<u>122,000</u>	<u>-</u>	<u>122,000</u>
<b>PCWA Power Division - Operating:</b>			
Power Operations	14,336,817	-	14,336,817
General and Administrative	5,847,672	275,000	6,122,672
Natural Resources Management	3,272,311	(275,000)	2,997,311
Power Resources Management	1,686,253	-	1,686,253
Routine Capital	716,800	-	716,800
Total PCWA Power Division - Operating	<u>25,859,853</u>	<u>-</u>	<u>25,859,853</u>
<b>Debt Service</b>	5,690,730	-	5,690,730
<b>Capital Projects (Note 2) :</b>			
Current Year Capital Project Appropriation	11,624,000	7,800,000	19,424,000
<b>Total Expenditures and Capital Projects</b>	<b><u>43,296,583</u></b>	<b><u>7,800,000</u></b>	<b><u>51,096,583</u></b>
<b>Revenue over (under) Expenditure and Capital Projects</b>	<b><u>(5,656,583)</u></b>	<b><u>(7,800,000)</u></b>	<b><u>(13,456,583)</u></b>
<b>Reserve Funding or (Use) (Note 3):</b>			
Operating Reserve		-	-
Emergency Reserve		-	-
Capital Reserve	(5,656,583)	(7,800,000)	(13,456,583)
Total Reserve (Funding) / Use	<u>(5,656,583)</u>	<u>(7,800,000)</u>	<u>(13,456,583)</u>
<b>Net Revenue</b>	-	-	-
<b>Distributions and Debt Payment Requirement:</b>			
County	-	-	-
PCWA	-	-	-
Additional Principal Payment	-	-	-
Total Distributions and Debt Payment	<u>-</u>	<u>-</u>	<u>-</u>
<b>Net</b>	<b><u>\$ -</u></b>	<b><u>-</u></b>	<b><u>-</u></b>

**Note:** See reference discussion on the following page.

**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**2019 Budget Schedule**  
**Note References**  
**For the Period Ended December 31, 2019**

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**Note 1: Revenues and Other Financing Sources**

The MFPFA **Power Sales** budget includes the resource adequacy (RA), carbon free and renewable energy credit (REC) sales amounts based on bi-lateral contracts and 80% of estimated energy production for the year. The Power Sales amounts have been determined by Energy Marketing projections based on anticipated sales of resource adequacy, carbon free, renewable energy credits and estimated energy sales for January 1 to December 31, 2019.

**Note 2:** The **Capital Projects** adopted budget totaling \$11.6 million has been mostly by year-end, except for the Enterprise Resource Project for \$500,000 as the project still has sufficient carryover funds from 2018. In April 2019, an additional \$7.8 million was added to Capital Projects through a Board approved budget amendment.

**Note 3:** If funds are available, the **Reserve Accounts** are funded in accordance with the Authority General Financial Policies at year-end closing.

**Note 4:** There are two **Budget Adjustments and Transfers** to report to the Board for the period ended December 31, 2019, both of which occurred in the quarter ended June 30, 2019.

In April 2019, the Board approved additional appropriations of \$7.8 million from the Capital Reserve to the Hell Hole Dam Core Raise Project, resulting in a Capital Projects budget increase from \$11.6 million to \$19.4 million.

During the quarter ended June 30, 2019, the board approved a budget transfer to move \$275,000 from Natural Resources Management to General Administration, both of which components are within the operating budget. This proposal had no new appropriations for the 2019 Budget.

**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**Budget and Preliminary Schedule**  
**For the Year Ended**  
**December 31, 2019**

	2019 Adjusted Budget	Preliminary	Variances		Ref
			\$	%	
<b>Revenues and Other Financing Sources:</b>					
Power Sales	\$ 37,440,000	61,701,083	24,261,083	65%	
Interest Income	200,000	1,842,146	1,642,146	821%	
<b>Total Revenues and Other Financing Sources</b>	<b>37,640,000</b>	<b>63,543,229</b>	<b>25,903,229</b>	<b>69%</b>	<b>A</b>
<b>Expenditures:</b>					
<b>Administration:</b>					
Operating Supplies/Services	2,000	4,075	(2,075)	-104%	
Administration	70,000	46,919	23,081	33%	
Professional Services	50,000	26,487	23,513	47%	
Total Administrative Expenditures	122,000	77,481	44,519	36%	<b>B</b>
<b>PCWA Power Division - Operating:</b>					
Power Operations	14,336,817	12,332,829	2,003,988	14%	
General and Administrative	6,122,672	5,151,785	970,887	16%	
Natural Resources Management	2,997,311	838,762	2,158,549	72%	
Power Resources Management	1,686,253	1,392,886	293,367	17%	
Routine Capital	716,800	387,842	328,958	46%	
Total PCWA Power Division - Operating	25,859,853	20,104,104	5,755,749	22%	<b>C</b>
<b>Debt Service</b>	5,690,730	5,690,730	-	0%	<b>D</b>
<b>Capital Projects:</b>					
Current Year Capital Project Appropriations	19,424,000	18,924,000	500,000	3%	<b>E</b>
<b>Total Expenditures and Capital Projects</b>	<b>51,096,583</b>	<b>44,796,315</b>	<b>6,300,268</b>	<b>12%</b>	
<b>Revenue over (under) Expenditures and Capital Projects</b>	<b>\$ (13,456,583)</b>	<b>18,746,914</b>	<b>32,203,497</b>	<b>239%</b>	
2020 Adopted Budget Appropriation (per Policy)	-	4,098,337	4,098,337	0%	<b>F</b>
<b>Reserve Funding: (Funded at Year-end)</b>					
Operating Reserve	-	-			
Emergency Reserve	-	-			
Capital Reserve	(13,456,583)	10,473,650			
Total Reserve Funding (Use)	(13,456,583)	10,473,650			<b>G</b>
<b>Net</b>	<b>\$ -</b>	<b>4,174,927</b>			<b>H</b>

**Note:** See 2019 Budget to Actual Variances discussion on the following page.

**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**2019 Budget and Preliminary Schedule**  
**Discussion of 2019 Budget to Actual Variances**  
**For the Year Ended December 31, 2019**

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**Ref**      **Revenues and Other Financing Sources**

**A**      **Power Sales Revenue** – Preliminary Power Sales revenue for the year ended December 31, 2019 is \$61.7 million, \$24.3 million over budget, primarily due to above average annual precipitation and snowpack. This hydrology, coupled with mild weather that extended the snowpack melt further into the year, enabled the Middle Fork Project to maximize generation throughout 2019. Generation totaled 1,441,000 MWh for the year ended December 31, 2019 compared to budgeted generation of 803,000 MWh, and a historical 50 year average of approximately 1,000,000 MWh. However, this increased generation was offset by energy prices which were generally lower for the majority of the year due to decreased energy demand stemming from the mild California weather. Moreover, in early 2019, there was a favorable spike in energy prices due to limited natural gas supply and cold Pacific Northwest weather. This price increase in conjunction with strong generation produced substantial revenue, resulting in the Middle Fork Project’s highest ever one-month revenue in February.

**Interest Income** – Interest income for the period ended December 31, 2019 is \$1.8 million, \$1.6 million over budget.

**Expenditures**

**B**      **Administration** is under budget for the year ended December 31, 2019.

**C**      **PCWA Power Division** – Operations is under budget by 22% through the fourth quarter of the fiscal year due to unspent routine capital funds, and savings in cost share agreements, consulting, and facilities repair & maintenance expenditures. In addition, postponement of implementation costs related to the FERC license issuance into 2020 accounted for approximately \$1.6 million.

**D**      **Debt Service** – Semi-annual debt service payments are recorded on April 1 and October 1.

**E**      **Capital Projects** – Based on 2019 hydrologic conditions and the Power Sales revenue projections, the appropriations for the 2019 Capital Projects with an adopted budget of \$11.6 million have been mostly funded. As of December 31, 2019, \$11.1 of the \$11.6 has been funded, \$.5 million of appropriations for ERP System costs were not funded due to carryover of funds from 2018. In April 2019, the Authority Board approved a budget amendment totaling \$7.8 million from the Capital Reserve for the Hell Hole Dam Core Raise Project for additional work that was anticipated to occur during 2019 and 2020. This increased the adjusted budget amount to \$19.4 million for Capital Projects.

**F**      **2020 Adopted Budget Appropriations** – The Authority Board adopted 2020 Budget reflects a \$4.1 million Reserve use due to Expenditure and Appropriations exceeding Revenues. Since 2019 Reserves are funded in Q1 2020 after the year-end close, the \$4.1 million has been appropriated per Policy prior to Capital Reserve funding for the year ended December 31, 2019.

**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**2019 Budget and Preliminary Schedule**  
**Discussion of 2019 Budget to Actual Variances**  
**For the Year Ended December 31, 2019**

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**Ref**      **Reserve Funding (Use)**

**G**      **Reserve Funding (Use)** – The reserve accounts are funded in accordance with the Authority’s General Financial Policies at year-end before any distributions of Net Revenue. Preliminary 2019 results provide for a full funding of the reserve accounts to the target level of \$47.8 million.

**H**      **Net Revenue** – The final year-end results, including any distribution of Net Revenue are currently pending due to the year-end closing process and will be provided to the Authority Board in April 2020.

**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**Preliminary Reserve Schedule**  
**For the Year Ended**  
**December 31, 2019**

	<b>2019 Target</b>	<b>Beginning Balance January 1, 2019</b>	<b>Year-to-Date Use</b>	<b>Year-End Funding</b>	<b>2019 Ending Balance</b>	<i>Amount Needed to Fund Target</i>
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E=B+C+D</b>	<b>F=A-E</b>
<b>Operating Reserve</b>	\$ 25,750,000	25,750,000	-	-	25,750,000	-
<b>Emergency Reserve</b>	2,000,000	2,000,000	-	-	2,000,000	-
<b>Capital Reserve</b>	20,000,000	17,326,350	(7,800,000)	10,473,650	20,000,000	-
<b>Total</b>	\$ 47,750,000	45,076,350	(7,800,000)	10,473,650	47,750,000	-

**Notes:**

**General Note:** The reserve accounts are funded in accordance with the Authority's General Financial Policies after the year-end closing process and before any distributions of Net Revenue.

**Operating Reserve:** The **Operating Reserve** is established by the Authority's General Financial Policies, which set a funding target minimum of one year of operating expenses, currently set at \$25.75 million. The Operating Reserve will provide readily available funds for the MFP operations and require prior approval of the Authority's Executive Director and Secretary, or Board before use.

**Emergency Reserve:** The **Emergency Reserve** is established by the Authority's General Financial Policies, which set a funding target amount that will be aligned with the needs under a severe outage contingency. The current \$2 million reserve is intended to fund insurance deductibles and seed monies to commence any significant unforeseen capital expenses. Annually, the level of Emergency Reserve will be assessed to identify the trade-off between insurance (self-insurance and paid insurance), emergency reserve funds, and other financing, and propose recommended changes during the budget process.

**Capital Reserve:** The **Capital Reserve** is established by the Authority's General Financial Policies and has two components - a sinking fund for current and prior year appropriated projects and a reserve for future capital projects. Currently, the long-term Capital Reserve target is \$20 million.

**PLACER COUNTY WATER AGENCY**  
**MFP Capital Projects (Preliminary)**  
**Funded by the Middle Fork Project Finance Authority**  
**For the Period Ended December 31, 2019**

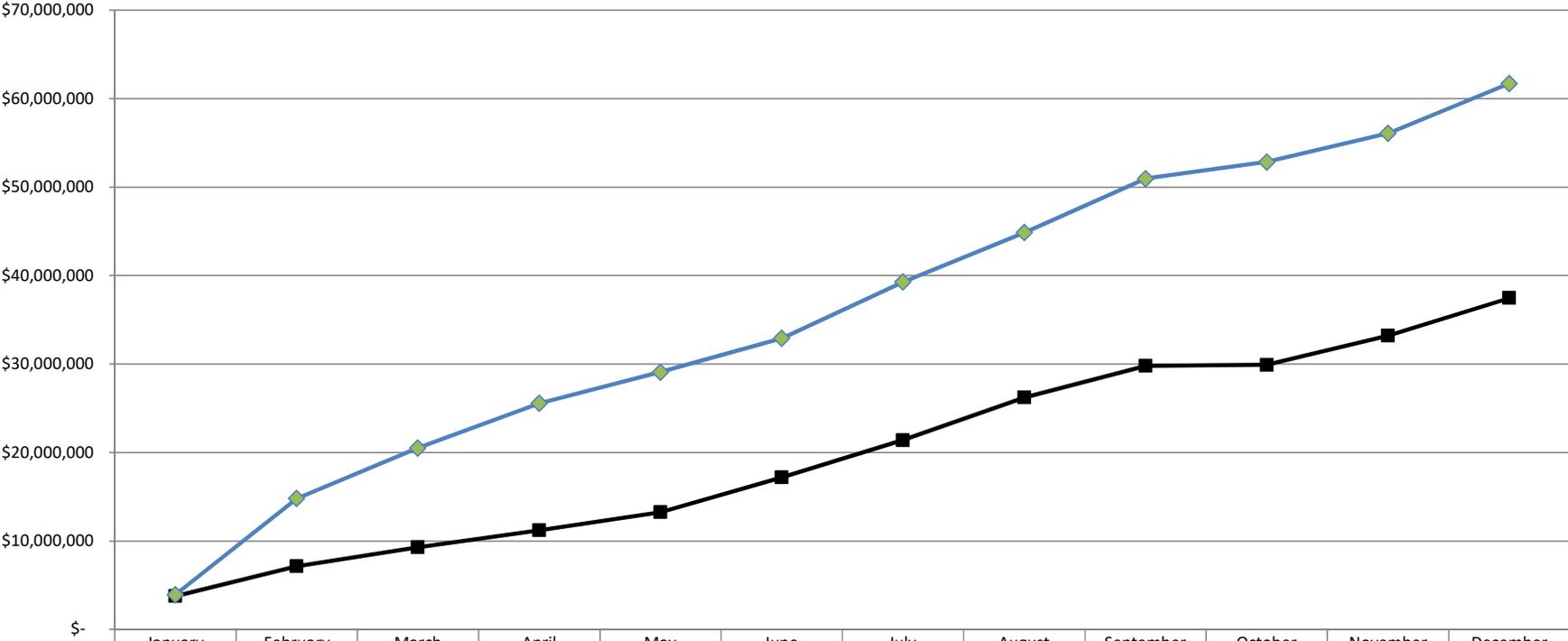
Project No.	Project Description	Total Estimated Project Cost (Note 1)	PTD Budget (December 31, 2018)	2019 Adopted Budget (Note 2)	2019 Budget Funded (Note 2)	Budget Adjustments Quarter 1-3	Budget Adjustments Quarter 4	Project-to-Date Adjusted Budget (December 31, 2019)	Prior Years' Expenses	2019 Year-to-Date Expenses	Project-to-Date Expenses	Outstanding Encumbrances	Project-to-Date Available Balance
		A	B	C	D	E=A+B+C+D	F	G	H	I	J=E-H-I		
<b>MINOR PROJECTS - TOTAL</b>			\$ 1,852,223	375,000	375,000	-	-	2,227,223	36,833	5,954	42,787	13,491	2,170,946
<b>MAJOR PROJECTS - AUTHORIZED</b>													
14007P	French Meadows Powerhouse Reliability Upgrades	Ongoing	1,880,424	1,450,000	1,450,000	77,345	-	3,407,769	1,019,499	490,895	1,510,394	111,600	1,785,775
14003P	Hell Hole Powerhouse Reliability Upgrades	Ongoing	668,009	-	-	-	-	668,009	4,840	24,881	29,722	67,119	571,169
12003P	Hillside Slope Stability - Middle Fork Project		1,711,245	300,000	300,000	-	-	1,811,245	1,066,112	-	1,066,112	-	745,133
14009P	Middle Fork Powerhouse Reliability Upgrades	Ongoing	1,250,219	2,700,000	2,700,000	25,394	25,342	4,000,955	5,064	101,206	106,270	84,151	3,810,533
14010P	Oxbow Powerhouse Reliability Upgrades	Ongoing	1,139,815	750,000	750,000	-	-	1,889,815	253,993	614,956	868,950	127,123	893,742
12015A	Project Wide Communications Upgrade		13,853,000	-	-	-	-	15,253,271	12,191,894	1,405,389	13,597,283	1,584,566	71,422
12029A	Project Wide SCADA Reliability Upgrades		670,000	100,000	100,000	-	-	770,000	565,407	31,492	596,899	15,936	157,165
14012P	Ralston Powerhouse Reliability Upgrades	Ongoing	1,330,089	2,650,000	2,650,000	-	-	3,980,089	45,673	299,282	344,955	407,869	3,227,265
14013P	FERC License Implementation - Project Infrastructure		28,464,000	1,105,000	1,105,000	7,800,000	-	26,232,275	8,161,149	4,031,209	12,192,359	9,912,850	4,127,066
14014P	FERC License Implementation - Project Recreation Facilities		16,686,000	944,000	944,000	-	-	2,756,040	867,150	242,124	1,109,274	1,607	1,645,160
17004P	French Meadows Forest Management		80,000	375,000	750,000	-	-	1,125,000	359,912	209,474	569,386	50,460	505,154
17013P	Sediment Removal		5,000,000	-	-	-	-	6,000,000	4,502,455	707,589	5,210,044	325,213	464,743
17019W	ERP System		1,802,691	500,000	-	-	-	1,477,691	589,067	11,760	600,827	-	876,561
<b>TOTAL MAJOR PROJECTS</b>			<b>50,695,078</b>	<b>11,249,000</b>	<b>10,749,000</b>	<b>7,902,739</b>	<b>25,342</b>	<b>69,372,159</b>	<b>29,632,216</b>	<b>8,170,258</b>	<b>37,802,474</b>	<b>12,688,493</b>	<b>18,880,889</b>
<b>PROJECTS CLOSED IN 2019</b>													
<b>MAJOR PROJECTS CLOSED</b>													
18013P	French Meadows Penstock Coupling Investigation	Ongoing	100,000	-	-	(77,345)	-	22,655	22,655	-	22,655	-	-
14033P	Middle Fork Powerhouse Battery Rooms	Ongoing	699,743	-	-	(125,394)	-	574,349	512,251	62,098	574,349	-	-
13027P	Middle Fork Powerhouse Cooling & Sump Upgrade	Ongoing	779,908	-	-	-	(3,604)	776,304	776,655	(351)	776,304	-	-
18019P	Middle Fork Power House Ibay Road Slope Stability	Ongoing	1,200,000	-	-	100,000	(21,738)	1,278,262	786,363	491,899	1,278,262	-	-
<b>TOTAL PROJECTS CLOSED 2019 (Note 3)</b>			<b>2,779,651</b>	<b>-</b>	<b>-</b>	<b>(102,739)</b>	<b>(25,342)</b>	<b>2,651,570</b>	<b>2,097,924</b>	<b>553,646</b>	<b>2,651,570</b>	<b>-</b>	<b>-</b>
<b>TOTAL CAPITAL PROJECTS</b>			<b>\$ 55,326,952</b>	<b>11,624,000</b>	<b>11,124,000</b>	<b>7,800,000</b>	<b>-</b>	<b>74,250,952</b>	<b>31,766,972</b>	<b>8,729,859</b>	<b>40,496,831</b>	<b>12,701,984</b>	<b>21,051,835</b>

Note 1: Major Projects may be comprised of a variety of sub-projects for which appropriations will be allocated, administered and accounted for as separate "Projects" at the PCWA project management level, as PCWA is the lead entity for MFP Projects. For budgeting purposes, the **Total Estimated Project Cost** for the powerhouse reliability projects is defined as "**Ongoing**" because underlying sub-projects will be added, completed and removed over time.

Note 2: The 2019 Capital Project approved budget is \$11,624,000. A budget amendment in the amount of \$7,800,000 was approved by the Authority Board on April 18, 2019. The Adjusted 2019 CIP budget is \$19,424,000.

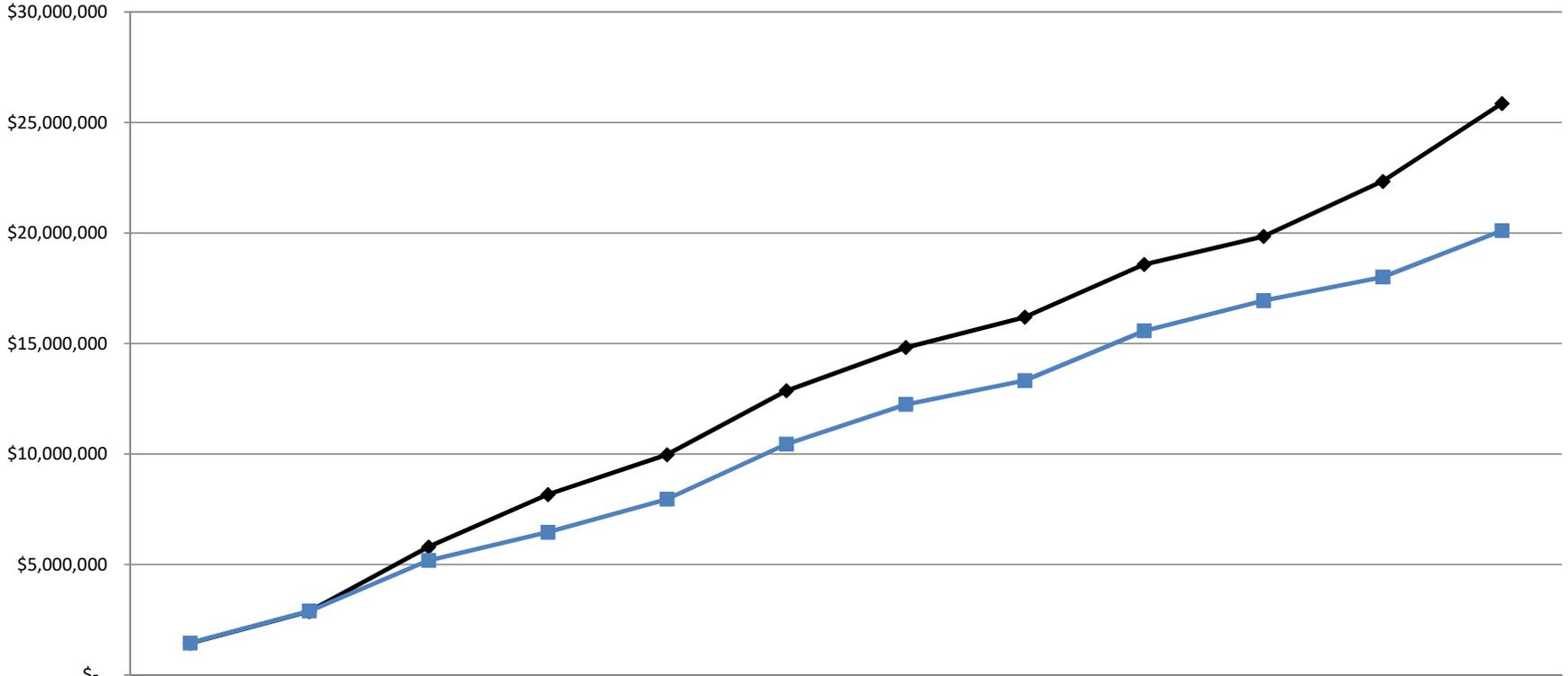
Note 3: During February 2019, the Middle Fork Power House Battery Room Addition project transferred \$100,000 to fund the Middle Fork Power House Ibay Slope Stabilization project. In August 2019, the French Meadows Penstock Coupling Investigation project was closed. Accordingly, the remaining balance in the project's budget totaling \$77,345 was transferred to the French Meadows Powerhouse Reliability Upgrades project. Additionally, the Middle Fork Powerhouse Battery Room and Middle Fork Powerhouse Cooling & Sump Upgrade projects were closed in September and December 2019, respectively, and remaining funds were transferred to Middle Fork Powerhouse Reliability Upgrades. These are no changes to the overall budget for these transfers.

**Middle Fork Project Finance Authority  
Power Sales Revenue  
Budget to Actual 2019**



	January	February	March	April	May	June	July	August	September	October	November	December
Revenue Budget	\$3,774,909	7,128,690	9,281,094	11,194,977	13,247,213	17,181,180	21,387,488	26,222,459	29,795,031	29,897,926	33,184,440	37,440,000
Actual Revenue	3,940,278	14,796,317	20,510,130	25,559,846	29,086,289	32,898,171	39,268,994	44,867,990	50,948,754	52,832,240	56,076,827	61,701,083

**Middle Fork Project Finance Authority  
Power Operating Expenses  
Budget to Actual 2019**



	January	February	March	April	May	June	July	August	September	October	November	December
Operating Exp Budget	\$1,437,808	2,870,444	5,795,193	8,158,784	9,966,388	12,857,521	14,820,284	16,193,442	18,569,962	19,839,681	22,335,157	25,859,853
Op Exp Actual Cumulative	1,439,740	2,886,472	5,179,775	6,455,426	7,952,062	10,440,112	12,240,268	13,319,253	15,564,363	16,936,166	18,002,828	20,104,104

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M E M O R A N D U M

**TO:** Board of Directors

**FROM:** Jay L'Estrange, Director of Power Generation Services  
Joseph H. Parker, CPA, Authority Treasurer

**DATE:** January 7, 2020

**RE:** Utility Work Vessel – 2020 Budget Amendment Approval and Notification

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RECOMMENDATION:

Approve a budget amendment for the purchase of a utility work vessel in the amount of \$140,000 from the Middle Fork Project Finance Authority Operating Reserve.

BACKGROUND:

The Power System Department has completed research for a suitable replacement for the 1964 Starcraft Fiberglass boat currently used as the main utility work vessel for on-water inspections, maintenance, and construction activities. The Starcraft has been in operation over fifty-four years and is long past its useful service life. Additionally, the needs of the Agency and Power System Department have changed dramatically since the inception of the Middle Fork Project. Federal Energy Regulatory Commission requirements, inspection routines, maintenance, repair practices, construction activities, and environmental considerations have all increased the Agency's requirement for floating access to its lake and river facilities. An industrial grade work vessel constructed specific to the Agency's needs would meet all current and future working requirements, increase worker safety, and provide service for another fifty years. The current vessel struggles with routine activities and prevents us from taking full advantage of our technical capabilities. For example, due to size and configuration, using our submersible ROV for gate and dam inspections is not possible in the Starcraft. The proposed new vessel would allow staff to use the submersible ROV to perform underwater inspections of gates, gate valve stems, dam faces, and intake structures. Staff would also have the ability to inspect and record sedimentation elevation at specific underwater locations.

Using a federal government negotiated discount pricing contract, the 2019 cost for a new work vessel would be \$133,661, including tax and delivery. To confirm the negotiated contract pricing

was reasonable and within market ranges, staff solicited an additional quote using the same specifications from an industrial boat manufacturer. A quote was received for \$202,970, which is 41% higher than using government pre-negotiated supply contracts. Staff reached out to the following organizations to compare equipment needs and costs: NID, PG&E, SMUD, US Bureau of Reclamation (Folsom), and Placer County Public Works. Each organization provided make, model, and cost of each vessel they operate. All vessels were constructed out of aluminum. On average, each party owns two vessels, with an average value of \$82,000. While the overall vessel costs vary greatly, out of the ten vessels evaluated, four of the vessels cost over \$95,000 and two cost more than \$200,000.

FISCAL IMPACT:

With approval of the Budget Amendment for the use of \$140,000 from the Operating Reserve, there are sufficient funds available to purchase the work vessel. The current Operating Reserve has a balance of \$25,750,000 and with this use of \$140,000 the reserve account would total \$25,610,000.



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M E M O R A N D U M

**TO:** Middle Fork Project Finance Authority

**FROM:** Jay L'Estrange, PCWA Director of Power Generation Services

**DATE:** January 16, 2020

**RE:** Middle Fork Communication Upgrade Project

---

RECOMMENDATION

Approve a budget amendment for the Middle Fork Project Communications Upgrade in the amount of \$350,000 from the Middle Fork Project Finance Project Adjustment Fund (a minor project).

BACKGROUND

The Middle Fork Communications Upgrade Project consists of constructing new communications that will add redundancy and robustness to the Middle Fork Project control and communications system. Additionally the project will extend communication to the LL Anderson Dam which will allow remote control and monitoring. The improvements consist of installing new microwave radios, underground fiber optic cables, radio towers, buildings, and ancillary equipment.

The construction contract is to install the microwave radios, underground fiber optic, radio towers, buildings, and ancillary equipment. The negotiated contract is with Nokia of America Corporation previously known as Alcatel- Lucent USA Inc. in the amended amount of \$9,960,189. The construction costs and delays for the project are higher than the estimated cost. Staff is requesting additional funds be transferred from a minor project in the amount of \$350,000 for continuing construction, inspection and project administration costs.

FISCAL IMPACT:

Project to Date Budget	\$ 15,253,271
Additional Funding Requested	350,000
Subtotal Budget	<u>15,603,271</u>
Less Project to Date Expenses and Encumbrances	<u>15,182,065</u>
Total Remaining Budget	<u>\$ 421,206</u>

With approval of the Budget Amendment for the transfer of \$350,000 from the minor project, MFPFA Project Adjustment Fund, there are sufficient funds available to complete the project.



---

M E M O R A N D U M

**TO:** Middle Fork Project Finance Authority

**FROM:** Jay L'Estrange, PCWA Director of Power Generation Services

**DATE:** January 16, 2020

**RE:** Middle Fork Powerhouse Penstock Coupling Repair

---

RECOMMENDATION

Information item, no action necessary.

BACKGROUND

The PCWA Director of Power Generation will provide a status report on the emergency repair of a pipe coupling on the Middle Fork Powerhouse Penstock.

# Middle Fork Powerhouse Penstock Coupling Repair 01-16-2020



Middle Fork Powerhouse Penstock

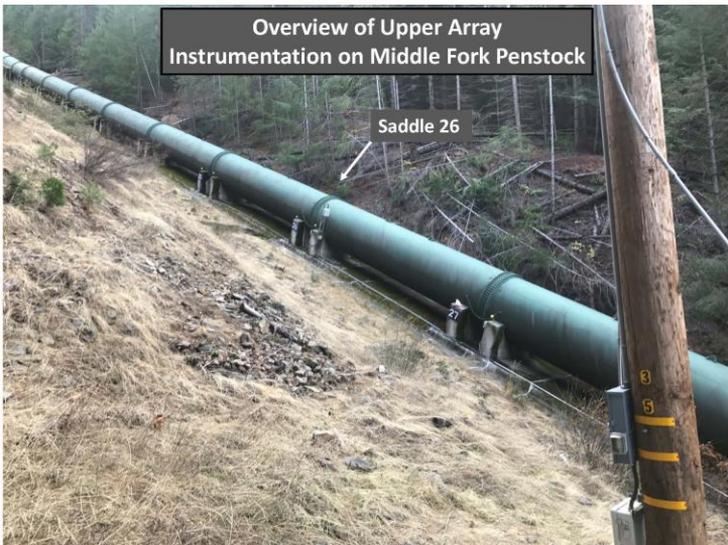
- Small pipe movement was discovered at Pipe Joint N. 26 during a routine inspection in 2012.
- Since 2013 Power System engineers have been monitoring movement of the concrete saddle block at Joint No. 26 using a data logging system.
- During the October 2019 annual maintenance outage, consulting engineers completed an internal inspection of the Middle Fork Powerhouse Penstock.
- The internal inspection discovered that only ¼ inch of pipe remained connected to the upstream side of the coupling at Joint No. 26. Prior to this inspection it was estimate that ¾ to 1 inch of overlap remained.



Middle Fork Powerhouse Penstock



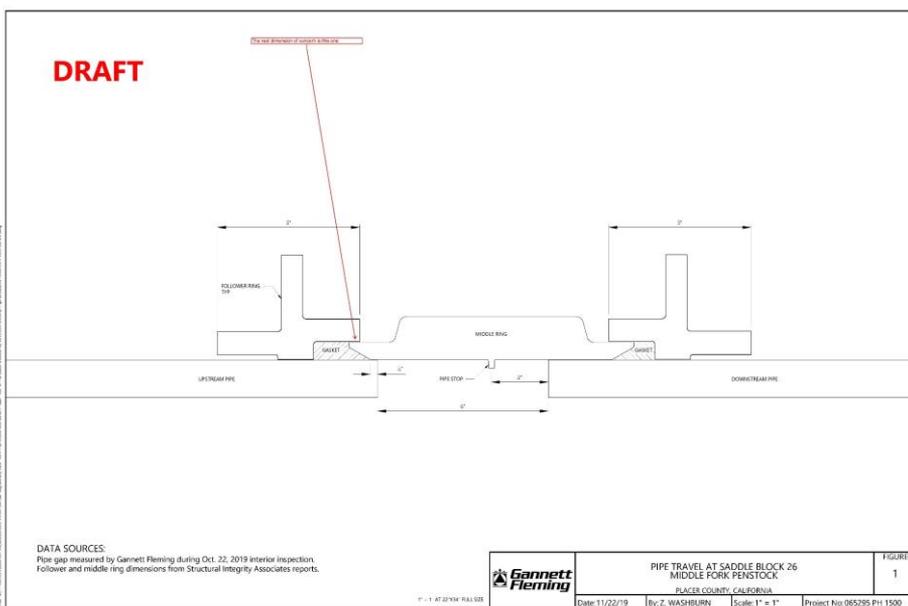
Middle Fork Powerhouse Penstock Coupling Repair



## Middle Fork Powerhouse Penstock Coupling Repair



## Middle Fork Powerhouse Penstock Coupling Repair





Middle Fork Penstock construction - December 4, 1964.

Questions?



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M E M O R A N D U M

**TO:** Middle Fork Project Finance Authority Board of Directors  
**FROM:** Joseph H. Parker, CPA - Treasurer  
**DATE:** January 8, 2020  
**RE:** MFPFA Debt Refinancing

---

**RECOMMENDATION:**

- 1) Consider the adoption of **Resolution No. 20-\_\_** authorizing the issuance and sale of refunding bonds, authorizing the execution and delivery of an indenture, a bond purchase contract, and a continuing disclosure certificate; approving the form of a preliminary official statement and the related distributions thereof and approving other actions related thereto.
  
- 2) Consider approving agreement for tax counsel services with Orrick, Herrington & Sutcliffe LLP related to the refunding of the 2006 Revenue Bond in an amount not to exceed \$45,000, payable at closing.

**Drafts of the Refinancing Bond Documents are attached for your review and reference:**

These debt documents are current draft documents and most will be modified prior to execution:

- Resolution authorizing issuance and sale of refunding bonds and authorizing Officers to execute documents
- Indenture (Agreement with Trustee)
- Bond Purchase Contract
- Preliminary Official Statement
- Continuing Disclosure Certificate (Exhibit D)

Middle Fork Project Financial Feasibility Report prepared by Horizons Energy (Exhibit G) (CURRENT DRAFT), which is supplemental to the documents presented for consideration.

The reason this information is presented at today's Regular Authority Board meeting is because the Joint Exercise of Powers Act under which the Authority was created requires that bond issuances be approved at a Regular meeting of the Board. Thus, the information is presented herein, yet we are not far enough along in the financing structure and document preparation to

authorize the issuance of the bonds at today's, January 16, 2020 Board meeting. Therefore this item will need to be continued in the Adjourned Regular meeting scheduled on **February 20, 2020 at 11:00 am**. Updated bond documents will be provided in that Board meeting agenda package for your review and consideration.

**BACKGROUND:**

In 2006, the Authority issued the Middle Fork Project Finance Authority Revenue Bond, Series 2006 which was purchased by the Placer County Treasury in a face amount up to \$100,000,000 with the total amount borrowed \$84,359,094 (draws \$61,445,845, initial reimbursement \$3,932,584 and capitalized interest \$18,980,665). Proceeds from the Bond were used for the financing of the Middle Fork Project FERC relicensing and other betterments to the Middle Fork Project. As of January 8, 2020, the outstanding principal balance of the Bond is \$71,028,393 with a fixed interest rate of 3.471%.

The net present value savings, which was identified last fall for a taxable refunding continues to be positive with about \$500,000 NPV savings. However, in its Underwriter proposal, Goldman Sachs presented an approach, which is supported by tax counsel, Orrick, Herrington & Sutcliffe LLP that would allow the Authority to issue a tax exempt refunding. The NPV saving of a tax exempt issuance is approximately \$4 million. The current schedule is to price the refunding bonds in early March 2020.

At the Board meeting on October 10, 2019, the Board authorized staff to perform due diligence for the refinancing of the 2006 Bond, approved agreement for financial and legal services including authorizing an independent financial feasibility study and report.

Since this authorization, due diligence has continued and much has been accomplished:

1. After the request for feasibility consultant proposal process, a very qualified and competent firm, Horizon Energy was selected to perform the Financial Feasibility study for a cost of \$30,000, which was significantly less than the anticipated range of \$100,000 to \$155,000. The Financial Feasibility study will evaluate whether the Middle Fork Project can internally generate sufficient funds necessary to meet its annual obligations under a range of possible future operating conditions for the years 2020 to 2036. The Horizons report, which is nearly complete, details the results and evaluation and confirms that the Middle Fork Project can internally generate funds necessary to meet its annual obligations given a range of possible future operating conditions for the years 2020 – 2036 and therefore passes the test for financial feasibility.

2. In November, Proposals were solicited to potential underwriters with seven responses received from: Bank of America, Goldman Sachs, JP Morgan, RBC, Stifel, US Bank, and Wells Fargo. Of the seven, Goldman Sachs was ranked first with their deep tax analysis, rating agency analysis and tax exempt issuance plan.
3. Because of the complexity of the tax-exempt issuance analysis separate tax counsel with expertise in similar tax-exempt issuances, Orrick, Herrington & Sutcliffe LLP, will be added to the financing team with approval of this item.
4. The MFP is owned and operated by PCWA. PCWA holds the FERC license and its employees manage and staff the operations of the MFP. PCWA is integral to assuring the MFP's operations generate sufficient revenue for the Authority to pay the debt service obligation, therefore there is a need with this 2020 public debt sale to have covenants from the Agency to protect the source of revenues for the Authority's bond debt service. Because of the close working relationship between the Agency and the County, the 2006 Bond covenant did not have specific Agency covenants.
5. A covenant of the Indenture requires the Authority to establish an Operation and Maintenance Reserve Fund equal to 180 days of projected operating and maintenance expenses as projected by the Authority semi-annually (March 31 and September 30). This new reserve fund will be a component of the Authority's Operating Reserve, which is based on approximately 360 days of operating and maintenance expense and has a current balance totaling \$25,750,000. Based on the Preliminary expense amount for the year ended December 31, 2019, this Operation and Maintenance Reserve would be approximately \$10 million.

**FISCAL IMPACT:**

Based on current market conditions, there are currently estimated net present value savings of about \$4 million from refinancing the existing Authority debt with a new tax-exempt issuance. This estimated net present value savings includes all estimated transaction costs for the financial, legal, underwriter and other services.

Most of the professional fees incurred must be paid even if the refinancing can't be completed. However, some of the fees are contingent on the completion of the refinancing (underwriter's fees). The full amount of all professional service and underwriting fees will only be payable if the refinancing is completed and the fees will be funded from the proceeds of the refinancing bonds.

**RESOLUTION NO. 20-\_\_\_ OF THE BOARD OF DIRECTORS OF THE MIDDLE FORK PROJECT FINANCE AUTHORITY AUTHORIZING THE ISSUANCE AND SALE OF REFUNDING BONDS; AUTHORIZING THE EXECUTION AND DELIVERY OF AN INDENTURE, A BOND PURCHASE CONTRACT, AND A CONTINUING DISCLOSURE CERTIFICATE; APPROVING THE FORM OF AN OFFICIAL STATEMENT AND THE DISTRIBUTION THEREOF; AND APPROVING OTHER ACTIONS RELATED THERETO**

WHEREAS, the Middle Fork Project Finance Authority (the “Authority”) is a joint exercise of powers agency duly organized and operating pursuant to Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California (the “Act”) and a joint exercise of powers agreement dated January 10, 2006 (the “Joint Powers Agreement”), between the County of Placer (the “County”) and the Placer County Water Agency (the “Agency”);

WHEREAS, the County and the Agency established the Authority to provide for the financing of studies, programs, procedures, projects, services, improvements, modifications, and costs that may be required for the FERC relicensing of the Middle Fork Project by the Agency;

WHEREAS, pursuant to Resolution No. 06-06 of the Board of Directors of the Authority (the “Board”) and the Bond Purchase Contract dated March 29, 2006, between the Authority and the Placer County Treasurer, the Authority issued and sold its Revenue Bond, Series 2006 (the “Series 2006 Bond”), to finance costs related to the relicensing of the Middle Fork Project;

WHEREAS, to refund the Series 2006 Bond, the Authority intends to issue its Middle Fork Project Finance Authority Revenue Bonds, Series 2020 Refunding (the “Bonds”);

WHEREAS, the Authority has previously adopted General Financial Policies, which include a debt management policy that complies with Government Code section 8855(i), and the Authority’s issuance and sale of the Bonds as contemplated by this Resolution are in compliance with the debt management policy;

WHEREAS, the following proposed agreements and documents relating to the issuance, sale, and delivery of the Bonds by the Authority, which are incorporated herein by reference, have been presented to the Board for its review and approval:

1. an indenture between the Authority, the Agency, and U.S. Bank, N.A., as trustee, to provide for the authentication and delivery of revenue bonds and secure the payment of the principal of, premium if any, and interest on the bonds according to the terms and conditions set forth therein (the “Indenture”);
2. a bond purchase contract between the Authority, the Agency, and Goldman Sachs & Co. LLC (the “Underwriter”), whereby the Authority will sell the Bonds to the Underwriter (the “Bond Purchase Contract”);
3. an official statement relating to the Bonds (the “Official Statement”); and
4. a Continuing Disclosure Certificate (the “Continuing Disclosure Certificate”) relating to the Bonds;

WHEREAS, it appears to the Board of Directors that the issuance, sale, and delivery of the Bonds and the authorization, approval, execution, and delivery of the agreements and documents described above or contemplated thereby or incidental thereto are desirable and in the best interests of the Authority;

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Middle Fork Project Finance Authority, as follows:

**Section 1.** Recitals. The foregoing recitals are true and correct and the Board so finds and determines.

**Section 2.** Authorization to Issue the Bonds. The Board hereby authorizes the issuance of the Bonds in accordance with the terms of the Indenture as finally executed, provided that the total net interest cost to maturity on the Bonds plus the principal amount of the Bonds does not exceed total net interest cost to maturity on the Series 2006 Bond plus the principal amount of the Series 2006 Bond.

**Section 3.** Authorization of Sale. The Board hereby authorizes the sale of the Bonds pursuant to the Bond Purchase Contract to the Underwriter with underwriter compensation in an amount not to exceed \$550,000. The Designated Officers are hereby authorized and directed to negotiate with the Underwriter the final terms of the sale and its timing.

**Section 4.** Authorization of Officers to Execute and Deliver Documents. The Board hereby authorizes the Chair, the Vice-Chair, the Executive Director, the Treasurer, and the Secretary of the Authority (the "Designated Officers"), and each of them individually, for and in the name of the and on behalf of the Authority, to approve, execute, and deliver the following agreements and documents:

- (a) the Indenture;
- (b) the Bond Purchase Contract;
- (c) the Official Statement and
- (d) the Continuing Disclosure Certificate;

in substantially the form presented to the Authority at this meeting, which agreements and documents are hereby approved, with such changes, insertions, revisions, corrections, or amendments as are approved by the officer or officers executing the agreement or document for the Authority. The execution of the foregoing by a Designated Officer or Officers constitutes conclusive evidence of such officer's or officers' and the Board's approval of any such changes, insertions, revisions, corrections, or amendments to the respective forms of agreements and documents presented to the Authority at this meeting. The date, respective principal amounts of each maturity, the interest rates, interest payment dates, denominations, forms, registration privileges, place or places of payment, terms of redemption, and other terms of the Bonds and provisions relating to municipal bond insurance, shall be as provided in the Indenture as finally executed.

**Section 5.** Execution of the Bonds. The Board hereby authorizes and directs the Chair to execute the Bonds on behalf of the Authority in the form set forth in and otherwise in accordance with the Indenture and authorizes and directs the Secretary to countersign the Bonds.

**Section 6. Distribution of Official Statement.** The Board hereby authorizes the Underwriter to distribute copies of the Official Statement in preliminary form to persons who may be interested in the purchase of the Bonds and authorizes and directs the Underwriter to deliver copies of the final Official Statement to all purchasers of the Bonds. The Board hereby authorizes and directs the Designated Officers, and each of them individually, to declare the preliminary form of the Official Statement to be deemed final as of its date.

**Section 7. Disclosure of Specified Financing Information.** Pursuant to the requirements of Government Code section 5852.1, the Board is required to disclose at a public meeting certain information related to the financing. The Board has obtained from Montague DeRose and Associates, LLC, as municipal advisor to the Authority, good faith estimates of this required information and hereby discloses the estimates information as shown in Exhibit A attached hereto and incorporated herein by reference.

**Section 8. General Authorization.** The Board hereby authorizes and directs the Designated Officers and other officers and agents of the Authority, and each of them individually, for and in the name of and on behalf of the Authority, to do any and all things and to execute and deliver any and all documents that they may deem necessary or advisable in order to complete the issuance, sale, and delivery of the Bonds and otherwise to carry out, give effect to, and comply with the terms and intent of this resolution. All actions heretofore taken by such officers and agents that are in conformity with the purposes and intent of this resolution are hereby ratified, confirmed and approved in all respects.

**Section 9. Effective Date.** This resolution takes effect immediately upon its passage.

The foregoing resolution was duly passed at the adjourned regular meeting of the Board of Directors of the Middle Fork Project Finance Authority held on February 20, 2020, by the following vote on roll call:

AYES: DIRECTORS:

NOES: DIRECTORS:

ABSENT: DIRECTORS:

Signed and approved by me after its passage this 20th day of February 2020.

\_\_\_\_\_  
Chair, Board of Directors  
Middle Fork Project Finance Authority

ATTEST:

\_\_\_\_\_  
Secretary,  
Middle Fork Project Finance Authority

## Exhibit A

### Specified Financial Information

The good faith estimates set forth herein are provided with respect to the Middle Fork Project Finance Authority Revenue Bonds, Refunding Series 2020 (the “Bonds”). The good faith estimates have been provided to the Authority by Montague DeRose and Associates, LLC, as municipal advisor to the Authority. Each estimate is based on the Authority’s financing plan and current market conditions, including market interest rates prevailing at the time of preparation of the estimate.

Principal Amount. The estimated aggregate principal amount of the Bonds to be sold is \$\_\_\_\_\_.

True Interest Cost. The estimated true interest cost of the Bonds, which means the rate necessary to discount the amounts payable on the respective principal and interest payment dates to the purchase price received for the Bonds, is \_\_.\_\_\_\_%.

Finance Charge. The estimated finance charge for the Bonds, which means the sum of all fees and charges paid to third parties (or costs associated with the Bonds), is \$\_\_\_\_,\_\_\_\_.

Amount of Proceeds to be Received. The estimate of the amount of proceeds to be received by the Authority from the sale of the Bonds, less the finance charge of the Bonds funded by proceeds of the Bonds, as estimated above, [and less the estimated reserve amount funded by proceeds of the Bonds,] is \$\_\_\_\_,\_\_\_\_,\_\_\_\_. No capitalized interest is expected to be funded with proceeds of the Bonds.

Total Payment Amount. The estimated total payment amount, which means the sum total of all payments the Authority will make to pay debt service on the Bonds, plus any estimated finance charge for the Bonds that is not paid with the proceeds of the Bonds, calculated to the final maturity of the Bonds, is \$\_\_\_\_, \_\_\_\_,\_\_\_\_.

The foregoing estimates are good faith estimates only. The actual figures may differ from the estimates owing to (a) differences between assumptions regarding the date of the sale of the Bond, the principal amount of Bonds sold, the amortization of the Bonds, and market interest rates at the time of sale of the Bonds and actual facts, (b) other market conditions, (c) changes in the financing plan, or (d) a combination of such factors.

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**INDENTURE**

between the

**MIDDLE FORK PROJECT FINANCE AUTHORITY,**

the **PLACER COUNTY WATER AGENCY,**

and

**U.S. BANK, N.A., as Trustee**

Dated March 1, 2020

relating to the

Middle Fork Project Finance Authority Revenue Bonds

and

\$\_\_\_\_\_ principal amount of Series 2020 Refunding Bonds

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## INDENTURE

THIS INDENTURE, dated March 1, 2020 (the “Indenture”), between the **MIDDLE FORK PROJECT FINANCE AUTHORITY** (the “Authority”), a joint exercise of powers agency duly created and existing pursuant to Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California (the “Act”) and an agreement entitled “Joint Exercise of Powers Agreement for the Middle Fork Project Finance Authority,” dated as of January 10, 2006 (the “Joint Powers Agreement”), between the County of Placer (the “County”), a political subdivision of the State of California, and the Placer County Water Agency (the “Agency”), a public agency duly organized and existing pursuant to the Placer County Water Agency Act (California Statutes 1957, Chapter 1234, as amended) (the “PCWA Act”), the **AGENCY**, and **U.S. BANK, N.A.**, a national banking association duly organized and existing under and by virtue of the laws of the United States of America, as trustee (the “Trustee”);

### W I T N E S S E T H:

WHEREAS, the Agency owns the Middle Fork American River Hydroelectric Project (the “Project”) and has operated it since 1967, first pursuant to license no. 2079 issued by the Federal Energy Regulatory Commission (“FERC”) on March 13, 1963, which expired on February 28, 2013, and thereafter pursuant to an annual license approved by order of FERC on March 7, 2013, which license is automatically renewed until action is taken by FERC on PCWA’s Application for New License, which was filed on February 23, 2011;

WHEREAS, the Agency and the County, through the PCWA Act, are responsible for approving new contracts for the sale of electrical energy and related services from the Project and the spending of revenue therefrom for the benefit of the people of Placer County;

WHEREAS, pursuant to the Joint Powers Agreement, the revenues from the sale of electrical energy and related services from the Project are payable directly to the Authority for deposit into the Authority’s bank account, and the Authority distributes those revenues as provided in the Joint Powers Agreement;

WHEREAS, the Joint Powers Agreement provides that the first priority for the expenditure of revenues from the Project is operation and maintenance of the Project, including compliance with all contract and regulatory requirements, the maintenance of prudent reserves, and the repayment of any debt incurred by the Authority;

WHEREAS, pursuant to the Act and the Joint Powers Agreement, the Authority is authorized to issue bonds (the “Bonds”) to finance or refinance studies, procedures, and improvements and modifications to the Project;

WHEREAS, pursuant to Resolution No. 06-06 of the Board of Directors of the Authority, the Authority issued its Revenue Bond, Series 2006 (the “Series 2006 Bond”), to finance costs related to the relicensing of the Project;

WHEREAS, the Authority has determined to enter into this Indenture in order to provide for the authentication and delivery of any additional Bonds, to establish and declare the terms and

conditions upon which the Bonds shall be issued and secured, and to secure the payment of the principal thereof and premium (if any) and interest thereon;

WHEREAS, the Authority intends to issue Bonds pursuant to this Indenture to refund the Series 2006 Bond;

WHEREAS, in order to provide for the authentication and delivery of the Bonds, to establish and declare the terms and conditions upon which the Bonds are to be issued and secured and to secure the payment of the principal thereof, premium, if any, and interest thereon, the Authority has authorized the execution and delivery of this Indenture;

WHEREAS, the Authority has determined that all acts and proceedings required by law necessary to constitute this Indenture a valid and binding agreement of the parties hereto for the uses and purposes herein set forth in accordance with its terms have been done and taken, and the execution and delivery of this Indenture have been in all respects duly authorized;

NOW, THEREFORE, THIS INDENTURE WITNESSETH, that, in order to secure the payment of the principal of, premium, if any, and the interest on all Bonds at any time issued and outstanding under this Indenture, according to their tenor, and to secure the performance and observance of all the covenants and conditions therein and herein set forth, and to declare the terms and conditions upon and subject to which the Bonds are to be issued and received, and in consideration of the premises and of the mutual covenants herein contained and of the purchase and acceptance of the Bonds by the owners thereof, and for other valuable considerations, the receipt whereof is hereby acknowledged, the Authority does hereby covenant and agree with the Trustee, for the benefit of the respective owners from time to time of the Bonds, as follows:

**ARTICLE I**  
**DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICABILITY**

**Section 1.01. Definitions.** Unless the context otherwise requires, the terms defined in this section shall for all purposes hereof and of any Supplemental Indenture and of any certificate, opinion, request or other document herein or therein mentioned:

(a) The terms defined in this Section have the meanings herein specified and include the plural as well as the singular.

(b) All accounting terms not otherwise defined herein have the meanings assigned to them, and all computations herein provided for shall be made, in accordance with generally accepted accounting principles.

(c) All references herein to “generally accepted accounting principles” refer to such principles as they exist at the date of applicability thereof.

(d) All references herein to “Articles,” “Sections,” and other subdivisions are to the designated Articles, Sections, and other subdivisions of this Indenture as originally executed.

(e) The words “herein,” “hereof,” “hereby,” “hereunder,” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section, or other subdivision.

(f) Words of the masculine gender mean and include words of the feminine and neuter genders.

(g) Unless otherwise defined in this Indenture, all terms used herein have the meanings assigned to such terms in the Act.

**Accountant’s Report** means a report signed by an Independent Certified Public Accountant.

**Accreted Value** means, with respect to any Capital Appreciation Bonds, as of the date of calculation, the initial amount thereof plus the interest accrued thereon to such date of calculation, compounded from the date of initial delivery at the approximate interest rate thereof on each compounding date, as determined in accordance with the table of accreted values for any Capital Appreciation Bonds prepared by the Authority at the time of sale thereof, assuming in any year that such Accreted Value increases in equal daily amounts on the basis of a year of three hundred sixty (360) days composed of twelve (12) months of thirty (30) days each.

**Act** means the Joint Exercise of Powers Act (being Chapter 5 of Division 7 of Title 1 of the California Government Code, as amended) and all laws amendatory thereof or supplemental thereto.

**Additional Bonds** means any Bonds of an additional Series issued pursuant to Section 3.01 (Issuance of Additional Series of Bonds) and secured on a parity with all other Bonds issued hereunder.

**Agency** means the Placer County Water Agency, a public agency duly organized and existing pursuant to the Placer County Water Agency Act (California Statutes 1957, Chapter 1234, as amended).

**Ancillary Obligations** means any Liquidity Facility or Financial Products Agreement designated in a Supplemental Indenture as an Ancillary Obligation for purposes of this Indenture.

**Authority** means the Middle Fork Project Finance Authority created pursuant to the Act and the Joint Powers Agreement, and its successors and assigns in accordance herewith.

**Annual Debt Service** means the total of Debt Service with respect to the Bonds coming due in the Fiscal Year to which reference is made.

**Authorized Denomination** for any Series of Bonds means, unless otherwise specified in the Supplemental Indenture that establishes the terms and provisions of such Series of Bonds, (1) with respect to any Current Interest Bond, \$5,000 principal amount and, (2) with respect to any Capital Appreciation Bond, \$5,000 Accreted Value at maturity or, with respect to both, any integral multiple thereof.

**Average Annual Debt Service** means the total of Debt Service for each Fiscal Year during which the Bonds to which reference is made are Outstanding divided by the number of Fiscal Years such Bonds are Outstanding.

**Beneficial Owner** means any person who has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds, including persons holding Bonds through nominees or depositories.

**Board** means the Board of Directors of the Authority.

**Bond Fund** means the fund by that name established pursuant to Section 7.06 (Bond Fund).

**Bonds** means all bonds of the Authority authorized by and at any time Outstanding pursuant hereto and executed, issued and delivered in accordance with Article II (Issuance of Bonds).

**Business Day** means any day on which the Trustee is open for business at its Corporate Trust Office.

**Capital Appreciation Bonds** means any Bonds described as such when issued and with respect to which interest thereon is compounded and paid at maturity or on prior redemption.

**Certificate, Statement, Request, Requisition, or Order** of the Authority or the Agency means, respectively, a written certificate, statement, request, requisition, or order signed in the name of the respective entity, in the case of the Authority, by the Chair, Vice-Chair, Executive Director, Treasurer, or Secretary of the Authority or by any other officer of the Authority duly authorized by the Executive Director for that purpose, and, in the case of the Agency, by its General Manager, Director of Financial Services, or any other person authorized by the Board of Directors of the Agency or the General Manager to execute such instruments.

**Closing Date** with respect to any Series of the Bonds means the date of delivery of such Series to the initial purchaser thereof.

**Code** means the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

**Corporate Trust Office** means the corporate trust office of the Trustee located at 500 South Hope Street, Los Angeles, California 90071, Attention: Global Corporate Trust Services, provided that for registration, transfer, exchange, payments and surrender of the Bonds, Corporate Trust Office means the corporate trust operations office in Los Angeles, California, or such other office or offices as the Trustee shall designate from time to time.

**Costs of Issuance** means all items of expense directly or indirectly payable by or reimbursable to the Authority and related to the original authorization, issuance, sale, and delivery of the Bonds, including but not limited to advertising and printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of the Trustee, legal fees and charges, fees and disbursements of consultants and professionals, financial advisor fees

and expenses, title insurance premiums, rating agency fees, municipal bond insurance premiums, fees and charges for preparation, execution, transportation, and safekeeping of Bonds, and any other cost, charge, or fee in connection with the original delivery of Bonds.

**County** means the County of Placer, a political subdivision of the State of California.

**Coverage Report** means a debt service coverage report signed by an Independent Certified Public Accountant, an Independent Engineer, or an Independent Financial Consultant and filed with the Authority pursuant to Section 3.0(E) (Issuance of Additional Series of Bonds -- Debt Service Feasibility).

**Current Interest Bonds** means any Bonds described as such when issued and that pay interest at least semiannually to the Owners thereof (excluding the first payment of interest thereon).

**Credit Facility** means the insurance policy, letter of credit, or other credit facility of the Credit Provider provided with respect to a Series of the Bonds.

**Credit Facility Account** means the account by that name established pursuant to Section 7.18 (Credit Facility Account and Liquidity Facility Account).

**Credit Provider** means any provider of a Credit Facility with respect to a Series of the Bonds and its successors and assigns. **Credit Providers** means, collectively, the providers of each Credit Facility with respect to the Bonds and their successors and assigns.

**Debt Service** means, for any Fiscal Year, the sum of:

(i) the interest accruing during such Fiscal Year on all outstanding Bonds, assuming that all outstanding Serial Bonds are retired as scheduled and that all outstanding Term Bonds are redeemed or paid from sinking fund payments as scheduled (except to the extent that such interest is to be paid from the proceeds of sale of any Bonds),

(ii) that portion of the principal amount of all outstanding Serial Bonds maturing on the next succeeding principal payment date that would have accrued during such Fiscal Year if such principal amount were deemed to accrue daily in equal amounts from the next preceding principal payment date or during the year preceding the first principal payment date, as the case may be, and

(iii) that portion of the principal amount of all outstanding Term Bonds required to be redeemed or paid on the next succeeding redemption date (together with the redemption premiums, if any, thereon) that would have accrued during such Fiscal Year if such principal amount (and redemption premiums) were deemed to accrue daily in equal amounts from the next preceding redemption date or during the year preceding the first redemption date, as the case may be;

provided, that:

(i) Accreted Value: if any of such Bonds are Capital Appreciation Bonds, then the Accreted Value payment shall be deemed a principal payment and interest that is compounded and paid as Accreted Value shall be deemed due on the scheduled redemption or payment date of such Capital Appreciation Bond;

(ii) Variable Rates: if any of such Bonds bear interest payable pursuant to a variable interest rate formula, the interest rate on such Bonds for periods when the actual interest rate cannot yet be determined, shall be assumed to be equal to the greater of:

(1) the actual rate on the date of calculation, or if such Bonds are not yet outstanding, the initial rate (if then established and binding), and

(2) if the Bonds have been outstanding for at least twelve (12) months, the average rate over the twelve (12) months immediately preceding the date of calculation, and

(iii) Debt Secured by Letter of Credit: if any of such Bonds are secured by an irrevocable letter of credit issued by a bank having a combined capital and surplus of at least one hundred million dollars (\$100,000,000), the principal payments or deposits with respect to such Bonds nominally due in the last Fiscal Year in which such Bonds mature may, at the option of the Authority, be treated as if they were due as specified in any loan agreement or reimbursement agreement issued in connection with such letter of credit or pursuant to the repayment provisions of such letter of credit and interest on such Bonds after such Fiscal Year shall be assumed to be payable pursuant to the terms of such loan agreement or reimbursement agreement or repayment provisions;

(iv) Balloon Debt: if any of such Bonds are not secured by a letter of credit as described in clause (c) of this definition and 20% or more of the original principal of such Bonds is not due until the final stated maturity of such Bonds, such principal may, at the option of the Authority, be treated as if it were due based upon a level amortization of such principal over the term of such Bonds or thirty (30) years, whichever is greater;

(v) Paired Obligations: (i) if any of such Bonds bear interest at a variable rate and the payments received and made by the Authority under a Financial Products Agreement with respect to such Bonds are expected to produce a fixed rate to be paid by the Authority, then such Bonds together with the Financial Products Agreement shall be treated as a single obligation of the Authority that bears interest at such fixed rate; or (ii) if any such Bonds bear interest at a fixed rate and the payments received and made by the Authority under a Financial Products Agreement with respect to such Bonds are expected to produce a variable rate to be paid by the Authority, then such Bonds together with the Financial Products Agreement shall be treated as a single obligation of the Authority that bears interest at such variable rate;

(vi) Deduction of Available Amounts: principal and interest payments with respect to Bonds shall be excluded to the extent such payments are to be paid from (i) amounts on deposit with the Trustee or other fiduciary in escrow specifically therefor, (ii) the proceeds of Bonds held by the Trustee or other fiduciary as funded (capitalized)

interest specifically to pay such interest, or (iii) amounts received or expected to be received from a governmental entity that are related to the payment thereof (such as refundable credits payable by the U.S. Treasury);

(vii) Available Reserve Amounts: the amount on deposit in a debt service reserve fund with respect to Bonds on any date of calculation of Debt Service shall be deducted from the amount of principal due at the final maturity of such Bonds; and, to the extent the amount in such debt service reserve fund is in excess of such amount of principal, such excess shall be applied to the full amount of principal due, in each preceding year, in inverse order of due date, until such amount is exhausted.

**Debt Service Fund** means the fund by that name established pursuant to Section 7.04 (Allocation of Net System Revenues).

**Defeasance Securities** means the following:

a. U.S. Treasury Certificates, Notes and Bonds (including State and Local Government Series – (SLGs)).

b. Direct obligations of the U.S. Treasury that have been stripped by the U.S. Treasury itself, CATS, TIGRS and similar securities.

c. The interest component of Resolution Funding Corp. (REFCORP) strips that have been stripped by request to the Federal Reserve Bank of New York in book-entry form

d. Pre-refunded municipal bonds rated in the highest Rating Category of any Rating Agency then rating the Bonds. If, however, the issue is only rated by Standard & Poor's (i.e., there is no Moody's and no Fitch rating) then the pre-refunded bonds must have been pre-refunded with cash, direct U.S. or U.S. guaranteed obligations, or AAA rated pre-refunded municipals to satisfy this condition.

e. Obligations issued by the following agencies that are backed by the full faith and credit of the U.S.:

(i). *U.S. Export-Import Bank (Eximbank)*  
Direct obligations or fully guaranteed certificates of beneficial ownership

(ii) *Farmers Home Administration (FmHA)*  
Certificates of beneficial ownership

(iii) *Federal Financing Bank*

(iv) *General Services Administration*  
Participation Certificates

(v) *U.S. Maritime Administration*  
Guaranteed Title XI financing

- (vi) *U.S. Department of Housing and Urban Development (HUD)*
  - Project Notes
  - Local Authority Bonds
  - New Communities Debentures – U.S. government guaranteed debentures
  - U.S. Public Housing Notes and Bonds – U.S. government-guaranteed public housing notes and bonds

**Energy Market Hedging Agreement** means a hedging agreement, arrangement or security, however denominated, entered into for the purpose of reducing or otherwise managing the risk of energy market prices.

**Engineer's Report** means a report signed by an Independent Engineer.

**Event of Default** means any of the events described in Section 10.01 (Events of Default) hereof as an "Event of Default."

**Financial Products Agreement** means an interest rate swap, cap, collar, option, floor, forward or other hedging agreement, arrangement or security, however denominated, identified to the Trustee in a Certificate of the Authority as having been entered into with a Qualified Provider not for investment purposes but with respect to Bonds (which Bonds shall be specifically identified in the Certificate of the Authority) for the purpose of (1) reducing or otherwise managing the risk of interest rate changes or (2) effectively converting interest rate exposure, in whole or in part, from a fixed rate exposure to a variable rate exposure or from a variable rate exposure to a fixed rate exposure.

**Fiscal Year** means the twelve-month period terminating on June 30 of each year, or any other annual accounting period hereafter selected and designated by the Authority as its Fiscal Year in accordance with applicable law.

**Fitch** means Fitch Ratings, Inc., and its successors and assigns, except that, if Fitch no longer maintains a rating on the Bonds, any other nationally recognized bond rating agency then maintaining a rating on the Bonds, but only so long as a nationally recognized rating agency then maintains a rating on the Bonds.

**Generally Accepted Accounting Principles** means the uniform accounting and reporting procedures set forth in publications of the Financial Accounting Standards Board or its successor, or by any other generally accepted authority on such procedures, and includes, as applicable, the standards set forth by the Governmental Accounting Standards Board or its successor.

**Indenture** means this Indenture, dated March 1, 2020, between the Authority, the Agency, and the Trustee, as originally executed and as it may from time to time be amended or supplemented by all Supplemental Indentures executed pursuant to the provisions hereof.

**Independent Certified Public Accountant** means any certified public accountant or firm of such accountants duly licensed and entitled to practice and practicing as such under the laws of the State or a comparable successor, appointed and paid by the Authority, and who, or each of whom:

(1) is in fact independent according to the Statement of Auditing Standards No. 1 and not under the domination of the Authority;

(2) does not have a substantial financial interest, direct or indirect, in the operations of the Authority; and

(3) is not connected with the Authority as a member, officer or employee of the Authority, but who may be regularly retained to audit the accounting records of and make reports thereon to the Authority.

**Independent Engineer** means a registered engineer or firm of registered engineers generally recognized to be well-qualified in engineering matters relating to hydroelectric power generating systems, appointed and paid by the Authority, and who:

(1) is in fact independent and not under the domination of the Authority or any member thereof;

(2) does not have a substantial financial interest, direct or indirect, in the operations of the Authority; and

(3) is not connected with the Authority as an officer or employee of the Authority or any member thereof, but who may be regularly retained to make reports to the Authority.

**Independent Financial Consultant** means a financial consultant qualified in the field of municipal finance, appointed and paid by the Authority, and who:

(1) is in fact independent and not under the domination of the Authority or any member thereof;

(2) does not have a substantial financial interest, direct or indirect, in the operations of the Authority; and

(3) is not connected with the Authority as an officer or employee of the Authority or any member thereof, but who may be regularly retained to make reports to the Authority.

**Information Service** means the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access (“EMMA”) website, or, in accordance with then-current guidelines of the Securities and Exchange Commission, such other addresses and or such other services providing information with respect to called bonds, or no such services, as the Authority may designate in a Certificate of the Authority delivered to the Trustee.

**Insurance Consultant** means an individual or firm, employed by the Authority, including the Risk Manager of the Authority, that has actuarial-experienced personnel in the field of risk management.

**Interest Fund** means the fund by that name established pursuant to Section 7.06 (Bond Fund).

**Interest Payment Date** with respect to Bonds of any Series means the date or dates specified in such Bonds on which interest on such Bonds is due and payable.

**Joint Powers Agreement** means the agreement entitled “Joint Exercise of Powers Agreement for the Middle Fork Project Finance Authority,” dated as of January 10, 2006, between the County and the Agency, as originally executed and as it may from time to time be amended or supplemented pursuant to the provisions hereof and thereof.

**Liquidity Facility** means a commitment of a Liquidity Provider to provide liquidity for the purchase of a Series of the Bonds in form and substance satisfactory to the Credit Providers. A Liquidity Facility may be included as part of a Credit Facility.

**Liquidity Facility Account** means the account by that name established pursuant to Section 7.18 (Credit Facility Account and Liquidity Facility Account).

**Liquidity Facility Agreement** means the agreement pursuant to which a Liquidity Provider provides a Liquidity Facility.

**Liquidity Provider** means any institution issuing a Liquidity Facility then in effect with respect to a Series of the Bonds. Liquidity Providers means, collectively, the institutions issuing each Liquidity Facility then in effect with respect to the Bonds.

**Liquidity Provider Bonds** means Bonds purchased with amounts drawn under a Liquidity Facility and owned by a Liquidity Provider or its transferees.

**Mandatory Sinking Account Payment** means, with respect to Bonds of any Series and maturity, the amount required by a Supplemental Indenture hereto to be deposited by the Agency in a Sinking Account for the payment of Term Bonds of such Series and maturity.

**Maximum Annual Debt Service** means the greatest amount of Debt Service with respect to the Bonds coming due in any Fiscal Year including the Fiscal Year in which the calculation is made or any subsequent Fiscal Year.

**Moody’s** means Moody’s Investors Service, Inc., and its successors and assigns, except that, if Moody’s no longer maintains a rating on the Bonds, any other nationally recognized bond rating agency then maintaining a rating on the Bonds, but only so long as a nationally recognized rating agency then maintains a rating on the Bonds.

**Net Proceeds** means, when used with respect to any condemnation award or with respect to any insurance proceeds, the amount of such condemnation award or such insurance proceeds remaining after payment of all expenses (including attorneys’ fees) incurred in the collection of such award or such proceeds.

**Net System Revenues** means, for any Fiscal Year, the System Revenues during such Fiscal Year less the Operation and Maintenance Costs during such Fiscal Year.

**Operation and Maintenance Costs** means the reasonable and necessary costs paid or incurred by the Agency or the Authority for maintaining and operating the System, determined in accordance with Generally Accepted Accounting Principles, including (without limitation) all reasonable expenses of maintenance and repair and other expenses necessary to maintain and preserve the System in good repair and working order, and all administrative costs of the Agency or the Authority that are charged directly or apportioned to the operation of the System, such as salaries and wages of employees, overhead, taxes (if any), insurance premiums, and costs to comply with State or federal regulations, and including all other reasonable and necessary costs of the Authority or charges required to be paid by it to comply with the terms hereof or of any resolution authorizing the issuance of any Bonds or of such Bonds, such as compensation, reimbursement and indemnification of the trustee for any such Bonds and fees and expenses of Independent Certified Public Accountants, Independent Engineers, Independent Financial Consultants, Insurance Consultants, and the Agency's or the Authority's financial advisor; but excluding in all cases (a) depreciation, replacement and obsolescence charges or reserves therefor, amortization of intangibles, losses or gains on subsidiaries accounted for on any equity basis, or other bookkeeping entries of a similar nature, (b) intergovernmental transfers by the Agency or the Authority that are not reimbursements or payments for overhead or other administrative expenses incurred by the Agency or the Authority, and (c) all interest charges and charges for the payment of principal or amortization of bonded or other indebtedness of the Authority.

**Opinion of Counsel** means a written opinion of counsel experienced in the field of law relating to municipal bonds, appointed and paid by the Authority.

**Outstanding**, when used as of any particular time with reference to Bonds, means all Bonds except

- (1) Bonds theretofore cancelled by the Trustee or surrendered to the Trustee for cancellation;
- (2) Bonds paid or deemed to have been paid within the meaning of Section 6.01(A) (Discharge of Indenture -- Payment of Bonds); and
- (3) Bonds in lieu of or in substitution for which other Bonds shall have been executed, issued and delivered by the Authority pursuant hereto.

**Owner** means any person who shall be the registered owner of any Outstanding Bond.

**Payments** means the payments of interest and principal and the redemption premiums, if any, payable by the Authority under and pursuant to this Indenture.

**Permitted Investments** means any of the following to the extent permitted by the laws of the State (the Trustee is entitled to rely on any Written Request of the Authority directing investments as a certification to the Trustee that such investments are so permitted):

- (1) Direct obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury, and CATS and TIGRS) or obligations the principal of and interest on which are unconditionally guaranteed by the United States of America.

- (2) Bonds, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following federal agencies and provided such obligations are backed by the full faith and credit of the United States of America (stripped securities are only permitted if they have been stripped by the agency itself):

U.S. Export-Import Bank (Eximbank)

Direct obligations or fully guaranteed certificates of beneficial ownership

Farmers Home Administration (FmHA)

Certificates of beneficial ownership

Federal Financing Bank

Federal Housing Administration (FHA)

Debentures

General Services Administration

Participation Certificates

Government National Mortgage Association (GNMA or “Ginnie Mae”)

GNMA - guaranteed mortgage-backed bonds

GNMA - guaranteed pass-through obligations (participation certificates)

U.S. Maritime Administration

Guaranteed Title XI financing

U.S. Department of Housing and Urban Development (HUD)

Project Notes

Local Authority Bonds

New Communities Debentures – U.S. government guaranteed debentures

U.S. Public Housing Notes and Bonds – U.S. government guaranteed public housing notes and bonds

- (3) Bonds, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following non-full faith and credit U.S. government agencies (stripped securities are only permitted if they have been stripped by the agency itself):

Federal Home Loan Bank System

Senior debt obligations

Federal Home Loan Mortgage Corporation (FHLMC or “Freddie Mac”)

Participation Certificates

Senior debt obligations

Federal National Mortgage Association (FNMA or “Fannie Mae”)

Mortgage-backed securities and senior debt obligations

Resolution Funding Corp. (REFCORP)  
obligations

Farm Credit System

Consolidated systemwide bonds and notes.

- (4) Money market funds, including funds of the Trustee or any affiliate, registered under the Federal Investment Company Act of 1940, whose shares are registered under the Federal Securities Act of 1933, and having a rating in one of the two highest Rating Categories of any Rating Agency then rating the Bonds.
- (5) Certificates of deposit secured at all times by collateral described in (1) and/or (2) above. Such certificates must be issued by commercial banks, savings associations or mutual savings banks. The collateral must be held by a third party and the Trustee, on behalf of Owners, must have a perfected first security interest in the collateral.
- (6) Certificates of deposit, savings accounts, deposit accounts or money market deposits, including deposits in the Trustee or any affiliate, that are fully insured by the Federal Deposit Insurance Corporation, including BIF and SAIF.
- (7) Investment Agreements, including guaranteed investment contracts, forward purchase agreements, and reserve fund put agreements entered into with financial institutions whose long-term debt obligations are rated in one of the three highest Rating Categories of any Rating Agency then rating the Bonds or acceptable to the Credit Providers.
- (8) Commercial paper rated, at the time of purchase, in the highest short-term Rating Category of any Rating Agency then rating the Bonds.
- (9) Bonds or notes issued by any state or municipality that are rated in one of the three highest Rating Categories by any Rating Agency then rating the Bonds.
- (10) Federal funds or bankers acceptances with a maximum term of one year of any bank that has an unsecured, uninsured and unguaranteed obligation rating in the highest short-term Rating Category or one of the three highest long-term Rating Categories of any Rating Agency then rating the Bonds.
- (11) Repurchase agreements that provide for the transfer of securities from a dealer bank or securities firm (seller/borrower) to the Trustee (buyer/lender), and the transfer of cash from the Trustee to the dealer bank or securities firm with an agreement that the dealer bank or securities firm will repay the cash plus a yield to the Trustee in exchange for the securities at a specified date. Repurchase Agreements (“repos”) with a term that exceeds 30 days must be acceptable to the Credit Providers. Repos with a term of 30 days or less must satisfy the following criteria:

Repos must be between the Trustee and a dealer bank or securities firm

Primary dealers on the Federal Reserve reporting dealer list that are rated in one of the three highest long-term Rating Categories of any Rating Agency then rating the Bonds, or

Banks rated in one of the three highest long-term Rating Categories of any Rating Agency then rating the Bonds.

The written repo contract must include the following:

Securities that are acceptable for transfer are:

Direct U.S. governments

Federal agencies backed by the full faith and credit of the

U.S. government (and FNMA & FHLMC)

The term of the repo may be up to 30 days

The collateral must be delivered to the Trustee (if Trustee is not supplying the collateral) or third party acting as agent for the Trustee before/simultaneous with payment (perfection by possession of certificated securities).

Valuation of Collateral

The securities must be valued weekly, marked-to-market at current market price plus accrued interest. The value of collateral must be equal to 104% of the amount of cash transferred by the Trustee to the dealer bank or security firm under the repo plus accrued interest. If the value of securities held as collateral slips below 104% of the value of the cash transferred by Trustee, then additional cash and/or acceptable securities must be transferred. If, however, the securities used as collateral are FNMA or FHLMC, then the value of collateral must equal 105%.

Legal opinion that must be delivered to the Authority:

Repo meets guidelines under state law for legal investment of public funds.

- (12) Pre-refunded municipal bonds rated in the highest Rating Category by any Rating Agency then rating the Bonds. If, however, the issue is only rated by Standard & Poor's, then the pre-refunded bonds must have been pre-refunded with cash, direct U.S. or U.S. guaranteed obligations, or AAA-rated pre-refunded municipals to satisfy this condition.
- (13) The Local Agency Investment Fund referred to in Section 16429.1 of the California Government Code.
- (14) Shares in a California common law trust established pursuant to Title 1, Division 7, Chapter 5 of the Government Code of the State of California that invests exclusively in investments permitted by Section 53601 of Title 5, Division 2,

Chapter 4 of the California Government Code, as it may be amended (California Asset Management Program).

**Person** means a corporation, firm, association, partnership, trust, or other legal entity or group of entities, including a governmental entity or any agency or political subdivision thereof.

**Principal Fund** means the fund by that name established pursuant to Section 7.06 (Bond Fund).

**Principal Payment Date** with respect to Bonds of any Series means the date or dates specified in such Bonds on which installments of principal of such Bonds are due and payable or Mandatory Sinking Account Payments are due and payable.

**Project** means any additions, betterments, extensions, or improvements to the System designated by the Board as a designated Project, the acquisition and construction of which is to be paid for by the proceeds of any Bonds.

**Project Fund** means a fund of that name established by a Supplemental Indenture to hold the proceeds of a Series of Bonds or a portion thereof prior to expenditure on a Project.

**Qualified Provider** means any financial institution or insurance company that is a party to a Financial Products Agreement. The general unsecured obligations of any Qualified Provider must have a long-term rating in one of the three highest Rating Categories of any Rating Agency then rating the Bonds.

**Rating Agency** means Standard & Poor's, Moody's, and Fitch or, in the event that Standard & Poor's, Moody's, or Fitch no longer maintains a rating on the Bonds, any other nationally recognized bond rating agency then maintaining a rating on the Bonds, but, in each instance, only so long as Standard & Poor's, Moody's, Fitch, or other nationally recognized rating agency then maintains a rating on the Bonds.

**Rating Category** means (i) with respect to any long-term rating category, all ratings designated by a particular letter or combination of letters, without regard to any numerical modifier, plus or minus sign or other modifier and (ii) with respect to any short-term or commercial paper rating category, all ratings designated by a particular letter or combination of letters and taking into account any numerical modifier, but not any plus or minus sign or other modifier.

**Redemption Fund** means that means the fund by that name established pursuant to Section 7.10 (Application of Redemption Fund) hereof.

**Redemption Price** means, with respect to any Bond (or portion thereof) the principal amount of such Bond (or portion) plus the applicable premium, if any, payable upon redemption thereof pursuant to the provisions of such Bond and this Indenture.

**Regular Record Date** means the fifteenth day of the month immediately preceding an Interest Payment Date, whether or not such day is a Business Day.

**Reserve Facility** means any letter of credit, insurance policy, surety bond or other credit source deposited with the Trustee pursuant to Section 7.09 (Funding and Application of Reserve Fund).

**Reserve Fund** means the fund by that name established pursuant to Section 7.09 (Funding and Application of Reserve Fund) hereof.

**Responsible Officer of the Trustee** means any Vice President, Assistant Vice President or Trust Officer of the Trustee having regular responsibility for corporate trust matters related to this Indenture.

**Securities Depositories** means The Depository Trust Company, 711 Stewart Avenue, Garden City, New York 11530, Fax-(516) 227-4039 or 4190; or such other addresses and/or such other securities depositories as the Authority may designate.

**Serial Bonds** means Bonds for which no scheduled mandatory redemptions are provided.

**Series**, whenever used herein with respect to Bonds, means all of the Bonds designated as being of the same series, issued in a simultaneous transaction, regardless of variations in maturity, interest rate, redemption, and other provisions, and any Bonds thereafter issued upon transfer or exchange or in lieu of or in substitution for (but not to refund) such Bonds as herein provided.

**Series Required Reserve** means, as of any date of calculation:

- (1) for the Series 2020 Refunding Bonds, \$ \_\_\_\_\_; and
- (2) for any other Series of Bonds the amount specified in the Supplemental Indenture that establishes the terms and provisions of such Series of Bonds;

provided that, if the Supplemental Indenture providing for the issuance of an additional Series of Bonds provides that such Series shall be secured by the Reserve Account established for a previously issued Series of Bonds, then a single Series Required Reserve shall be calculated on a combined basis for those Series.

**Series 2020 Refunding Bonds** means the Series of Bonds issued pursuant to Article IV (Terms and Issue of Series 2020 Refunding Bonds).

**Sinking Accounts** means the accounts in the Principal Fund so designated and established pursuant to Section 7.08 (Application of Principal Fund) for the payment of Term Bonds.

**Special Record Date** for the payment of any defaulted interest on the Bonds means a date fixed by the Trustee pursuant to Section 2.07 (Payment of Interest on the Bonds; Interest Rights Preserved).

**Standard & Poor's** means Standard & Poor's Global Ratings, a business unit of Standard & Poor's Financial Services LLC, a limited liability company duly organized and existing under the law of the State of New York, and its successors and assigns, except that if Standard & Poor's

no longer maintains a rating on the Bonds, any other nationally recognized bond rating agency, but only so long as a nationally recognized rating agency then maintains a rating on the Bonds.

**State** means the State of California.

**Supplemental Indenture** means any indenture then in full force and effect that has been duly executed and delivered by the Authority, the Agency, and the Trustee amendatory hereof or supplemental hereto; but only if and to the extent that such Supplemental Indenture is specifically authorized hereunder.

**System** means the electric power generating facilities of the Middle Fork American River Hydroelectric Project, currently consisting of five powerhouses (French Meadows, Hell Hole Dam, Middle Fork, Ralston, and Oxbow Powerhouses), five diversion impoundments (Duncan Creek Diversion, North Fork Long Canyon Creek Diversion, South Fork, Long Canyon Creek Diversion, Middle Fork Afterbay, and Ralston Afterbay), five tunnels (Duncan Creek-Middle Fork, French Meadows-Hell Hole, Hell Hole-Middle Fork, Middle Fork-Ralston, Ralston-Oxbow Tunnels), and two reservoirs (French Meadows Reservoir, and Hell Hole Reservoir), which is owned by the Agency, and all other properties, structures or works hereafter acquired and constructed by the Agency and determined to be a part of the hydroelectric power project, together with all additions, betterments, extensions or improvements to such facilities, properties, structures or works or any part thereof hereafter acquired and constructed.

**System Revenue Fund** means the fund by that name established pursuant to Section 7.03 (System Revenue Fund).

**System Revenues** means all gross income and revenue received or receivable by the Agency or the Authority from the ownership or operation of the System, determined in accordance with Generally Accepted Accounting Principles, including, without limiting the generality of the foregoing:

- (1) all revenue received by the Authority from the sale of electric energy or capacity and any other electric-power-related services of the System and all other income and revenue howsoever derived by the Authority from the ownership or operation of the System or arising from the System,
- (2) the earnings on and income derived from the investment of all such income or other moneys,
- (3) the proceeds derived by the Authority directly or indirectly from the sale, lease, or other disposition of a part of the System, and
- (4) the payments received net of payments made under a Financial Products Agreement or an Energy Market Hedging Agreement.

**Tax Certificate** means any arbitrage and/or rebate certificate delivered by the Authority at the time of the issuance and delivery of a Series of Tax-Exempt Bonds, as the same may be amended or supplemented in accordance with its terms.

**Tax-Exempt Bonds** means any Bonds of a Series the interest on which is intended to be excluded from gross income for federal income tax purposes.

**Term Bonds** means Bonds that are subject to scheduled mandatory redemptions on or before their respective maturities calculated to retire such bonds on or before their specified maturity dates.

**Trustee** means The U.S. Bank, N.A., or any other association or corporation that may at any time be substituted in its place as provided in Section 11.09 (Removal and Resignation; Appointment of Successor).

**Section 1.02. Equal Security.** In consideration of the acceptance of the Bonds by the Owners thereof, the Indenture shall be deemed to be and shall constitute a contract between the Authority, the Agency, and the Owners from time to time of all Bonds authorized, executed, issued and delivered hereunder and then Outstanding to secure the full and final payment of the interest on and principal of and redemption premiums, if any, on all Bonds which may from time to time be authorized, executed, issued and delivered hereunder, subject to the agreements, conditions, covenants and provisions contained herein; and all agreements and covenants set forth herein to be performed by or on behalf of the Authority shall be for the equal and proportionate benefit, protection and security of all Owners of the Bonds without distinction, preference or priority as to security or otherwise of any Bonds over any other Bonds by reason of the number or date thereof or the time of authorization, sale, execution, issuance or delivery thereof or for any cause whatsoever, except as expressly provided herein or therein.

**Section 1.03. Acts of Owners.** Any request, consent or other instrument required or permitted by this Indenture to be signed and executed by Owners may be in any number of concurrent instruments of substantially similar tenor and shall be signed or executed by such Owners in person or by an agent or agents duly appointed in writing. Proof of the execution of any such request, consent or other instrument or of a writing appointing any such agent, or of the holding by any person of Bonds transferable by delivery, shall be sufficient for any purpose of this Indenture and shall be conclusive in favor of the Trustee and of the Authority if made in the manner provided in this Section.

The fact and date of the execution by any person of any such request, consent or other instrument or writing may be proved by the certificate of any notary public or other officer of any jurisdiction, authorized by the laws thereof to take acknowledgments of deeds, certifying that the person signing such request, consent, or other instrument acknowledged to him the execution thereof, or by an affidavit of a witness of such execution duly sworn to before such notary public or other officer.

Any request, consent, or other instrument or writing of the Owner of any Bond shall bind every future Owner of the same Bond and the Owner of every Bond delivered in exchange therefor or in lieu thereof, in respect of anything done or suffered to be done by the Trustee or the Authority in accordance therewith or reliance thereon.

**Section 1.04. Notices, etc., to Authority, Agency, and Trustee.** Any notice to or demand upon the Trustee may be served or presented, and such demand may be made, at the

Corporate Trust Office. Any notice to or demand upon the Authority shall be deemed to have been sufficiently given or served for all purposes by being deposited, first-class mail postage prepaid, in a post office letter box, addressed, as the case may be, to the Authority at 144 Ferguson Road, Auburn, California 95604, Attention: Executive Director (or such other address as may have been filed in writing by the Authority with the Trustee). Any notice to or demand upon the Agency shall be deemed to have been sufficiently given or served for all purposes by being deposited, first-class mail postage prepaid, in a post office letter box, addressed, as the case may be, to the Agency at 144 Ferguson Road, Auburn, California 95604, Attention: Director of Financial Services (or such other address as may have been filed in writing by the Agency with the Trustee).

**Section 1.05. Notices to Owners; Waiver.** In any case where notice to Owners is given by mail, neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Owners shall affect the sufficiency of such notice with respect to other Owners.

Where this Indenture provides for notice in any manner, such notice may be waived in writing by the person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Owners shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

**Section 1.06. Form and Content of Documents Delivered to Trustee.** Every certificate or opinion provided for in this Indenture with respect to compliance by or on behalf of the Authority with any provision hereof shall include (1) a statement that the person making or giving such certificate or opinion has read such provision and the definitions herein relating thereto, (2) a brief statement as to the nature and scope of the examination or investigation upon which the certificate or opinion is based; (3) a statement that, in the opinion of such person, he has made or caused to be made such examination or investigation as is necessary to enable him to express an informed opinion with respect to the subject matter referred to in the instrument to which his signature is affixed; and (4) a statement as to whether, in the opinion of such person, such provision has been complied with.

Any such certificate or opinion made or given by an officer of the Authority may be based, insofar as it relates to legal or accounting matters, upon a certificate or opinion of or representation by counsel, an accountant, or an independent consultant, unless such officer knows, or in the exercise of reasonable care should have known, that the certificate, opinion or representation with respect to the matters upon which such certificate or statement may be based, as aforesaid, is erroneous. Any such certificate or opinion made or given by counsel, an accountant, or an independent consultant may be based, insofar as it relates to factual matters (with respect to which information is in the possession of the Authority) upon a certificate or opinion of or representation by an officer of the Authority, unless such counsel, accountant, or independent consultant knows, or in the exercise of reasonable care should have known, that the certificate or opinion or representation with respect to the matters upon which such person's certificate or opinion or representation may be based, as aforesaid, is erroneous. The same officer of the Authority, or the same counsel, or accountant or independent consultant, as the case may be, need not certify to all of the matters required to be certified under any provision of this Indenture, but different officers, counsel, accountants, or independent consultants may certify to different matters, respectively.

**Section 1.07. Effect of Headings and Table of Contents.** The headings or titles of the several Articles and Sections hereof, and any table of contents appended to copies hereof, shall be solely for convenience of reference and shall not affect the meaning, construction, or effect of this Indenture.

**Section 1.08. Successors and Assigns.** Whenever herein either the Authority, the Agency, or the Trustee is named or referred to, such reference shall be deemed to include the successors or assigns thereof, and all agreements and covenants required hereby to be performed by or on behalf of the Authority, the Agency, or the Trustee shall bind and inure to the benefit of the respective successors and assigns thereof, whether so expressed or not.

**Section 1.09. Benefits of the Indenture.** Nothing contained herein, expressed or implied, is intended to give to any person other than the Authority, the Agency, the Trustee and the Owners any right, remedy or claim under or by reason of this Indenture or any covenant, condition or provision herein contained; and all such covenants, conditions and provisions are and shall be held to be for the sole and exclusive benefit of the Authority, the Agency, the Trustee, and the Owners of the Bonds.

**Section 1.10. Payments/Actions Otherwise Scheduled on Non-Business Days.** Except as specifically set forth in a Supplemental Indenture, any payments or transfers that would otherwise become due on any day that is not a Business Day shall become due or shall be made on the next succeeding Business Day. When any other action is provided for herein to be done on a day named or within a specified time period and the day named or the last day of the specified period falls on a day other than a Business Day, such action may be performed on the next succeeding Business Day with the same effect as though performed on the appointed day or within the specified period.

**Section 1.11. No Personal Liability For Debt Service.** No Board member, officer, or employee of the Authority is individually or personally liable for the payment of the interest on or principal of or redemption premiums, if any, on the Bonds by reason of their issuance, but nothing herein contained relieves any such member, officer or employee from the performance of any official duty provided by the Act or any other applicable provisions of law or hereby.

**Section 1.12. No Liability of Agency for Debt Service; No Personal Liability for Obligations of the Agency.** The Agency is not the issuer of the Bonds and is not liable for the payment of the interest on or principal of or redemption premiums, if any, on the Bonds. No member of the Board of Directors of the Agency, officer, or employee of the Agency is individually or personally liable for the obligations of the Agency hereunder, but nothing herein contained relieves any such member, officer or employee from the performance of any official duty provided by the Act or any other applicable provisions of law or hereby.

**Section 1.13. Separability Clause.** If any one or more of the agreements or covenants or portions thereof required hereby to be performed by or on the part of the Authority, the Agency, or the Trustee is contrary to law, then such agreement or agreements, such covenant or covenants or such portions thereof is null and void and shall be deemed separable from the remaining agreements and covenants or portions thereof and in no way affects the validity hereof or of the Bonds, and the Owners retains all the benefit, protection and security afforded to them under the

Act or any other applicable provisions of law. The Authority, the Agency and the Trustee hereby declare that they would have executed and delivered the Indenture and each and every other article, section, paragraph, subdivision, sentence, clause and phrase hereof and would have authorized the issuance of the Bonds pursuant hereto irrespective of the fact that any one or more articles, sections, paragraphs, subdivisions, sentences, clauses or phrases hereof or the application thereof to any person or circumstance may be held to be unconstitutional, unenforceable or invalid.

**Section 1.14. Governing Law.** This Indenture shall be governed by, and construed and interpreted in accordance with, the laws of the State.

**Section 1.15. Execution in Several Counterparts.** This Indenture may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original; and all such counterparts, or as many of them as the Authority, the Agency, and the Trustee shall preserve undestroyed, shall together constitute but one and the same instrument.

## ARTICLE II ISSUANCE OF BONDS

**Section 2.01. Title; Issuable in Series; General Limitations.** The general title of the Bonds of all Series shall be “Middle Fork Project Finance Authority Revenue Bonds.” With respect to the Bonds of any particular Series, the Authority may incorporate into or add to the general title of such Bonds any words, letters, or figures designed to distinguish that Series.

The Authority may issue Bonds in Series hereunder, in book-entry form or otherwise, as from time to time authorized by the Board, subject to the covenants, provisions, and conditions contained in this Indenture.

The maximum principal amount of Bonds that the Authority may issue hereunder is not limited; subject, however, to the right of the Authority, which is hereby reserved, to limit the aggregate principal amount of Bonds that may be issued or Outstanding hereunder.

**Section 2.02. Terms of Particular Series.** Each Series of Bonds, other than the Series 2020 Refunding Bonds, shall be created by a Supplemental Indenture establishing the terms and provisions of such Series of Bonds and the form of the Bonds of such Series. The several Series of Bonds may differ from each other in any respect not in conflict with the provisions of this Indenture and as may be prescribed in this Indenture or the Supplemental Indenture creating such Series.

The Authority shall determine, at the time of issuance of each Series of Bonds, the terms thereof, including the interest rate or rates at which interest is borne by the Bonds of such Series or the manner in which the interest rate or rates are determined (not to exceed the maximum rate of interest permitted by law), the intervals at which interest on the Bonds of such Series shall be payable, the date or dates on which and the year or years in which the Bonds of such Series shall mature and become payable, and the manner in which principal of and interest on the Bonds of such Series shall be payable.

**Section 2.03. Forms and Denominations.** The form of the Bonds of each Series shall be established by the provisions of the Indenture or the Supplemental Indenture creating such Series.

The Bonds of each Series shall be distinguished from the Bonds of other Series as may be determined by the officers of the Authority executing particular Bonds, as evidenced by their execution thereof. The Bonds may carry such legends as may be required to indicate restrictions on their transfer, if any.

The Authority may issue the Bonds of any Series (i) in such denominations as it specifies at the time of issuance thereof and (ii) in fully registered form without coupons or in fully registered book-entry form.

**Section 2.04. Execution, Authentication, Delivery, and Dating.** The Bonds shall be executed in the name and on behalf of the Authority by the Chair of the Authority and countersigned by its Secretary of the Authority. The signature of any of these officers on the Bonds may be facsimile or manual. Unless otherwise provided in any Supplemental Indenture, the Bonds shall then be delivered to the Trustee for authentication by it.

In case any of the officers who signed or countersigned any of the Bonds ceases to be such officer or officers of the Authority before the Bonds so signed or countersigned have been authenticated, or delivered by the Trustee, or issued by the Authority, such Bonds may nevertheless be authenticated, delivered, and issued and, upon such authentication, delivery, and issue, shall be as binding upon the Authority as though those who signed and countersigned the same had continued to be such officers of the Authority. Any Bond may be signed and countersigned on behalf of the Authority by such persons as at the actual date of execution such Bond are the proper officers of the Authority although at the nominal date of such Bond any such person was not such officer of the Authority.

Except as may be provided in any Supplemental Indenture, no Bond is valid or obligatory for any purpose or entitled to the benefits of this Indenture unless there appears on such Bond a certificate of authentication substantially in the form provided for herein, manually executed by the Trustee. Such certificate of authentication when manually executed by the Trustee is conclusive evidence, and the only evidence, that such Bond has been duly executed, authenticated, and delivered hereunder.

**Section 2.05. Registration, Transfer, and Exchange.** The Trustee will keep or cause to be kept a register (herein sometimes referred to as the “Bond Register”) in which, subject to such reasonable regulations as it may prescribe, the Trustee shall provide for the registration and transfer of Bonds. The Bond Register shall at all times be open to inspection during normal business hours by the Authority with reasonable notice.

Upon surrender of a Bond for transfer at the Corporate Trust Office, the Authority shall execute and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Bonds of the same Series, tenor, and maturity and for an equivalent aggregate principal amount.

Bonds of any Series may be exchanged for an equivalent aggregate principal amount of Bonds of other authorized denominations of the same Series, tenor, and maturity, upon surrender of the Bonds for exchange at the Corporate Trust Office. Upon surrender of Bonds for exchange,

the Authority shall execute and the Trustee shall authenticate and deliver the Bonds that the Owner making the exchange is entitled to receive.

All Bonds surrendered upon any exchange or transfer provided for in this Indenture shall be promptly cancelled by the Trustee and thereafter disposed of as provided for in Section 2.09 (Cancellation).

All Bonds issued upon any transfer or exchange of Bonds are the valid obligations of the Authority, evidencing the same debt, and entitled to the same security and benefits under this Indenture, as the Bonds surrendered upon such transfer or exchange.

Every Bond presented or surrendered for transfer or exchange must be accompanied by a written instrument of transfer, in a form approved by the Trustee, that is duly executed by the Owner or by his attorney duly authorized in writing.

No service charge shall be made for any transfer or exchange of Bonds, but the Trustee shall require the Owner requesting such transfer or exchange to pay any tax or other governmental charge required to be paid with respect to such transfer or exchange. The cost of printing Bonds and any services rendered or expenses incurred by the Trustee in connection with any transfer or exchange shall be paid by the Authority.

The Trustee is not required to transfer or exchange (i) Bonds of any Series during the period established by the Trustee for the selection of Bonds of such Series for redemption or (ii) any Bond that has been selected for redemption in whole or in part, except the unredeemed portion of such Bond selected for redemption in part, from and after the day that such Bond has been selected for redemption in whole or in part.

**Section 2.06. Mutilated, Destroyed, Stolen or Lost Bonds.** If (i) any mutilated Bond is surrendered to the Trustee, or the Authority and the Trustee receive evidence to their satisfaction of the destruction, loss, or theft of any Bond, and (ii) there is delivered to the Authority and the Trustee such security or indemnity as may be required by them to save each of them harmless, then the Authority shall execute, and upon its request the Trustee shall authenticate and deliver, in exchange for or in lieu of any such mutilated, destroyed, lost, or stolen Bond, a new Bond of the same Series and of like tenor and principal amount, bearing a number not contemporaneously outstanding.

Upon the issuance of any new Bond under this Section, the Authority may require payment of a sum sufficient to pay the cost of preparing such Bond, any tax or other governmental charge that may be imposed in relation thereto, and any other expenses connected therewith.

Every new Bond issued pursuant to this Section in lieu of any destroyed, lost, or stolen Bond shall constitute an original additional contractual obligation of the Authority, whether or not the destroyed, lost, or stolen Bond is at any time enforceable by anyone, and is entitled to all the security and benefits of this Indenture equally and ratably with all other Outstanding Bonds secured by this Indenture. Neither the Authority nor the Trustee shall be required to treat both the new Bond and the Bond it replaces as being Outstanding for the purpose of determining the principal amount of Bonds that may be issued hereunder, but both the new Bond and the Bond it replaces shall be treated as one and the same.

**Section 2.07. Payment of Interest on the Bonds; Interest Rights Preserved.** Interest represented by any Bond that is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Owner thereof as of the close of business on the Regular Record Date for such interest specified in the provisions of this Indenture.

Any interest on any Bond that is payable but is not punctually paid or duly provided for on any Interest Payment Date forthwith ceases to be payable to the Owner on the relevant Regular Record Date. Such defaulted interest shall be paid to the Person in whose name the Bond is registered at the close of business on a Special Record Date for the payment of such defaulted interest to be fixed by the Trustee. In the name of and at the expense of the Authority, the Trustee shall cause notice of the payment of such defaulted interest and the Special Record Date to be mailed, first-class postage prepaid, to each Owner of a Bond at his address as it appears in the Bond Register not fewer than ten (10) days prior to such Special Record Date.

Subject to the foregoing provisions of this Section, each Bond delivered under this Indenture upon transfer of or in exchange for or in lieu of any other Bond carries all the rights to interest accrued and unpaid, and to accrue, that were carried by such other Bond. Each such Bond bears interest from such date so that neither loss nor gain in interest results from such transfer, exchange, or substitution.

**Section 2.08. Persons Deemed Owners.** The Authority and the Trustee are entitled to treat the person in whose name any Bond is registered as the owner thereof for all purposes of the Indenture and any applicable laws, notwithstanding any notice to the contrary received by the Trustee or the Authority. The ownership of Bonds shall be proved by the Bond Register. The Trustee may establish a record date as of which to measure consent of the Owners in order to determine whether the requisite consents are received.

**Section 2.09. Cancellation.** All Bonds surrendered for payment, redemption, transfer, or exchange, if surrendered to the Trustee, shall be promptly cancelled by the Trustee and, if surrendered to any person other than the Trustee, shall be delivered to the Trustee and, if not already cancelled, shall be promptly cancelled by the Trustee.

The Authority shall deliver to the Trustee for cancellation any Bonds acquired in any manner by the Authority, and the Trustee shall promptly cancel such Bonds.

No Bond shall be executed in lieu of or in exchange for any Bond cancelled as provided in this Section, except as expressly provided by this Indenture. The Trustee shall destroy all cancelled Bonds.

**Section 2.10. Book-Entry Provisions.** Notwithstanding any provision of this Indenture to the contrary, if the Bonds of a Series are issued as book-entry only bonds, then the following provisions shall apply:

(A) Limitations on Transfer. Registered ownership of Bonds of such Series, or any portions thereof, may not be transferred except:

(1) To any successor of The Depository Trust Company or its nominee, or to any substitute depository designated pursuant to clause (2) of this subsection (“substitute

depository”); provided that any successor of The Depository Trust Company or substitute depository shall be qualified under any applicable laws to provide the service proposed to be provided by it;

(2) To any substitute depository not objected to by the Trustee, upon (a) the resignation of The Depository Trust Company or its successor (or any substitute depository or its successor) from its functions as depository, or (b) a determination by the Authority that The Depository Trust Company or its successor (or any substitute depository or its successor) is no longer able to carry out its functions as depository; provided that any such substitute depository shall be qualified under any applicable laws to provide the services proposed to be provided by it; or

(3) To any person as provided below, upon (a) the resignation of The Depository Trust Company or its successor (or substitute depository or its successor) from its functions as depository if no substitute depository that is not objected to by the Trustee can be obtained, or (b) a determination by the Authority that it is in the best interests of the Authority to remove The Depository Trust Company or its successor (or any substitute depository or its successor) from its function as depository.

(B) Execution and Delivery of New Bonds. In the case of any transfer pursuant to clause (1) or clause (2) of subsection 2.10(A) (Book-Entry Provisions -- Limitations on Transfer) hereof, upon receipt of all Outstanding Bonds of such Series by the Trustee, together with a Certificate of the Authority to the Trustee, a single new Bond for each maturity of Bonds of such Series in the aggregate principal amount of the Bonds of such maturity then Outstanding shall be executed and delivered, registered in the name of such successor or such substitute depository, or their nominees, as the case may be, all as specified in such Certificate of the Authority. In the case of any transfer pursuant to clause (3) of subsection 2.10(A) (Book-Entry Provisions -- Limitations on Transfer) hereof, upon receipt of all Outstanding Bonds of such Series by the Trustee together with a Certificate of the Authority to the Trustee, new Bonds shall be executed and delivered in such denominations and registered in the names of such persons as are requested in such Certificate of the Authority, subject to the limitations of Section 2.05 (Registration, Transfer, and Exchange) hereof; provided that the Trustee shall not be required to deliver such new Bonds within a period less than sixty (60) days from the date of receipt of such a Certificate of the Authority.

(C) Notation of Reduction of Principal. In the case of partial redemption, cancellation or a refunding of any Bonds evidencing all or a portion of the principal maturing in a particular year, The Depository Trust Company shall make an appropriate notation on the Bonds indicating the date and amounts of such reduction in principal, in form acceptable to the Trustee.

(D) No Responsibility to Persons Other Than Owners. The Authority and the Trustee are entitled to treat the person in whose name any book-entry only Bond is registered as the Owner thereof for all purposes of the Indenture and any applicable laws, notwithstanding any notice to the contrary received by the Trustee or the Authority; and the Authority and the Trustee have no responsibility for transmitting payments to, communication with, notifying, or otherwise dealing with any beneficial owners of such Bonds. Neither the Authority nor the Trustee has any responsibility or obligations, legal or otherwise, to the beneficial owners or to any other party

including The Depository Trust Company or its successor (or substitute depository or its successor), except for the Owner of any Bond.

(E) Payments to Depository. So long as all Outstanding Bonds of such Series are registered in the name of “Cede & Co.” or its registered assign, the Authority and the Trustee shall cooperate with “Cede & Co.”, as sole registered Owner of such Bonds, and its registered assigns in effecting payment of the principal of and redemption premium, if any, and interest on the Bonds by arranging for payment in such manner that funds for such payments are properly identified and are made immediately available on the date they are due.

**Section 2.11. Establishment and Application of Project Funds**. With respect to each Series of Bonds that funds the payment of the costs of a Project, the Authority shall establish and maintain a separate fund designated as the “\_\_\_\_\_ Project Fund” (inserting therein the Series designation of such Bonds). The Authority shall use the moneys in a Project Fund to pay the costs of acquiring, constructing, furnishing, and equipping a Project (or reimbursing the Authority or the Agency for such costs) and to pay the Costs of Issuance of the Bonds. All earnings from the investment of moneys in a Project Fund shall be deposited therein. Upon completion of a Project, the Authority shall notify the Trustee in writing of such completion and transfer any amounts remaining in the related Project Fund to the Trustee for deposit in the System Revenue Fund.

### **ARTICLE III ISSUANCE AND DELIVERY OF ADDITIONAL SERIES OF BONDS**

**Section 3.01. Issuance of Additional Series of Bonds**. The Authority may by Supplemental Indenture establish one or more Series of Bonds, in addition to the Series 2020 Refunding Bonds issued hereby, secured under this Indenture equally and ratably with the Series 2020 Refunding Bonds and any other Bonds previously issued hereunder, and the Authority may issue, and the Trustee shall authenticate and deliver to the purchasers thereof, Bonds of any Series so established, in such principal amount as shall be determined by the Authority, but only upon compliance by the Authority with the provisions of Section 3.02 (Proceedings for Issuance of Additional Series of Bonds) and any additional requirements set forth in the related Supplemental Indenture and subject to the following specific conditions, which are hereby made conditions precedent to the issuance of any such additional Series of Bonds:

(A) No Default. No Event of Default has occurred and is then continuing.

(B) Principal Amount. The aggregate principal amount of Bonds issued hereunder may not exceed any limitation imposed by law or by any Supplemental Indenture.

(C) Payment Dates. If and to the extent deemed practical in the reasonable judgment of the Authority with regard to the type of Bond to be issued, the principal payments of such additional Series of Bonds shall be due on April 1 in each year in which principal is to be paid and, if the interest on such Series of Bonds is to be paid semiannually, such interest payments shall be due on April 1 and October 1 in each year, as appropriate.

(D) Debt Service. The Indenture is amended so as to increase the Payments payable by the Authority thereunder by an amount at least sufficient to pay the interest on and principal of such Additional Bonds as the same become due.

(E) Debt Service Feasibility. The Authority must satisfy the debt service feasibility requirements described in this subsection (E). The debt service feasibility requirements for new money financings are as described below under (1) Project Financings, and the debt service feasibility requirements for refundings are as described below under (2) Refundings.

(1) Project Financings. With respect to the financing of the acquisition or construction of a Project, the Authority may satisfy either the historical coverage test or the projected coverage test. The Authority need not satisfy both coverage tests.

(i) Historical Coverage. The historical coverage test is satisfied if the Net System Revenues for either the most recent Fiscal Year for which audited financial statements are available or a period of twelve (12) consecutive months during the eighteen (18) months immediately preceding the date of adoption (the “adoption date”) by the Board of the resolution authorizing the issuance of Bonds (the “measurement period”), as evidenced by both a calculation prepared by the Authority and a Coverage Report on such calculation on file with the Authority, shall have produced a sum equal to at least one hundred twenty per cent (120%) of Annual Debt Service on all Outstanding Bonds and the Bonds to be issued in each of the five (5) full Fiscal Years next succeeding the adoption date or in each of the three (3) full Fiscal Years next succeeding the date through which interest with respect to the Bonds to be issued has been capitalized, whichever period ends later.

(ii) Projected Coverage. The projected coverage test is satisfied if the projected Net System Revenues for each of the five (5) full Fiscal Years next succeeding the earlier of (x) the date through which interest with respect to the Bonds to be issued has been capitalized or the execution date or issue date if no interest has been capitalized and (y) the date on which all Projects are expected to commence operations shall be at least one hundred twenty per cent (120%) of Annual Debt Service in each such Fiscal Year on all Bonds to be Outstanding, as evidenced by both a calculation prepared by the Authority and a Coverage Report on such calculation on file with the Authority. In calculating debt service coverage for this purpose, projected Net System Revenues may include the estimated amount of additional Net System Revenues to accrue to the System from new sales of electric energy anticipated to be generated during such five-year period by the additions or improvements to or extensions of the System.

(2) Refundings. If any such Bonds are issued for the purpose of discharging or defeasing Bonds then unpaid and outstanding, the debt service feasibility requirements will be satisfied if, upon such execution or issuance, either (a) the Authority meets the requirements of subsection (E)(1) above or (b) a Coverage Report is filed with the Authority to the effect that Annual Debt Service on all Bonds to be Outstanding in each future Fiscal Year following such discharge or defeasance would not exceed Annual Debt Service in that Fiscal Year had such discharge or defeasance not occurred.

(F) Reserve Account. Subject to the provisions of Section 7.09 (Funding and Application of Reserve Fund), the Supplemental Indenture providing for the issuance of such Series shall require that, forthwith upon the receipt of the proceeds of the sale of such Series, either

(1) the Reserve Account for such Series be funded in the amount of the Series Required Reserve for such Series (if greater than zero), or (2) if the Authority provides in the Supplemental Indenture providing for the issuance of such Series that such Series will be secured by the Reserve Account established with respect to another Series of Bonds, the balance in the Reserve Account be increased, if necessary, to an amount at least equal to the Series Required Reserve with respect to all Bonds of all Series to be secured by that Reserve Account that are to be considered Outstanding upon the issuance of such Series. The deposit may be made from the proceeds of the sale of such Series or from other funds of the Authority or from both such sources or in the form of a Reserve Facility as described in Section 7.09 (Funding and Application of Reserve Fund), as provided in such Supplemental Indenture.

Nothing in this Section or in this Indenture contained shall prevent or be construed to prevent the Supplemental Indenture providing for the issuance of an additional Series of Bonds from pledging or otherwise providing, in addition to the security given or intended to be given by this Indenture, additional security for the benefit of such additional Series of Bonds or any portion thereof.

### **Section 3.02. Proceedings for Issuance of Additional Series of Bonds.**

(A) Supplemental Indenture. Whenever the Authority determines to issue a Series of Bonds pursuant to Section 3.01 (Issuance of Additional Series of Bonds), the Authority shall authorize the execution of a Supplemental Indenture specifying the principal amount and prescribing the forms of Bonds of such additional Series and providing the terms, conditions, distinctive designation, denominations, methods of numbering, date, maturity date or dates, interest rate or rates (or the manner of determining the same), redemption provisions, and place or places of payment of principal or Redemption Price, if any, of and interest on such Bonds, and any other provisions respecting the Bonds of such Series not inconsistent with the terms of this Indenture.

(B) Documentation. Before such additional Series of Bonds may be issued and delivered, the Authority shall file the following documents with the Trustee (upon which documents the Trustee may conclusively rely in determining whether the conditions precedent to the issuance of such Series of Bonds have been satisfied):

(1) Supplemental Indenture. An executed copy of the Supplemental Indenture authorizing such Series.

(2) Authority Certificate. A Certificate of the Authority stating that that each of the requirements of subsections (A) through (F) of Section 3.01 (Issuance of Additional Series of Bonds) has been met.

(3) Debt Service Certificate. A Certificate of an Independent Financial Consultant or the underwriter of the proposed Additional Bonds stating that the requirements of Section 3.01(D) (Issuance of Additional Series of Bonds -- Debt Service) have been satisfied.

(4) Debt Service Coverage. The calculation and Coverage Report required by Section 3.01(E) (Issuance of Additional Series of Bonds -- Debt Service Feasibility).

(5) Opinion of Counsel. An Opinion of Counsel to the effect that the execution of the Supplemental Indenture has been duly authorized by the Authority and the Agency in accordance with this Indenture; that the aggregate principal amount of Bonds issued hereunder does not exceed any limitation imposed by law or by any Supplemental Indenture; that such Series, when duly executed by the Authority and authenticated and delivered by the Trustee, will be valid and binding limited obligations of the Authority; that upon the delivery of such Series the aggregate principal amount of Bonds then Outstanding will not exceed the amount permitted by law or by this Indenture; and that the Supplemental Indenture will be a valid and binding obligation of the Authority and the Agency.

(6) Redemption Instructions. In the case of issuance of Additional Bonds for refunding purposes, if any of the Bonds to be refunded are to be redeemed prior to their stated maturity dates, irrevocable instructions to the Trustee to give the applicable notice of redemption or a waiver of the notice of redemption signed by the Owners or owners of all or the portion of the Bonds to be redeemed, or proof that such notice has been given by the Authority; provided, however, that, in lieu of such instructions or waiver or proof of notice of redemption, the Authority may cause to be deposited with the Trustee all of the Bonds proposed to be redeemed (whether cancelled or uncanceled) with irrevocable instructions to the Trustee to cancel the Bonds so to be redeemed upon the exchange and delivery of the refunding Bonds; and provided further that no provision of this Indenture shall be construed to require the redemption of Bonds prior to their respective maturity dates in connection with the refunding thereof.

## **ARTICLE IV TERMS AND ISSUE OF SERIES 2020 REFUNDING BONDS**

### **Section 4.01. Terms and Form of Series 2020 Refunding Bonds.**

(A) Creation of Series 2020 Refunding. The Authority hereby creates a series of Bonds and additionally designates them “Series 2020 Refunding.” At any time after the execution and delivery of this Indenture, the Authority may execute and the Trustee shall authenticate and deliver the Series 2020 Refunding Bonds in an aggregate principal amount of \$[PRINCIPAL AMOUNT] upon the Order of the Authority.

(B) Form of Series 2020 Refunding Bonds. The form of the Series 2020 Refunding Bonds shall be substantially as set forth in Exhibit A with such insertions, omissions, substitutions, and variations as may be determined by the officers executing the same, as evidenced by their execution thereof, to reflect the applicable terms of the Series 2020 Refunding Bonds established by this Article.

(C) Book-Entry Form; Denominations. The Series 2020 Refunding Bonds shall be issued in fully registered form, in Authorized Denominations and shall be initially registered in the name of “Cede & Co.,” as nominee of The Depository Trust Company. The Series 2020 Refunding Bonds shall be evidenced by one Series 2020 Refunding Bond maturing on each of the maturity dates with respect to the Series 2020 Refunding Bonds in a denomination corresponding to the total principal amount represented by the Series 2020 Refunding Bonds payable on such

date. Registered ownership of the Series 2020 Refunding Bonds, or any portion thereof, may not thereafter be transferred except as set forth in Section 2.10 (Book-Entry Provisions). The Series 2020 Refunding Bonds shall bear such distinguishing numbers and letters as may be specified by the Trustee.

(D) Date; Interest Accrual; Maturity Dates; Interest Rates. The Series 2020 Refunding Bonds shall be dated their date of delivery, shall mature in the following amounts on the following dates, and shall bear interest from their date at the following rates per annum:

Maturity Date (April 1)	Principal Amount	Interest Rate
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\* Term Bond Maturity

Interest on the Series 2020 Refunding Bonds shall be calculated on the basis of a 360 day year comprising twelve 30 day months.

(E) Principal and Interest Payments. The principal or Redemption Price of the Series 2020 Refunding Bonds shall be payable to the Owner thereof upon surrender thereof in lawful money of the United States of America at the Corporate Trust Office. Interest on the Series 2020 Refunding Bonds shall be payable on October 1, 2020, and thereafter semiannually on April 1 and October 1 of each year by check mailed by first class mail on each Interest Payment Date or, as provided in Section 2.10(E) (Payments to Depository) and upon the written request received by the Trustee at least five (5) days before the applicable Record Date of any Owner of \$1,000,000 or more in aggregate principal amount of Bonds who has provided the Trustee with wire transfer instructions on or before the applicable Regular Record Date, by wire transfer on each Interest Payment Date to the Owner thereof as of the close of business on the Regular Record Date. Any such written request shall remain in effect until rescinded in writing by the Owner. Any Owner that requests payment by wire transfer shall pay the associated wire charges. The Regular Record Date for the Series 2020 Refunding Bonds is the fifteenth (15th) day of the calendar month immediately preceding the relevant Interest Payment Date.

(F) Cessation of Interest Accrual. Interest on any Series 2020 Refunding Bond ceases to accrue (i) on the maturity date thereof, provided that there has been irrevocably deposited with the Trustee an amount sufficient to pay the principal amount thereof, plus interest accrued thereon to such date; or (ii) on the redemption date thereof, provided there has been irrevocably deposited with the Trustee an amount sufficient to pay the Redemption Price thereof, plus interest accrued thereon to such date. The Owner of such Bond is not entitled to any other payment, and such Bond is no longer be Outstanding and entitled to the benefits of this Indenture, except for the payment of the principal amount or Redemption Price, as appropriate, of such Bond.

**Section 4.02. Redemption of Series 2020 Refunding Bonds.**

(A) General Redemption Provisions. The Series 2020 Refunding Bonds are subject to redemption as provided in Article V (Redemption of Bonds). No Bond may be redeemed in part pursuant to the provisions of this Section 4.02 if the principal amount of such Bond to be Outstanding following such partial redemption is not an Authorized Denomination.

(B) Optional Redemption. The Series 2020 Refunding Bonds are subject to redemption prior to their stated maturities, at the option of the Authority, from any source of available funds, as a whole or in part (in Authorized Denominations and by such maturities as may be specified by the Authority and at random within a maturity) on any date on and after April 1, 20\_\_, at the stated principal amount of the Series 2020 Refunding Bonds called for redemption, without premium, plus accrued interest to the date fixed for redemption.

(C) Mandatory Sinking Fund Redemption. The Series 2020 Refunding Bonds maturing on April 1, 20\_\_, are subject to redemption prior to their stated maturity, in part, at random from Mandatory Sinking Account Payments in the following amounts and on the following dates, at the principal amount thereof on the date fixed for redemption, without premium, but which amounts will be proportionately reduced by the principal amount of all Series 2020 Refunding Bonds optionally redeemed:

<b>Mandatory Redemption Dates (<u>April 1</u>)</b>	<b>Principal Amount</b>	<b>Mandatory Redemption Dates (<u>April 1</u>)</b>	<b>Principal Amount</b>
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*\*Maturity*

**Section 4.03. Application of Proceeds of Series 2020 Refunding Bonds.** The Authority shall cause the proceeds of the sale of the Series 2020 Refunding Bonds in the amount of \$\_\_\_\_\_ to be set aside or applied as follows:

[in the Reserve Fund (created by Section 7.09 (Funding and Application of Reserve Fund)) \$\_\_\_\_\_];

in the Series 2020 Refunding Costs of Issuance Account (created by Section 4.04 (Establishment and Application of Costs of Issuance Fund)) \$\_\_\_\_\_; and

to the Placer County Treasurer, \$\_\_\_\_\_ for the prepayment of the Series 2006 Bond.

The Trustee may, in its discretion, establish a temporary fund or account to facilitate the foregoing deposits.

**Section 4.04. Establishment and Application of Costs of Issuance Fund.** The Authority shall establish and maintain a separate fund designated as the “Costs of Issuance Fund.” With respect to each Series of Bonds for which proceeds of the sale thereof are required to be set aside specifically to pay Costs of Issuance, the Authority shall maintain a separate account within the Costs of Issuance Fund designated as the “\_\_\_\_\_ Costs of Issuance Account” (inserting therein the Series designation of such Bonds). The moneys in each Costs of Issuance Account shall be applied by the Authority to pay or to reimburse itself for the payment of the Costs of Issuance of the related Series of Bonds.

**Section 4.05. Validity of Series 2020 Refunding Bonds.** The recital in the Series 2020 Refunding Bonds that they are issued pursuant to the Constitution and statutes of the State is conclusive evidence of their validity and of compliance with provisions of law in their issuance.

## **ARTICLE V REDEMPTION OF BONDS**

**Section 5.01. General Applicability of Article.** Bonds that are redeemable before their respective stated maturities shall be redeemable in accordance with their terms and in accordance with this Article.

**Section 5.02. Notice to Trustee.** In the case of any redemption at the election of the Authority of less than all the Outstanding Bonds, the Authority shall, at least forty-five (45) days prior to the date fixed for redemption (unless a shorter notice shall be satisfactory to the Trustee) notify the Trustee of such redemption date and of the principal amount of Bonds to be redeemed.

**Section 5.03. Selection by Trustee of Bonds to be Redeemed.** If less than all the Outstanding Bonds of any maturity are to be redeemed, not more than sixty (60) days prior to the redemption date the Trustee shall select the particular Bonds to be redeemed (in whole or in part) from the Outstanding Bonds that have not previously been called for redemption, in minimum denominations of \$5,000, at random in any manner that the Trustee in its sole discretion shall deem appropriate and fair. For purposes of selection, each \$5,000 portion of a Bond shall be deemed to be a separate Bond.

The Trustee shall promptly notify the Authority in writing of the Bonds so selected for redemption and, in the case of a Bond selected for partial redemption, the principal amount represented thereby to be redeemed.

For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Bonds shall relate, in the case of any Bond redeemed or to be redeemed only in part, to the portion of the principal represented by such Bond that has been or is to be redeemed.

**Section 5.04. Notice of Redemption.**

(A) Mailed Notice. Notice of redemption shall be mailed (first class postage prepaid) by the Trustee, not fewer than thirty (30) nor more than sixty (60) days prior to the redemption date, to (i) the respective Owners of any Bonds designated for redemption at their addresses appearing on the Bond Register, (ii) the Securities Depositories (if the Bonds are not then in book entry form), and (iii) the Information Service. Notice of redemption to the Securities Depositories shall be given by registered or overnight mail.

(B) Content of Notice. Each notice of redemption shall state the date of such notice, the date of issue of the Bonds, the redemption date, the amount of any redemption premium, the place or places of redemption (including the name and appropriate address or addresses of the Trustee), the CUSIP number (if any) of the maturity or maturities, and, if less than all of any such maturity, the distinctive certificate numbers of the Bonds of such maturity to be redeemed and, in the case of Bonds to be redeemed in part only, the respective portions of the principal amount represented thereby to be redeemed. Each such notice shall also state that on said date there will become due and payable on each of said Bonds the principal amount thereof or specified portion of the principal amount thereof in the case of a Bond to be redeemed in part only, together with premium (if any) and interest thereon accrued to the date fixed for redemption, and that from and after such redemption date interest thereon ceases to accrue, and shall require that such Bonds be then surrendered at the address or addresses of the Trustee specified in the redemption notice. Neither the Authority nor the Trustee has any responsibility for any defect in the CUSIP number that appears on any Bond or in any redemption notice with respect thereto, and any such redemption notice may contain a statement to the effect that CUSIP numbers have been assigned by an independent service for convenience of reference and that neither the Authority nor the Trustee is liable for any inaccuracy in such numbers.

(C) Defects in Notice or Procedure. Failure by the Trustee to give notice to the Information Service or any of the Securities Depositories or failure of any Owner to receive notice or any defect in any such notice does not affect the sufficiency of the proceedings for redemption. Failure by the Trustee to mail notice to any one or more of the respective Owners of any Bonds designated for redemption does not affect the sufficiency of the proceedings for redemption with respect to the Owner or Owners to whom such notice was mailed.

(D) Conditional Notice of Redemption; Rescission of Redemption. The Authority may, at its option, specify in any notice of optional redemption that redemption is conditional upon the availability of money sufficient to pay the Redemption Price of all the Bonds that are to be redeemed on the date fixed for redemption. The Authority may, at its option, prior to the date fixed for optional redemption in any notice of redemption, rescind and cancel such notice of optional redemption by written notice to the Trustee on or prior to the date fixed for redemption. Any notice of redemption will be cancelled and annulled if for any reason funds are not available on the date fixed for redemption for the payment in full of the Bonds then called for redemption, and such cancellation will not constitute a default under this Trustee Agreement. Neither the Authority nor the Trustee has any liability to the Owners or any other party as a result of the Authority's failure to redeem Bonds as a result of insufficient money.

**Section 5.05. Deposit of Redemption Price; Payment of Amounts to Reserve Facility Providers.** Prior to any date for redemption of Bonds, the Authority shall deposit with the Trustee an amount of money sufficient to pay the Redemption Price of all the Bonds that are to be redeemed

on that date. Such money shall be held in trust for the benefit of the persons entitled to such Redemption Price. Prior to any date for optional redemption of Bonds, the Authority must pay in full all amounts due to each issuer of a Reserve Facility.

**Section 5.06. Bonds Payable on Redemption Date; Effect of Redemption.** Notice of redemption having been duly given as aforesaid and moneys for payment of the Redemption Price of the Bonds so to be redeemed being held by the Trustee, on the redemption date designated in such notice (i) the Bonds so to be redeemed become due and payable at the Redemption Price specified in such notice, (ii) interest on such Bonds ceases to accrue, (iii) such Bonds cease to be entitled to any benefit or security under this Indenture, and (iv) the Owners of such Bonds have no rights in respect thereof except to receive payment of said Redemption Price. Upon surrender of any such Bond for redemption in accordance with said notice, such Bond shall be paid by Trustee at the Redemption Price. Installments of interest due on or prior to the Redemption Date shall be payable to the Owners of the Bonds on the relevant Record Dates according to the terms of such Bonds and the provisions of Section 2.07 (Payment of Interest on the Bonds; Interest Rights Preserved).

**Section 5.07. Bonds Redeemed in Part.** Upon surrender of any Bond redeemed in part only, the Authority shall execute and the Trustee shall authenticate and deliver to the Owner thereof, at the expense of the Authority, a new Bond or Bonds of authorized denominations, and of the same maturity, equal in aggregate principal amount to the unredeemed portion of the Bond surrendered.

## **ARTICLE VI DEFEASANCE**

### **Section 6.01. Discharge of Indenture.**

(A) Payment of Bonds. Any Bond may be paid in any of the following ways:

(1) by paying or causing to be paid the principal of and interest on the Bond, as and when the same become due and payable;

(2) by depositing with the Trustee, an escrow agent or other fiduciary, in trust, at or before maturity, money or securities in the necessary amount (as provided in Section 6.03 (Deposit of Money or Securities with Trustee)) to pay or redeem the Bond; or

(3) by delivering the Bond to the Trustee for cancellation.

(B) Consequence of Payment of All Bonds. If all Bonds that are Outstanding have been paid and the Authority has also paid or caused to be paid all other sums payable hereunder, then and in that case, at the election of the Authority, evidenced by a Statement of the Authority filed with the Trustee signifying the intention of the Authority to discharge all such obligations and this Indenture, and notwithstanding that any Bonds not have been surrendered for payment, this Indenture, the pledge of assets made hereunder, all covenants and agreements and other obligations of the Authority under this Indenture, and the rights and interests created hereby (except as to any surviving rights of transfer or exchange of Bonds as provided in Section 2.05 (Registration, Transfer, and Exchange)) and rights to payment from moneys deposited with the Trustee as

provided in Section 6.02 (Discharge of Liability on Bonds)) cease, terminate, become void, and are completely discharged and satisfied. Notwithstanding the satisfaction and discharge of this Indenture, the obligations to the Trustee under Section 11.07 (Compensation and Indemnification of Trustee), the provisions of Section 11.09 (Removal and Resignation; Appointment of Successor), and the covenants of the Authority to preserve the exclusion of interest on Tax-Exempt Bonds contained in Section 9.06 (Federal Income Tax Covenants) survive.

(C) Delivery of Excess Funds. In such event, upon Request of the Authority, the Trustee shall cause an accounting for such period or periods as may be requested by the Authority to be prepared and filed with the Authority and shall execute and deliver to the Authority all such instruments as may be necessary or desirable to evidence such discharge and satisfaction, and the Trustee shall pay over, transfer, assign, or deliver to the Authority all moneys or securities or other property held by it pursuant to this Indenture that, as evidenced by a verification report (upon which the Trustee may conclusively rely) from an Independent Certified Public Accountant, are not required for the payment or redemption of Bonds not theretofore surrendered for such payment or redemption; subject to the provisions of Section 9.06 (Federal Income Tax Covenants) and any Tax Certificate with respect to moneys in the Rebate Fund.

(D) Notice of Defeasance. If moneys or Permitted Investments are deposited with and held by the Trustee as provided above, the Trustee shall within thirty (30) days after such money or Permitted Investments are deposited with it mail a notice, first class postage prepaid, to the Owners at the addresses listed on the registration books kept by the Trustee pursuant to Section 2.05 (Registration, Transfer, and Exchange) hereof, (a) setting forth the maturity date or date fixed for redemption, as the case may be, of the Bonds, (b) giving a description of the Permitted Investments, if any, so held by it, and (c) stating that this Indenture has been discharged in accordance with the provisions of this Section.

**Section 6.02. Discharge of Liability on Bonds**. Upon the deposit with the Trustee, escrow agent, or other fiduciary, in trust, at or before maturity, of money or securities in the necessary amount (as provided in Section 6.03 (Deposit of Money or Securities with Trustee)) to pay or redeem any Outstanding Bond (whether upon or prior to its maturity or the redemption date of such Bond), provided that, if such Bond is to be redeemed prior to maturity, notice of such redemption has been given as in Article V (Redemption of Bonds) provided or provision satisfactory to the Trustee has been made for the giving of such notice, then all liability of the Authority in respect of such Bond ceases, terminates, and is completely discharged, except that thereafter (i) the Owner thereof is entitled to payment of the principal of and interest on such Bond and premium, if any, thereon by the Authority, and the Authority remains liable for such payment, but only out of such money or securities deposited with the Trustee as aforesaid for their payment, subject, however, to the provisions of Section 6.04 (Payment of Bonds After Discharge of Indenture) and (ii) the Owner thereof retains its rights of transfer or exchange of Bonds as provided in Section 2.05 (Registration, Transfer, and Exchange).

The Authority may at any time surrender to the Trustee for cancellation by it any Bonds previously executed and delivered, which the Authority may have acquired in any manner whatsoever, and such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

**Section 6.03. Deposit of Money or Securities with Trustee.** Whenever in this Indenture it is provided or permitted that there be deposited with or held in trust by the Trustee money or securities in the necessary amount to pay or redeem any Bonds, the money or securities so to be deposited or held may include money or securities held by the Trustee in the funds and accounts established pursuant to this Indenture and shall be:

(A) Cash. Lawful money of the United States of America in an amount equal to all unpaid principal of and interest on such Bonds to maturity, except that, in the case of Bonds that are to be redeemed prior to maturity and in respect of which notice of such redemption shall have been given as in Article V (Redemption of Bonds) provided or provision satisfactory to the Trustee has been made for the giving of such notice, the amount to be deposited or held shall be all unpaid principal of and interest on the Bonds to the redemption date and any redemption premium thereon; or

(B) Defeasance Securities. Defeasance Securities the principal of and interest on which when due will, together with the money (if any) deposited with or held by the Trustee at the same time, in the opinion of an Independent Certified Public Accountant delivered to the Trustee (upon which opinion the Trustee may conclusively rely), provide money sufficient to pay the principal of and all unpaid interest to maturity, or to the redemption date, as the case may be, on (and any redemption premium on) the Bonds to be paid or redeemed, as such principal or Redemption Price and interest become due, provided that, in the case of Bonds that are to be redeemed prior to the maturity thereof, notice of such redemption has been given as in Article V (Redemption of Bonds) provided or provision satisfactory to the Trustee has been made for the giving of such notice;

provided, in each case, that the Trustee has been irrevocably instructed (by the terms of this Indenture or by Request of the Authority) to apply such money to the payment of such principal or Redemption Price of and interest on such Bonds.

**Section 6.04. Payment of Bonds After Discharge of Indenture.** Any moneys held by the Trustee in trust for the payment of the principal of or interest or redemption premium on any Bonds and remaining unclaimed for two years after the principal of all of the Bonds has become due and payable (whether at maturity or upon call for redemption as provided in this Indenture), if such moneys were so held at such date, or two years after the date of deposit of such moneys if deposited after said date when all of the Bonds became due and payable, shall, upon Request of the Authority, be repaid to the Authority free from the trusts created by this Indenture, and all liability of the Trustee with respect to such moneys thereupon ceases; provided, however, that, before the repayment of such moneys to the Authority as aforesaid, the Trustee shall (solely at the request and cost of the Authority) first mail to the Owners of any Bonds remaining unpaid at the addresses shown on the Bond Register a notice, in such form as may be deemed appropriate by the Trustee, with respect to the Bonds so payable and not presented and with respect to the provisions relating to the repayment to the Authority of the moneys held for the payment thereof. All moneys held by or on behalf of the Trustee for the payment of principal of or premium or interest on Bonds, whether at redemption or maturity, shall be held uninvested in trust for the account of the Owners thereof and the Trustee is not be required to pay Owners any interest on, or be liable to the Owners or any other person for any interest earned on, moneys so held.

## ARTICLE VII SYSTEM REVENUES

**Section 7.01. Liability of Authority Limited to System Revenues.** Notwithstanding anything to the contrary contained herein, neither the Agency nor the Authority is required to advance any money derived from any source other than the System Revenues as provided herein for the payment of the interest on or principal of or redemption premiums, if any, on the Bonds or for the performance of any agreements or covenants herein contained. The Authority and the Agency may, however, advance funds for any such purpose so long as such funds are derived from a source legally available for such purpose without incurring any indebtedness.

**Section 7.02. Pledge of Net System Revenues.** In order to secure the payment of the principal of, premium, if any, and interest on the Bonds in accordance with their terms and the provisions of this Indenture, and subject only to the provisions of this Indenture permitting the application thereof for the purposes and on the terms and conditions set forth herein, the Authority hereby pledges all of the Net System Revenues and any other amounts (including proceeds of the sale of Bonds) held in any fund or account established pursuant to this Indenture, other than amounts on deposit in the Rebate Fund. This pledge constitutes a first pledge of and charge and lien upon such assets for the payment of the Bonds in accordance with their terms and is valid and binding from and after issuance of the Bonds, without any physical delivery thereof or further act. The pledge herein made is irrevocable until all of the Bonds are no longer Outstanding.

**Section 7.03. System Revenue Fund.** In order to carry out and effectuate the pledge and lien on the Net System Revenues contained herein, (a) the Agency agrees and covenants that all System Revenues shall be paid directly to the Authority and (b) the Authority agrees and covenants that all System Revenues shall be deposited when and as received in the "System Revenue Fund," which fund the Authority agrees and covenants to maintain so long as any Bonds remain unpaid. The Authority shall, from the moneys in the System Revenue Fund, pay all Operation and Maintenance Costs of the System as they become due and payable.

**Section 7.04. Allocation of Net System Revenues.**

(A) Allocations for Debt Service and Reserve Replenishment. So long as any Bonds are Outstanding, the Authority shall deposit or cause to be deposited moneys from the System Revenue Fund into the following respective funds in the following amounts, in the following order of priority, the requirements of each such fund (including the making up of any deficiencies in any such fund resulting from lack of moneys sufficient to make any earlier required deposit) at the time of deposit to be satisfied before any deposit is made to any fund subsequent in priority:

(1) Debt Service Fund. Not later than fifteen (15) days before each Interest Payment Date and each Principal Payment Date, the Authority shall set aside in the "Debt Service Fund," which fund the Authority agrees and covenants to maintain so long as any Bonds remain unpaid, an amount equal to (a) the aggregate amount of interest and principal becoming due and payable on the Outstanding Bonds on such Interest Payment Date or Principal Payment Date (but excluding any moneys on deposit in the Interest Fund from the proceeds of the Bonds or other source and reserved as capitalized interest to pay interest on any future Interest Payment Dates following such date) (b) the aggregate principal

amount of Bonds to be redeemed on such date from the respective Sinking Accounts for the Term Bonds, but less any amounts deposited into the Principal Fund during the preceding twelve-month period and theretofore paid from the Principal Fund to redeem or purchase Term Bonds during such twelve-month period.

(2) Reserve Replenishment. On each Interest Payment Date, the Authority shall (a) transfer to the Trustee for deposit into each Reserve Account the amount necessary to increase the amount therein to the Series Required Reserve and (b) deposit in the Operation and Maintenance Fund the amount necessary to increase the amount therein to its required balance.

(B) Surplus Amounts. Provided that no Event of Default has occurred and is then continuing, the Authority may use and apply any moneys remaining in the System Revenue Fund on each Principal Payment Date after the foregoing transfers described in (1) and (2) of Subsection (A) above for any lawful purpose.

**Section 7.05. Payments to Trustee.** Not later than fifteen (15) days before each Interest Payment Date, the Authority shall pay to the Trustee from the System Revenue Fund such amount as is required by the Trustee to make the transfers and deposits required by Section 7.06 (Bond Fund) with respect to the Bonds. Each transfer by the Authority to the Trustee hereunder must be in lawful money of the United States of America and paid to the Trustee at the Corporate Trust Office. The Trustee shall forthwith deposit the amounts received from the Authority in a trust fund designated as the “Bond Fund,” which fund the Trustee shall designate and maintain, so long as any Bonds remain unpaid. All moneys at any time held in the Bond Fund shall be held in trust for the benefit of the Owners of the Bonds and shall be disbursed, allocated, and applied solely for the uses and purposes set forth in Section 7.06 (Bond Fund).

**Section 7.06. Bond Fund.**

(A) Allocations to Funds. So long as any Bonds are Outstanding, the Trustee shall set aside the moneys in the Bond Fund in the following respective funds or accounts (each of which the Trustee shall establish, maintain and hold in trust for the benefit of the Owners of the Bonds) in the following amounts, in the following order of priority, the requirements of each such fund (including the making up of any deficiencies in any such fund resulting from lack of moneys sufficient to make any earlier required deposit) at the time of deposit to be satisfied before any deposit is made to any fund subsequent in priority:

(1) Interest Fund. On each Interest Payment Date, the Trustee shall set aside in the Interest Fund an amount equal to the aggregate amount of interest becoming due and payable on the Outstanding Bonds on such Interest Payment Date. No deposit need be made into the Interest Fund if the amount contained therein is at least equal to the interest due and payable on such Interest Payment Date upon all of the Bonds then Outstanding (but excluding any moneys on deposit in the Interest Fund from the proceeds of the Bonds or other source and reserved as capitalized interest to pay interest on any future Interest Payment Dates following such Interest Payment Date).

(2) Principal Fund; Sinking Accounts. On each Principal Payment Date, the Trustee shall deposit in the Principal Fund an amount equal to (a) the aggregate amount of principal becoming due and payable on the Outstanding Serial Bonds, and (b) the aggregate principal amount of Bonds to be redeemed on such date from the respective Sinking Accounts for the Term Bonds.

No deposit need be made into the Principal Fund so long as there shall be in such fund (i) moneys sufficient to pay the principal of all Serial Bonds then Outstanding and maturing by their terms on such Principal Payment Date plus (ii) the aggregate principal amount of all Term Bonds required to be redeemed on such Principal Payment Date, but less any amounts deposited into the Principal Fund during the preceding twelve-month period and theretofore paid from the Principal Fund to redeem or purchase Term Bonds during such twelve-month period.

(B) Surplus Amounts. Any moneys remaining in the Bond Fund after the foregoing transfers described in (1) and (2) of Subsection (A) above shall be deposited, in order of priority, (i) into each Reserve Account to the extent that the amount therein is less than the Series Required Reserve, and (ii) into the Rebate Fund if so directed by the Authority. Amounts not required to be so deposited shall be transferred on the same Business Day to the Authority. The Authority may use and apply any moneys when received by it for any purpose with respect to the System, including the redemption of Bonds upon the terms and conditions set forth herein and the purchase of Bonds as and when and at such prices as it may determine.

**Section 7.07. Application of Interest Fund.** All money in the Interest Fund shall be used and withdrawn by the Trustee solely for the purpose of paying interest on the Bonds as it shall become due and payable (including accrued interest on any Bonds purchased or redeemed prior to maturity).

**Section 7.08. Application of Principal Fund.**

(A) Use of Amounts in Principal Fund. All amounts in the Principal Fund shall be used and withdrawn by the Trustee solely for the purposes of paying the principal of the Bonds when due and payable, except that all amounts in the Sinking Account shall be used and withdrawn by the Trustee solely to purchase or redeem or pay Bonds at maturity, as provided herein.

(B) Sinking Accounts. The Trustee shall establish and maintain within the Principal Fund a separate account for the Term Bonds of each maturity, designated as the “\_\_\_\_\_ Sinking Account,” inserting therein the maturity designation of such Bonds. On any date upon which Term Bonds are subject to mandatory redemption, the Trustee shall transfer the amount of the principal then redeemable from the Principal Fund to the applicable Sinking Account. With respect to each Sinking Account, on each mandatory redemption date established for such Sinking Account, the Trustee shall apply the amount required on that date to the redemption (or payment at maturity, as the case may be) of Term Bonds of such maturity for which such Sinking Account was established, upon the notice and in the manner provided herein; provided that, at any time prior to giving such notice of such redemption, the Trustee shall, upon receipt of a Request of the Authority, apply moneys in such Sinking Account to the purchase (in whole or in part) of Term Bonds of such maturity at public or private sale, as and when and at such prices (including

brokerage and other charges, but excluding accrued interest, which is payable from the Interest Fund) as is directed by the Authority, except that the purchase price (excluding accrued interest) shall not exceed the principal amount represented thereby. If, during the twelve-month period immediately preceding said mandatory redemption date, the Trustee has purchased Term Bonds of such maturity with moneys in such Sinking Account, or, during said period and prior to giving said notice of redemption, the Authority has deposited Term Bonds of such maturity with the Trustee, or Term Bonds of such maturity were at any time purchased or redeemed by the Trustee from the Redemption Fund and allocable to said mandatory redemption, such Term Bonds so purchased or deposited or redeemed shall be applied, to the extent of the full principal amount represented thereby, to reduce the amount required for deposit on the mandatory redemption date in the Sinking Account.

Any amounts remaining in a Sinking Account when all of the Term Bonds for which such account was established are no longer Outstanding shall be withdrawn by the Trustee and transferred to the Authority to be used for any lawful purpose.

All Bonds purchased from a Sinking Account or deposited by the Authority with the Trustee in a twelve-month period ending April 1, shall be allocated first to the next succeeding mandatory redemption for such maturity of Term Bonds, then as a credit against such future mandatory redemptions for such maturity of Term Bonds as may be specified in a Request of the Authority. All Term Bonds redeemed by the Trustee from the Redemption Fund shall be credited to such future mandatory redemptions for such maturity of Term Bonds as may be specified in a Request of the Authority.

#### **Section 7.09. Funding and Application of Reserve Fund.**

(A) Funding of the Reserve Fund. The Trustee shall establish and maintain a separate fund designated as the “Bond Reserve Fund.” With respect to each Series of Bonds for which the Series Required Reserve is greater than zero, the Trustee shall establish and maintain in the Reserve Fund a separate account designated as the “Series \_\_\_\_\_ Reserve Account” (inserting therein the Series designation or designations (if the Reserve Account secures more than one Series) of such Bonds). Upon the delivery of each Series of Bonds, if required by subsection (F) of Section 3.01 (Issuance of Additional Series of Bonds – Reserve Account), the Authority shall deposit into the Reserve Account for the Series either the amount of the Series Required Reserve (if the Reserve Account secures a single Series of Bonds) or the amount necessary to increase the balance in the Reserve Account to the Series Required Reserve with respect to all Bonds of all Series secured by that Reserve Account (if the Reserve Account secures more than one Series). [The Series Required Reserve for the Series 2020 Refunding Bonds shall be initially satisfied by the delivery of a Reserve Facility in the amount of \$\_\_\_\_\_.]

(B) Substitution of Cash. The Authority may at any time substitute cash for all or part of the amount available to be paid to the Trustee under any Reserve Facility delivered pursuant to this Section to satisfy the Series Required Reserve.

(C) Replenishment of Reserve Accounts. The Authority shall deposit as soon as possible in each month in each Reserve Account, except as otherwise provided in this Section, upon the occurrence of any deficiency therein, one-twelfth (1/12th) of the aggregate amount of

each unreplenished prior withdrawal from that Reserve Account and one-fourth (1/4) of the aggregate amount of any deficiency due to any required valuations of the investments in that Reserve Account until the total of the cash balance in the Reserve Account and the amount available under any Reserve Facility is at least equal to the Series Required Reserve.

(D) Letter of Credit.

(1) In lieu of making the Series Required Reserve replenishment deposits in compliance with subsection (C) of this Section, or in replacement of moneys then on deposit in a Reserve Account (which shall be transferred by the Trustee to the Authority), the Authority may deliver to the Trustee an irrevocable letter of credit issued by a financial institution having unsecured debt obligations rated in one of the two highest Rating Categories of any Rating Agency then rating the Bonds, in an amount, together with moneys, Permitted Investments, or Reserve Facilities (as described in subsection (E) of this Section) on deposit in the Reserve Account, equal to the Series Required Reserve. Such letter of credit shall have a term of no less than three (3) years or, if less, until the maturity of the Bonds and shall provide by its terms that it may be drawn upon as provided in this Section. In addition, the letter of credit must be acceptable to the Credit Providers. If a drawing is made on the letter of credit, the Authority shall make such payments as may be required by the terms of the letter of credit or any obligations related thereto (but no less than quarterly pro rata payments) so that the letter of credit shall, absent the delivery to the Trustee of a Reserve Facility satisfying the requirements contained in subsection (E) of this Section or the deposit in the Reserve Account of an amount sufficient to increase the balance in the Reserve Account to the Series Required Reserve, be reinstated in the amount of such drawing within one year of the date of such drawing.

(2) At least one year prior to the stated expiration of such letter of credit, the Authority shall either (i) deliver a replacement letter of credit acceptable to the Credit Providers, (ii) deliver an extension of the letter of credit for at least an additional year or, if less, the maturity of the Bonds, or (iii) deliver to the Trustee a Reserve Facility satisfying the requirements of subsection (E) of this Section. Upon delivery of such replacement letter of credit, extended letter of credit, or Reserve Facility, the Trustee shall deliver the then-effective letter of credit to or upon the order of the Authority. If the Authority shall fail to deposit a replacement letter of credit, extended letter of credit, or Reserve Facility with the Trustee, the Authority shall immediately commence to make quarterly deposits with the Trustee so that an amount equal to the Series Required Reserve will be on deposit in the Reserve Account no later than the stated expiration date of the letter of credit. If an amount equal to the Series Required Reserve as of the date following the expiration of the letter of credit is not on deposit in the Reserve Account one week prior to the expiration date of the letter of credit (excluding from such determination the letter of credit), the Trustee shall draw on the letter of credit to fund the deficiency resulting therefrom in the Reserve Account.

(E) Other Reserve Facility. In lieu of making the Series Required Reserve replenishment deposits in compliance with subsection (C) of this Section, or in replacement of moneys then on deposit in the Reserve Account (which shall be transferred by the Trustee to the Authority), the Authority may also deliver to the Trustee an insurance policy, surety bond, or other

Reserve Facility securing an amount, together with moneys, Permitted Investments or letters of credit on deposit in the Reserve Account, no less than the Series Required Reserve issued by an insurance company whose unsecured debt obligations (or for which obligations secured by such insurance company's insurance policies or surety bonds) are rated in one of the two highest Rating Categories of any Rating Agency then rating the Bonds and, if rated by A.M. Best & Company, must also be rated in the highest rating category by A.M. Best & Company. Such Reserve Facility shall have a term of no less than the maturity of the Bonds in connection with which such Reserve Facility was obtained. In addition, the Reserve Facility must be acceptable to the Credit Providers. In the event that such Reserve Facility for any reason lapses or expires, the Authority shall immediately implement (i) or (iii) of the preceding paragraph or make the required deposits to the Reserve Account.

(F) Use of Amounts in Reserve Fund.

(1) Payment of Debt Service Deficiencies. All amounts in a Reserve Account (including all amounts that may be obtained from Reserve Facilities on deposit in that Reserve Account) shall be used and withdrawn by the Trustee, as hereinafter provided, solely for the purpose of paying debt service on the Bonds of the related Series in the event of any deficiency in the Interest Fund or the Principal Fund, or (together with any other moneys available therefor) for the payment or redemption of all Bonds of such Series then Outstanding, or for the payment of the final principal and interest payment with respect to the Bonds of any Series of Bonds secured by that Reserve Account (provided that following such payment the amounts in the Reserve Account (including the amounts that may be obtained from Reserve Facilities on deposit therein) will equal the Series Required Reserve. The Trustee shall first draw on the portion of the Reserve Account held in cash or Permitted Investments and then, on a pro rata basis with respect to amounts held in the form of Reserve Facilities (calculated by reference to the maximum amounts of such Reserve Facilities), draw on or collect under each Reserve Facility issued with respect to the Reserve Account, in a timely manner and pursuant to the terms of such Reserve Facility to the extent necessary in order to obtain sufficient funds on or prior to the date such funds are needed to pay the principal of and interest on the Bonds of such Series when due.

(2) Repayment of Amounts Recovered as Preferences in Bankruptcy. If the Trustee has notice that any payment of principal or interest represented by a Bond has been recovered from an Owner pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with the final, nonappealable order of a court having competent jurisdiction, the Trustee, pursuant to and provided that the terms of the Reserve Facility, if any, securing that Bond so provide, shall so notify the issuer thereof and draw on or collect under such Reserve Facility to the lesser of the extent required or the maximum amount of such Reserve Facility in order to pay to such Owner the principal and interest so recovered. If and to the extent that the Series Required Reserve is satisfied by a deposit of cash or Permitted Investments and one or more Reserve Facilities (or any combination thereof), the Trustee shall first draw on the portion of the Reserve Account held in cash or Permitted Investments and then make drawings on or collect under such Reserve Facilities on a pro rata basis (calculated by reference to the maximum amounts of such Reserve Facilities).

(3) Reimbursement to Reserve Facility Providers. If the Trustee draws on or collects under a Reserve Facility, the Trustee shall use amounts deposited in the related Reserve Account by the Authority following such draw or collection first to make the payments required by the terms of the Reserve Facility or related reimbursement or loan agreement so that the Reserve Facility shall, absent the delivery to the Trustee of a substitute Reserve Facility acceptable to the Credit Providers that satisfies the requirements of this Section or the deposit in that Reserve Account of an amount sufficient to increase the balance in the Reserve Account to the Series Required Reserve, be reinstated in the amount of such draw or collection within one year of the date of the draw or collection. After such reinstatement, the Trustee shall use amounts deposited in that Reserve Account by the Authority for the replenishment of the portion of the Reserve Account held in cash or Permitted Investments.

(G) Transfer of Excess Amounts. Any amounts in a Reserve Account in excess of the Series Required Reserve (as calculated by the Authority) shall be transferred by the Trustee to the Authority on the Business Day next succeeding each Principal Payment Date; provided that such amounts shall be transferred only from the portion of the Reserve Account held in the form of cash or Permitted Investments and further provided that the Authority is not then in default under this Indenture.

**Section 7.10. Application of Redemption Fund.** The Trustee shall establish, maintain and hold in trust a special fund designated as the “Redemption Fund.” All moneys deposited by the Authority with the Trustee for the purpose of redeeming Bonds shall, unless otherwise directed by the Authority, be deposited in the Redemption Fund. All amounts deposited in the Redemption Fund shall be used and withdrawn by the Trustee solely for the purpose of redeeming Bonds, in the manner, at the times and upon the terms and conditions specified herein; provided that, at any time prior to giving such notice of redemption, the Trustee shall, upon receipt of a Request of the Authority, apply such amounts to the purchase of Bonds at public or private sale, as and when and at such prices (including brokerage and other charges, but excluding accrued interest, which is payable from the Interest Fund) as is directed by the Authority, except that the purchase price (exclusive of such accrued interest) may not exceed the Redemption Price then applicable to such Bonds. All Term Bonds purchased or redeemed from the Redemption Fund shall be allocated to Mandatory Sinking Account Payments applicable to such maturity of Term Bonds as may be specified in a Request of the Authority.

**Section 7.11. Rebate Fund.** At the direction of the Authority, upon the issuance of a Series of Tax-Exempt Bonds, the Trustee shall establish and maintain a fund designated as the “Rebate Fund” separate from any other fund held by the Trustee. The Trustee shall deposit moneys into and disburse moneys from the Rebate Fund pursuant to written instructions from the Authority. The Trustee shall be deemed conclusively to have complied with the provisions of this Section and the Tax Certificate if it follows the instructions of the Authority, including to supply all necessary information in the manner specified in the Tax Certificate. In the absence of written instructions from the Authority, the Trustee shall not be required to take any action with respect to the Rebate Fund or the Tax Certificate and shall have no liability or responsibility to enforce compliance by the Authority with the terms of the Tax Certificate.

**Section 7.12. Investments of Money in Accounts and Funds.**

(A) Investment in Permitted Investments. All moneys in any of the funds and accounts held by the Trustee and established pursuant to this Indenture shall be invested solely as directed by the Authority, solely in Permitted Investments. All Permitted Investments shall, as directed by the Authority in writing or by telephone, promptly confirmed in writing, be acquired subject to the limitations set forth in Section 9.06 (Federal Income Tax Covenants), the limitations as to maturities hereinafter in this Section set forth and such additional limitations or requirements consistent with the foregoing as may be established by Request of the Authority and not inconsistent with the duties of the Trustee under this Indenture. If and to the extent the Trustee does not receive investment instructions from the Authority with respect to the moneys in the funds and accounts held by the Trustee pursuant to this Indenture, such moneys shall be invested in Permitted Investments described in clause (4) (Money Market Funds) of the definition thereof and the Trustee shall thereupon immediately request investment instructions from the Authority for such moneys.

(B) Maturity of Investments. Moneys in a Reserve Account shall be invested in Permitted Investments maturing within five years of the date of such investment, but in no event later than the final maturity of the Bonds of the Series secured thereby, or, in the case of Investment Agreements, available by the terms thereof for withdrawal at the times and for the purposes required for the application of funds in the Reserve Account. Moneys in the remaining funds and accounts shall be invested in Permitted Investments maturing or available on demand not later than the date on which it is estimated that such moneys will be required by the Trustee.

(C) Deposit of Earnings. All interest, profits, and other income received from the investment of moneys in any fund or account held by the Trustee hereunder, other than the Rebate Fund, shall be transferred to the System Revenue Fund when received. All interest, profits, and other income received from the investment of moneys in the Rebate Fund shall be deposited therein, except as otherwise directed by the Authority. Notwithstanding anything to the contrary contained in this paragraph, an amount of interest received with respect to any Permitted Investment equal to the amount of accrued interest, if any, paid as part of the purchase price of such Permitted Investment shall be credited to the fund or account from which such accrued interest was paid.

(D) Valuation. All Permitted Investments credited to the Reserve Fund shall be valued as of each Interest Payment Date at their fair market value determined to the extent practical by reference to the closing bid price thereof published in the Wall Street Journal or any other financial publication or quotation service selected by the Trustee in its discretion, including such pricing services as may be available to the Trustee within the Trustee's regular accounting system.

(E) Accounting; Acquisition and Disposition. The Trustee may commingle any of the funds or accounts established pursuant to this Indenture into a separate fund or funds for investment purposes only, provided that all funds or accounts held by the Trustee hereunder shall be accounted for separately as required by this Indenture. The Trustee and its affiliates may act as sponsor, advisor, depository, principal, or agent in the making or disposing of any investment and, with the prior written consent of the Authority, may impose its customary charge therefor. The Authority acknowledges that, to the extent regulations of the Comptroller of the Currency or other applicable regulatory entity grants the Authority the right to receive brokerage confirmations or security transactions as they occur, the Authority specifically waives receipt of such confirmations

to the extent permitted by law. The Trustee may sell at the best price reasonably obtainable, or present for redemption, any Permitted Investments so purchased whenever it shall be necessary to provide moneys to meet any required payment, transfer, withdrawal, or disbursement from the fund or account to which such Permitted Investment is credited, and the Trustee shall not be liable or responsible for any loss resulting from such investment.

**Section 7.13. Funds and Accounts.** Any fund required by this Indenture to be established and maintained by the Trustee may be established and maintained in the accounting records of the Trustee, either as a fund or an account, and may, for the purposes of such records, any audits thereof and any reports or statements with respect thereto, be treated either as a fund or as an account; but all such records with respect to all such funds shall at all times be maintained in accordance with customary standards of the corporate trust industry, to the extent practicable, and with due regard for the protection of the security of the Bonds and the rights of every Owner thereof.

**Section 7.14. Money Held for Particular Bonds.** The money held by the Trustee for the payment of the interest, principal, or Redemption Price due on any date with respect to particular Bonds (or portions of Bonds in the case of Bonds redeemed in part only) shall, on and after such date and pending such payment, be set aside on its books and held uninvested in trust by it for the Owners of the Bonds entitled thereto, subject, however, to the provisions of Section 6.04 (Payment of Bonds After Discharge of Indenture).

**Section 7.15. Draws Under Credit Facilities.** Prior to the termination thereof, the Trustee shall draw on a Credit Facility in an amount and at such times (as such times shall be set forth in the Credit Facility) as shall be required to pay in full the principal of and interest on the Bonds (excluding any Liquidity Provider Bonds registered in the name of the Credit Provider or its designee or Bonds registered in the name of the Authority). If the Credit Facility is a direct-pay letter of credit, the Trustee shall make such draw at such time as is required to receive amounts needed on each Interest Payment Date, maturity date, mandatory sinking fund redemption date, and other redemption date. If the Credit Facility is an insurance policy, the Trustee shall make such draw in accordance with the terms of such insurance policy to pay the principal of and interest on the Bonds following non-payment thereof on any Interest Payment Date, maturity date, mandatory sinking fund redemption date or, with the consent of the Credit Provider, other redemption date and following a recovery of payments of principal of and interest on the Bonds pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with the final, nonappealable order of a court having competent jurisdiction. If the Credit Facility is a direct pay letter of credit, the Trustee shall pay the principal of and interest on the Bonds (excluding any Outstanding Liquidity Provider Bonds registered in the name of the Credit Provider or its designee) when due and payable solely from moneys drawn under the Credit Facility.

**Section 7.16. Credit Facility Provisions.**

The Trustee shall hold and maintain each Credit Facility for the benefit of the Owners until the Credit Facility terminates in accordance with its terms. The Trustee shall diligently enforce all terms, covenants and conditions of each Credit Facility, including payment when due of any claims under each Credit Facility, and will not consent to or agree to or permit any amendment or modification thereof that would materially adversely affect the rights or security of Owners. If at

any time during the term of the Credit Facility any successor Trustee shall be appointed and qualified under this Indenture, the resigning or removed Trustee shall request that the Credit Provider transfer the Credit Facility, if required, by the Credit Facility, to the successor Trustee. If the resigning or removed Trustee fails to make this request, the successor Trustee shall do so before accepting appointment.

Notwithstanding anything contained herein to the contrary, all provisions hereof regarding consents, approvals, directions, waivers, appointments, requests or other actions by the Credit Providers shall be deemed not to require or permit such consents, approvals, directions, waivers, appointments, requests or other actions and shall be read as if the Credit Providers were not mentioned therein (1) during any period during which there is a payment default under the related Credit Facility, or (2) after the related Credit Facility shall at any time for any reason cease to be valid and binding on the related Credit Provider in the reasonable judgment of the Agency, or shall be declared to be null and void by final non-appealable judgment of a court of competent jurisdiction; provided, however, that the payment of amounts due to the related Credit Provider pursuant to the terms hereof shall continue in full force and effect. The foregoing shall not affect any other rights of such Credit Provider.

#### **Section 7.17. Liquidity Facility Provisions.**

The Trustee shall hold and maintain each Liquidity Facility for the benefit of the Owners until the Liquidity Facility expires in accordance with its terms. The Trustee shall enforce all terms, covenants and conditions of each Liquidity Facility, including drawing on a Liquidity Facility as required to provide for the purchase price of Bonds (other than Liquidity Provider Bonds or Bonds owned by the Agency), and the provisions relating to the payment of draws on, and reinstatement of amounts that may be drawn under, a Liquidity Facility, and will not consent to, agree to or permit any amendment or modification of a Liquidity Facility that would materially adversely affect the rights or security of the Owners of the Bonds. If at any time during the term of any of the Liquidity Facilities any successor Trustee is appointed and qualified under this Indenture, the successor Trustee succeeds to the rights of the resigning or removed Trustee under the Liquidity Facility. The resigning or removed Trustee shall request that the Liquidity Providers take any action necessary to effect the assignment to the successor Trustee.

The Trustee shall draw moneys under the Liquidity Facility for the related Series of the Bonds in accordance with the terms thereof in an amount necessary to make full and timely payments of the purchase price of Bonds of such Series required to be made pursuant to this Indenture.

#### **Section 7.18. Credit Facility Account and Liquidity Facility Account.**

(A) Credit Facility Account. The Trustee shall create within the Bond Fund a separate account called the “Credit Facility Account,” into which all moneys drawn under the Credit Facilities shall be deposited and disbursed (with separate sub-accounts for different Series of the Bonds and Credit Facilities). The Credit Facility Account shall be established and maintained by the Trustee and held in trust apart from all other moneys and securities held under this Indenture or otherwise, and the Trustee has the exclusive and sole right of withdrawal from the Credit Facility Account for the exclusive benefit of the Owners of the Bonds with respect to which such drawing was made. Moneys drawn on the Credit Facility and deposited in the Credit Facility Account for

the payment of debt service with respect to a particular Series of Bonds shall be used only to pay debt service with respect to such Series of Bonds. Moneys in the Credit Facility Account shall be held in cash and shall not be invested. Any amounts remaining on deposit in the Credit Facility Account Fund and not required for the purpose for which drawn shall be promptly repaid to the Credit Provider.

(B) Liquidity Facility Account. The Trustee shall create within the Bond Fund a separate account called the “Liquidity Facility Account,” into which all moneys drawn under the Liquidity Facilities shall be deposited and disbursed (with separate sub-accounts for different Series of the Bonds and Liquidity Facilities). The Authority has no right title or interest in the Liquidity Facility Account. The Liquidity Facility Account shall be established and maintained by the Trustee and held uninvested and in trust apart from all other moneys and securities held under this Indenture or otherwise, and over which the Trustee has the exclusive and sole right of withdrawal for the exclusive benefit of the Owners of the Bonds with respect to which such drawing was made.

## **ARTICLE VIII FINANCIAL COVENANTS OF THE AGENCY AND THE AUTHORITY**

**Section 8.01. Compliance with Law; Preservation of Rights.** The Authority and the Agency will faithfully comply with, keep, observe, and perform all valid and lawful obligations or regulations now or hereafter imposed on them by contract, or prescribed by any law of the United States of America or of the State of California, or by any officer, board, or commission having jurisdiction or control, as a condition of the continued enjoyment of each and every franchise, right, privilege, permit, and license now owned or hereafter acquired by them, including their right to exist and the Agency’s right to own and operate the System, to the end that such franchises, rights, privileges, permits, and licenses are maintained and preserved and do not become abandoned, forfeited, or in any manner impaired.

**Section 8.02. Amendment of Joint Powers Agreement.** The Agency agrees that, so long as any Bonds are Outstanding, it shall not agree to an amendment of the Joint Powers Agreement that would impair the Authority’s right to receive all of the revenues from the sale of electrical energy and related services from the System.

**Section 8.03. Power Sales.** The Agency shall use its best efforts to maintain in full force and effect the Participating Generator Agreement dated August 7, 2012, between the Agency and the California Independent System Operator Corporation, and otherwise preserve its eligibility to submit bids for the sale of power and energy and ancillary services from the System.

### **Section 8.04. Against Additional Prior Lien Obligations and Other Encumbrances; Subordinate Obligations.**

(A) Additional Prior Lien Obligations. The Authority hereby covenants and agrees that it shall not incur any obligations that are secured by a pledge and lien on the Net System Revenues that is senior to the pledge and lien on the Net System Revenues contained herein.

(B) Other Encumbrances. The Authority will not make any pledge of or place any lien on the System Revenues except as provided herein.

(C) **Subordinate Obligations.** The Authority may at any time, or from time to time, issue evidences of indebtedness for any lawful purpose that are payable from and secured by a pledge of and lien on any moneys transferred to other funds of the Authority (as provided in Section 7.04(B) (Allocation of Net System Revenues -- Surplus)), provided that such pledge and lien is subordinate in all respects to the pledge of and lien on the Net System Revenues provided herein.

**Section 8.05. Against Sale or Other Disposition of Property.** The Agency will not sell, lease, or otherwise dispose of the System or any part thereof essential to the proper operation of the System or to the maintenance of the System Revenues. The Agency will not enter into any agreement or lease that impairs the operation of the System or any part thereof necessary to secure adequate Net System Revenues for the payment of the Bonds or that would otherwise impair the rights of the Agency with respect to the System Revenues or the operation of the System. Any real or personal property that has become nonoperative or that is not needed for the efficient and proper operation of the System, or any material or equipment that has become worn out, may be sold by the Agency. The Agency shall deposit the proceeds of such sale in the System Revenue Fund.

**Section 8.06. Operation and Maintenance of the System.** The Agency will maintain and preserve the System in good repair and working order at all times in conformity with standards customarily followed in the electric utility industry for projects of like size and character. The Agency will operate the System as a revenue-producing enterprise in an efficient and economical manner consistent with sound economy, usual utility standards, and practices for the operation and maintenance of a facility similar to the System and so as to assure that the same is financially self-sufficient and self-sustaining and that the Authority can meet its obligations hereunder. The Agency will pay all Operation and Maintenance Costs of the System as they become due and payable.

**Section 8.07. Payment of Claims.** The Agency will pay and discharge any and all lawful claims for labor, materials or supplies that, if unpaid, might become a lien on the Net System Revenues or any part thereof or on any funds in the hands of the Agency prior or superior to the lien of the Bonds or that might impair the security of the Bonds.

**Section 8.08. Compliance with Contracts.** The Agency will comply with, keep, observe and perform all agreements, conditions, covenants, and terms (express or implied) required to be performed by it contained in all contracts for the use of the System and all other contracts affecting or involving the System to the extent that the Agency is a party thereto.

**Section 8.09. Payment of Taxes and Compliance with Governmental Regulations.** The Agency will pay and discharge all taxes, assessments, and other governmental charges that may hereafter be lawfully imposed upon the System or any part thereof or upon the System Revenues when the same shall become due. The Agency will duly observe and conform with all valid regulations and requirements of any governmental authority relative to the operation of the System or any part thereof, but the Agency shall not be required to comply with any regulations or requirements so long as the validity or application thereof is contested in good faith.

**Section 8.10. Insurance; Application of Net Proceeds.**

(A) Casualty Insurance. The Agency will procure and maintain or cause to be procured and maintained insurance on the System with responsible insurers in such amounts and against such risks (including accident to or destruction of the System) as are usually covered in connection with utility systems similar to the System so long as such insurance is available from reputable insurance companies. In the event of any damage to or destruction of the System caused by the perils covered by such insurance, the Net Proceeds thereof shall be applied to the reconstruction, repair, or replacement of the damaged or destroyed portion of the System. The Agency shall begin such reconstruction, repair, or replacement promptly after such damage or destruction occurs; shall continue and properly complete such reconstruction, repair, or replacement as expeditiously as possible; and shall pay out of such Net Proceeds all costs and expenses in connection with such reconstruction, repair, or replacement so that the same shall be completed and the System shall be free and clear of all claims and liens. If such Net Proceeds exceed the costs of such reconstruction, repair, or replacement, then the excess Net Proceeds shall be applied to the redemption of the Bonds. If such Net Proceeds are sufficient to enable the Authority to retire the entire obligation evidenced hereby prior to the final maturity of the Bonds, the Agency may elect not to reconstruct, repair, or replace the damaged or destroyed portion of the System, and thereupon such Net Proceeds shall be applied to the redemption of Bonds.

(B) Other Insurance. The Agency will procure and maintain such other insurance that it deems advisable or necessary to protect its interests, which insurance shall afford protection in such amounts and against such risks as are usually covered in connection with utility systems similar to the System.

(C) Self-Insurance. Any insurance required to be maintained pursuant to paragraph (A) above and any insurance maintained pursuant to paragraph (B) above may be maintained under a self-insurance or pooled risk program, so long as such self-insurance or pooled risk program is maintained in the amounts and manner usually maintained in connection with utility systems similar to the System.

(D) Notice of Cancellation. All policies of insurance required to be maintained herein shall provide that the Agency shall be given thirty (30) days' written notice of any intended cancellation thereof or reduction of coverage provided thereby.

**Section 8.11. Eminent Domain Proceeds.** If all or any part of the System is taken by eminent domain proceedings, the Net Proceeds thereof shall be applied as follows:

(A) Additions to System. If (1) the Agency obtains and files with the Trustee an Engineer's Report or Accountant's Report showing (i) the estimated loss of annual Net System Revenues, if any, suffered or to be suffered by the Agency by reason of such eminent domain proceedings, (ii) a general description of the additions, betterments, extensions, or improvements to the System proposed to be acquired and constructed by the Agency from such Net Proceeds, and (iii) an estimate of the additional annual Net System Revenues to be derived from such additions, betterments, extensions, or improvements, and (2) the Agency, on the basis of such Engineer's Report or Accountant's Report filed with the Trustee, determines that the estimated additional annual Net System Revenues will sufficiently offset the estimated loss of annual Net System Revenues resulting from such eminent domain proceedings so that the ability of the Agency and the Authority to meet their obligations hereunder will not be substantially impaired

(which determination shall be final and conclusive) then the Agency shall promptly proceed with the acquisition and construction of such additions, betterments, extensions, or improvements substantially in accordance with such Engineer's Report or Accountant's Report and such Net Proceeds shall be applied for the payment of the costs of such acquisition and construction, and any balance of such Net Proceeds not required by the Agency for such purpose shall be deposited in the System Revenue Fund.

(B) Application to Other Purposes. If (1) the Agency obtains and files with the Trustee an Engineer's Report or Accountant's Report containing an estimate of annual Net System Revenues after the taking by eminent domain and (2) the Agency, on the basis of such Engineer's Report or Accountant's Report, determines that Net System Revenues will equal at least one hundred twenty per cent (120%) of Debt Service for each Fiscal Year in which Bonds are Outstanding, then the Agency may use such Net Proceeds for any lawful purpose.

(C) Redemption of Bonds. If the conditions of neither of the foregoing subsections are met, then such Net Proceeds shall be applied to the redemption of Bonds.

**Section 8.12. Operation and Maintenance Reserve Fund.** The Authority shall establish and maintain a separate fund designated as the "Operation and Maintenance Reserve Fund." The Authority deposit \$\_\_\_\_\_ into the Operation and Maintenance Reserve Fund and shall maintain a balance in equal to the System's Operation and Maintenance Costs for a period of [180] days, which amount shall be determined by the Authority on each March 31 and September 30. The Authority shall apply the funds in the Operation and Maintenance Reserve Fund to the payment of Operation and Maintenance Costs.

## ARTICLE IX GENERAL COVENANTS OF THE AUTHORITY

**Section 9.01. Power to Issue Bonds and Make Pledge and Assignment.** The Authority is duly authorized pursuant to law to enter into this Indenture and to authorize the issuance of the Bonds and pledge the Net System Revenues under this Indenture in the manner and to the extent provided in this Indenture. The Bonds and the provisions of this Indenture are and will be the valid and binding limited obligations of the Authority in accordance with their terms.

**Section 9.02. Punctual Payment and Performance.** The Authority will punctually pay out of the System Revenues the interest on and the principal of and redemption premiums, if any, to become due on every Bond issued hereunder in strict conformity with the terms hereof and of the Bonds, and will faithfully observe and perform all the agreements and covenants to be observed or performed by the Authority contained herein and in the Bonds.

**Section 9.03. Extension of Time for Payment of Bonds.** The Authority will not directly or indirectly extend or assent to the extension of the maturity of any of the Bonds or the time of payment of any of the claims for interest by the purchase or funding of such Bonds or claims for interest or by any other arrangement. If the maturity of any of the Bonds or the time of payment of any such claims for interest shall be extended, such Bonds or claims for interest shall not be entitled, in case of any default hereunder, to the benefits of this Indenture, unless the principal represented by all of the Bonds and of all claims for interest represented thereby that shall not have

been so extended have been paid in full. Nothing in this Section shall be deemed to limit the right of the Authority to cause the delivery of Bonds for the purpose of refunding any Outstanding Bonds, and such delivery shall not be deemed to constitute an extension of maturity of Bonds.

**Section 9.04. Preservation of Rights of Owners.** The Authority shall at all times, to the extent permitted by law, defend, preserve, and protect the pledge of Net System Revenues and other assets and all the rights of the Owners under this Indenture against all claims and demands of all persons whomsoever.

**Section 9.05. Federal Income Tax Covenants.** The Authority and the Agency shall at all times do and perform all acts and things permitted by law and this Indenture that are necessary and desirable in order to assure that interest paid on any Tax-Exempt Bonds will continue to be excluded from gross income for federal income tax purposes and shall take no action that would result in such interest not being so excluded. Without limiting the generality of the foregoing, the Authority and the Agency agree to comply with the provisions of the Tax Certificate. This covenant shall survive the defeasance or payment in full of the Tax-Exempt Bonds.

**Section 9.06. Further Assurances.** Whenever and so often as reasonably requested to do so by the Trustee or any Owner, the Authority and the Agency will promptly execute and deliver or cause to be executed and delivered all such other and further assurances, documents or instruments, and promptly do or cause to be done all such other and further things as may be necessary or reasonably required in order to further and more fully vest in the Owners all rights, interests, powers, benefits, privileges and advantages conferred or intended to be conferred upon them hereby.

## **ARTICLE X EVENTS OF DEFAULT AND REMEDIES OF OWNERS**

**Section 10.01. Events of Default.** The following events are Events of Default:

(A) **Payment Default.** Default in the due and punctual payment of the interest on any Bond or the principal of or redemption premium, if any, on any Bond when and as the same shall become due and payable, whether at maturity as therein expressed or by proceedings for redemption when and as the same shall become due and payable;

(B) **Breach of Covenant.** Default by the Authority or the Agency in the observance or performance of any covenant, condition, agreement, or provision in this Indenture on its part to be observed or performed, for a period of thirty (30) days after written notice, specifying such failure and requesting that it be remedied, has been given to the Authority or the Agency by the Trustee;

(C) **Bankruptcy.** A declaration of bankruptcy by the Authority or the Agency.

**Section 10.02. Institution of Legal Proceedings by Trustee.** If one or more of the Events of Default shall happen and be continuing, the Trustee may, and upon the written request of the Owners of a majority in principal amount of the Bonds then Outstanding and upon being indemnified to its satisfaction therefor, shall, proceed to protect or enforce its rights or the rights of the Owners of Bonds under this Indenture by a suit in equity or action at law, either for the specific performance of any covenant or agreement contained herein, or in aid of the execution of

any power herein granted, or by mandamus or other appropriate proceeding for the enforcement of any other legal or equitable remedy as the Trustee shall deem most effectual in support of any of its rights and duties hereunder. The Trustee may exercise its rights under this Indenture to collect its fees and expenses without the consent of the Owners of any Bonds.

**Section 10.03. Non-Waiver.** Nothing in this Article or in any other provision hereof or in the Bonds affects or impairs the obligation of the Authority, which is absolute and unconditional, to pay the interest on and principal of and redemption premiums, if any, on the Bonds to the respective Owners of the Bonds at the respective dates of maturity or upon prior redemption as provided herein from the Net System Revenues as provided herein pledged for such payment, or affects or impairs the right of such Owners, which is also absolute and unconditional, to institute suit to enforce such payment by virtue of the contract embodied herein and in the Bonds.

A waiver of any default or breach of duty or contract by any Owner does not affect any subsequent default or breach of duty or contract or impair any rights or remedies on any such subsequent default or breach of duty or contract. No delay or omission by any Owner to exercise any right or remedy accruing upon any default or breach of duty or contract impairs any such right or remedy or shall be construed to be a waiver of any such default or breach of duty or contract or an acquiescence therein, and every right or remedy conferred upon the Owners by the Act or by this Article may be enforced and exercised from time to time and as often as deemed expedient by the Owners.

If any action, proceeding or suit to enforce any right or exercise any remedy is abandoned, the Authority and any Owner are restored to their former positions, rights and remedies as if such action, proceeding or suit had not been brought or taken.

**Section 10.04. Actions by Trustee as Attorney-in-Fact.** Any action, proceeding or suit that any Owner has the right to bring to enforce any right or remedy hereunder may be brought by the Trustee for the equal benefit and protection of all Owners, whether or not the Trustee is an Owner, and the Trustee is hereby appointed (and the successive Owners, by taking and holding the Bonds issued hereunder, shall be conclusively deemed to have so appointed it) the true and lawful attorney-in-fact of the Owners for the purpose of bringing any such action, proceeding or suit and for the purpose of doing and performing any and all acts and things for and on behalf of the Owners as a class or classes as may be advisable or necessary in the opinion of the Trustee as such attorney-in-fact.

**Section 10.05. Remedies Not Exclusive.** No remedy herein conferred upon or reserved to the Owners is intended to be exclusive of any other remedy, and each such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise and may be exercised without exhausting and without regard to any other remedy conferred by the Act or any other law.

**Section 10.06. Limitation on Owners' Right to Sue.** No Owner of any Bond issued hereunder has the right to institute any suit, action or proceeding at law or equity, for any remedy under or upon this Indenture, unless (a) such Owner has previously given to the Trustee written notice of the occurrence of an Event of Default as defined in Section 10.01 (Events of Default) hereunder; (b) the Owners of at least a majority in aggregate principal amount of all the Bonds

then Outstanding have made written request upon the Trustee to exercise the powers hereinbefore granted or to institute such suit, action or proceeding in its own name; (c) said Owners have tendered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities to be incurred in compliance with such request; and (d) the Trustee has refused or omitted to comply with such request for a period of sixty (60) days after such request was received by, and said tender of indemnity was made to, the Trustee.

Such notification, request, tender of security or indemnity, and refusal or omission are hereby declared, in every case, to be conditions precedent to the exercise by any Owner of Bonds of any remedy hereunder; its being understood and intended that no one or more Owners of Bonds has any right in any manner whatever by his or their action to enforce any right under this Indenture, except in the manner herein provided, and that all proceedings at law or in equity to enforce any provision of the Indenture must be instituted, had and maintained in the manner herein provided and for the equal benefit of all Owners of the Outstanding Bonds.

## **ARTICLE XI THE TRUSTEE**

**Section 11.01. Appointment of the Trustee.** The U.S. Bank, N.A. is hereby appointed as Trustee under this Indenture and hereby accepts the trust imposed upon it as Trustee hereunder and to perform all the functions and duties of the Trustee hereunder, subject to the terms and conditions set forth in this Indenture.

### **Section 11.02. Certain Duties and Responsibilities.**

(A) When No Default is Continuing. Prior to an Event of Default, and after the curing or waiver of all Events of Default that may have occurred,

(1) Duties Limited to Those Specified. the Trustee undertakes to perform such duties and only such duties as are specifically set forth in this Indenture and no implied covenants shall be read into this Indenture against the Trustee;

(2) Reliance on Documents. in the absence of bad faith on its part the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such certificates or opinions that by any provision hereof are specifically required to be furnished to the Trustee, the Trustee is under a duty to examine the same to determine whether or not they conform to the requirements of the Indenture.

(B) During Continuance of Default. During the existence of any Event of Default (that has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Indenture and use the same degree of care and skill in their exercise as a reasonable person would exercise or use under the circumstances in the conduct of such person's own affairs.

(C) Immunities of Trustee. No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that

(1) this Subsection shall not be construed to limit the effect of Subsection A of this Section;

(2) the Trustee is not liable for any error of judgment made in good faith by a Responsible Officer of the Trustee, unless it is be proved that the Trustee was negligent in ascertaining the pertinent facts;

(3) the Trustee is not liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the Owners of not less than a majority (or any lesser amount that may direct the Trustee under this Indenture) in aggregate principal amount of the Bonds at the time Outstanding relating to the time, method, and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Indenture; and

(4) no provision of this Indenture requires the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance or exercise of any of its duties hereunder, or in the exercise of its rights or powers, if it has reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

(D) Immunities Applicable to All Provisions of Indenture. Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee is be subject to the provisions of this Article XI (The Trustee).

**Section 11.03. Notice of Defaults.** Within forty five (45) days after the occurrence of any default hereunder, the Trustee shall transmit by mail to all Owners of Bonds as their names and addresses appear on the Bond Register notice of such default hereunder known to the Trustee, unless such default shall have been cured or waived; provided, however, that, except in the case of a default in the payment of the principal of or premium, if any, or interest on any Bond or in the payment of any sinking fund installment, the Trustee is protected in withholding such notice if and so long as the board of directors, the executive committee, or a trust committee of directors and/or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interests of the Owners; and provided further that in the case of any default of the character specified in Section 10.01(B) (Events of Default -- Breach of Covenant) no such notice to Owners shall be given until at least thirty (30) days after the occurrence thereof. For purposes of this Section, the term “default” means any event that is, or after notice or lapse of time or both would become, an Event of Default.

**Section 11.04. Certain Rights of Trustee; Liability of Trustee.** Except as otherwise provided in Section 11.02 (Certain Duties and Responsibilities):

(A) Reliance on Documents Believed Genuine. The Trustee may rely and is protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, requisition, consent, order, bond, note, or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(B) Documentation of Authority's Directions. Any request or direction of the Authority mentioned herein is sufficiently evidenced by a Certificate, Statement, Request, Requisition, or Order of the Authority;

(C) Reliance on Authority Statement. Whenever in the administration of the trusts imposed upon it by this Indenture the Trustee deems it necessary or desirable that a matter be proved or established prior to taking, suffering, or omitting any action hereunder, the Trustee (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of bad faith on its part, rely upon a Statement of the Authority, but in its discretion the Trustee may, in lieu thereof, accept other evidence of such matter or may require such additional evidence as to it may seem reasonable;

(D) Reliance on Advice of Counsel. The Trustee may consult with counsel, including, without limitation, counsel of or to the Authority, and the written advice of such counsel or any Opinion of Counsel is full and complete authorization and protection in respect of any action taken, suffered, or omitted by the Trustee hereunder in good faith and in reliance thereon;

(E) Security for Costs. The Trustee is under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Owners pursuant to the provisions of this Indenture, including, without limitation, the provisions of Article X (Events of Default and Remedies of Owners) hereof, unless such Owners have offered to the Trustee reasonable security or indemnity satisfactory to it against the costs, expenses and liabilities that may be incurred therein or thereby.

(F) Investigation of Factual Matters. The Trustee is not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, coupon or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee determines to make such further inquiry or investigation, it is entitled to examine the books, records and premises of the Authority, personally or by agent or attorney.

(G) Performance of Duties by Agents. The Trustee may execute any of the trusts or powers hereof and perform the duties required of it hereunder by or through attorneys, agents, or receivers, and is entitled to advice of counsel concerning all matters of trust and its duty hereunder, but the Trustee is answerable for the negligence or misconduct of any such attorney-in-fact, agent, or receiver selected by it; provided that the Trustee is not answerable for the negligence or misconduct of any attorney-in-law or certified public accountant selected by it with due care.

(H) Knowledge of Event of Default. The Trustee shall not be deemed to have knowledge of, and is not required to take any action with respect to, any Event of Default other than an Event of Default described in Section 10.01(A) (Events of Default – Payment Default) unless a Responsible Officer of the Trustee has actual knowledge of such event.

(I) No Responsibility for Disclosure Material. The Trustee shall have no responsibility with respect to any information, statement, or recital in any official statement, offering memorandum or any other disclosure material prepared or distributed with respect to the Bonds.

(J) Extension of Immunities. The immunities extended to the Trustee also extend to its directors, officers, employees and agents.

(K) No Duty. The permissive right of the Trustee to do things enumerated in this Indenture shall not be construed as a duty.

**Section 11.05. Trustee Not Responsible for Recitals, Validity of Bonds, or Application of Proceeds.**

(A) Trustee Makes No Representations. The recitals of facts herein and in the Bonds contained (other than the Certificate of Authentication on the Bonds) shall be taken as statements of the Authority, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Bonds, as to the sufficiency of the Net System Revenues or the priority of the lien of this Indenture thereon, or as to the financial or technical feasibility of any project and does not incur any responsibility in respect of any such matter, other than in connection with the duties or obligations expressly assigned to or imposed upon it herein or in the Bonds.

(B) Trustee Not Responsible for Authority's Use of Certain Moneys and Other Actions. The Trustee is not responsible for:

- (1) the application or handling by the Authority of any moneys transferred to or pursuant to any Requisition or Request of the Authority in accordance with the terms and conditions hereof;
- (2) the application and handling by the Authority of any fund or account designated to be held by the Authority hereunder;
- (3) any error or omission by the Authority in making any computation or giving any instruction pursuant to a Tax Certificate and the Trustee may rely conclusively on any computations or instructions furnished to it by the Authority in connection with the requirements of any Tax Certificate; or
- (4) the construction, operation, or maintenance of any project or facilities by the Authority or the Agency.

**Section 11.06. Trustee May Hold Bonds.** The Trustee and its directors, officers, employees or agents may in good faith buy, sell, own, hold and deal in any of the Bonds and may join in any action that any Owner of a Bond may be entitled to take, with like effect as if the Trustee was not the Trustee under this Indenture. The Trustee may in good faith hold any other form of indebtedness of the Authority; own, accept or negotiate any drafts, bills of exchange, acceptances or obligations of the Authority and make disbursements for the Authority; and enter into any commercial or business arrangement therewith, without limitation.

**Section 11.07. Compensation and Indemnification of Trustee.** The Authority agrees, subject to the provisions of Section 7.01 (Liability of Authority Limited to System Revenues):

(A) Compensation. to pay to the Trustee from time to time reasonable compensation for all services rendered by it hereunder;

(B) Reimbursement. except as otherwise expressly provided herein, to reimburse the Trustee upon its request for all reasonable expenses, disbursements, and advances incurred or made by the Trustee in accordance with any provision of this Indenture (including the reasonable compensation and the expenses and disbursements of its agents and counsel (including internal counsel)), except any such expense, disbursement, or advance as be attributable to the Trustee's negligence or willful misconduct; and

(C) Indemnification. to indemnify the Trustee for, and to hold it harmless against, any loss, liability, or expense incurred without negligence or willful misconduct on its part, arising out of or in connection with the acceptance or administration of the trusts created hereby, including the costs and expenses (including attorneys' fees) of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder.

The rights of the Trustee and the obligations of the Authority under this Section survive the discharge of the Bonds and this Indenture.

**Section 11.08. Corporate Trustee Required; Eligibility.** There must at all times be a Trustee hereunder, which must be a national banking association, federally chartered savings association or institution, trust company, or bank having the powers of a trust company authorized to do business in the State, having a combined capital and surplus of at least fifty million dollars (\$50,000,000), and subject to supervision or examination by federal or state authority. If such national banking association, federally chartered savings association or institution, bank, or trust company publishes a report of condition at least annually, pursuant to law or to the requirements of any supervising or examining authority, then for the purpose of this Section the combined capital and surplus of such federally chartered savings association or institution, bank, or trust company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee ceases to be eligible in accordance with the provisions of this Section, the Trustee shall resign immediately in the manner and with the effect specified in this Article.

**Section 11.09. Removal and Resignation; Appointment of Successor.**

(A) Effectiveness of Resignation or Removal. No removal or resignation of the Trustee and appointment of a successor Trustee pursuant to this Article becomes effective until the acceptance of appointment by the successor Trustee under Section 11.10 (Acceptance of Appointment by Successor).

(B) Trustee's Right to Resign. The Trustee may resign at any time by giving written notice of such resignation to the Authority and by giving the Owners notice of such resignation by mail at the addresses shown on the Bond Register. If an instrument of acceptance by a successor Trustee has not been delivered to the Trustee within thirty (30) days after the giving of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee, and such court may thereupon, after such notice (if any) as it may deem proper, appoint such successor Trustee.

(C) Authority's Right to Remove Trustee. The Authority may remove the Trustee at any time, unless an Event of Default has occurred and is then continuing, by giving written notice of such removal to the Trustee.

(D) Mandatory Removal of Trustee. The Authority shall remove the Trustee if at any time,

(1) requested to do so by an instrument or concurrent instruments in writing signed by the Owners of not less than a majority in aggregate principal amount of the Bonds then Outstanding (or their attorneys duly authorized in writing),

(2) the Trustee ceases to be eligible in accordance with Section 11.08 (Corporate Trustee Required; Eligibility) and fails to resign after written request therefor by the Authority, or

(3) the Trustee becomes incapable of acting or is adjudged a bankrupt or insolvent or a receiver of the Trustee or of its property is appointed or any public officer takes control or charge of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation, or liquidation,

in each case by giving written notice of such removal to the Trustee.

(E) Appointment of Successor. If the Trustee shall resign, be removed, or become incapable of acting, or if a vacancy occurs in the office of Trustee for any cause, the Authority shall promptly appoint a successor Trustee by an instrument in writing. If no successor Trustee has been so appointed by the Authority and accepted appointment in the manner hereinafter provided within thirty (30) days after such resignation, removal, or incapability or the occurrence of such vacancy, the Owners may, by an instrument or instruments signed by the Owners of a majority in principal amount of the Bonds, appoint a successor Trustee, or any Owner (on behalf of himself and all other Owners) may petition any court of competent jurisdiction for the appointment of a successor Trustee, and such court may thereupon, after such notice (if any) as it may deem proper, appoint such successor Trustee.

(F) Performance of Duties by Treasurer. If, by reason of the judgment of any court, the Trustee or any successor Trustee is rendered unable to perform its duties hereunder, and if no successor Trustee be then appointed, all such duties and all of the rights and powers of the Trustee hereunder shall be assumed by and vest in the Treasurer, or designee, of the Authority in trust for the benefit of the Owners.

(G) Notice of Removal or Resignation. The Authority shall give notice of each resignation and each removal of the Trustee and each appointment of a successor Trustee by mailing written notice of such event by first-class mail, postage prepaid, to the Owners as their names and addresses appear in the Bond Register. Each notice shall include the name of the successor Trustee and the address of its corporate trust office. If the Authority fails to mail such notice within fifteen (15) days after acceptance of appointment by the successor Trustee, the successor Trustee shall cause such notice to be mailed at the expense of the Authority.

**Section 11.10. Acceptance of Appointment by Successor.** Any successor Trustee appointed under this Indenture shall execute and deliver to the Authority and to its predecessor Trustee an instrument accepting such appointment, and thereupon such successor Trustee, without any further act, deed, or conveyance, becomes vested with all the moneys, rights, powers, trusts, and duties of the predecessor Trustee; but, at the Request of the Authority or the request of the successor Trustee, the predecessor Trustee shall, upon payment of its charges, execute and deliver an instrument conveying and transferring to the successor Trustee all the right, title, and interest of such predecessor Trustee in and to any property held by it under this Indenture and shall duly assign, transfer, and deliver to the successor Trustee all property and money held by the predecessor Trustee hereunder. Upon request of any successor Trustee, the Authority shall execute and deliver any and all instruments as may be reasonably required for more fully and certainly vesting in and confirming to such successor Trustee all such moneys, properties, rights, powers, trusts, and duties.

**Section 11.11. Merger or Consolidation.** Any company or entity into which the Trustee may be merged or converted or with which it may be consolidated or any company or entity resulting from any merger, conversion, or consolidation to which it shall be a party or any company or entity to which the Trustee may sell or transfer all or substantially all of its corporate trust business, provided such company or entity shall be eligible under Section 11.08 (Corporate Trustee Required; Eligibility), is the successor to such Trustee without the execution or filing of any paper or any further act, anything herein to the contrary notwithstanding. The successor Trustee shall mail written notice of such change of organization and the new name (if any) of the successor Trustee to the Authority by first-class mail, postage prepaid, within three (3) Business Days of its effectiveness. In case any Bonds have been executed, but not delivered, by the Trustee then in office, any successor by merger, conversion, or consolidation to such executing Trustee may adopt such execution and deliver the Bonds so executed with the same effect as if such successor Trustee had itself executed such Bonds.

**Section 11.12. Preservation and Inspection of Documents.** So long as any of the Bonds are Outstanding, all documents received by the Trustee under the provisions of this Indenture shall be retained in its possession and are subject at all reasonable times to the inspection of the Authority and any Owner, and their agents and representatives duly authorized in writing, at reasonable times and under reasonable conditions.

**Section 11.13. Accounting Records and Reports.** The Trustee will keep or cause to be kept proper books of record and accounts prepared in accordance with corporate trust industry standards, in which complete and accurate entries shall be made of all transactions relating to the receipts, disbursements, allocation and application of the System Revenues. The Trustee shall also maintain adequate records, verified with the respective issuer of a Reserve Facility, as to the amount available to be drawn under each Reserve Facility and as to the amounts paid and owing to each issuer of a Reserve Facility. Such books shall be made available for inspection by the Authority, the Credit Providers, and the issuers of any Reserve Facilities at reasonable hours and under reasonable conditions.

**ARTICLE XII**  
**AMENDMENT OF THE INDENTURE**

**Section 12.01. Supplemental Indentures without Consent of Owners.** This Indenture and the rights and obligations of the Authority, of the Agency, of the Trustee, and of the Owners of the Bonds may be modified or amended from time to time and at any time by a Supplemental Indenture, which the Authority, the Agency, and the Trustee may enter into without the consent of any Owners but only to the extent permitted by law and only for any one or more of the following purposes:

(A) Additional Security: to add to the covenants and agreements of the Authority or the Agency contained in this Indenture other covenants and agreements thereafter to be observed, to pledge or assign additional security for the Bonds (or any portion thereof), or to surrender any right or power herein reserved to or conferred upon the Authority or the Agency;

(B) Curative Provisions: to make such provisions for the purpose of curing any ambiguity, inconsistency, or omission, or of curing or correcting any defective provision, contained in this Indenture, or in regard to matters or questions arising under this Indenture, or to make any other revisions or additions to this Indenture as the Authority may deem necessary or desirable, and that shall not materially and adversely affect the interests of the Owners of the Bonds;

(C) Trust Indenture Act Qualification: to modify, amend, or supplement this Indenture in such manner as to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect, and to add such other terms, conditions, and provisions as may be permitted by said act or similar federal statute, and that shall not materially and adversely affect the interests of the Owners of the Bonds;

(D) Additional Series: to create any Series of Bonds and make such other provisions as provided in Article III (Issuance and Delivery of Additional Series of Bonds);

(E) Redemption Notification: to modify or supplement the procedures for giving notice of redemption of Bonds in order to comply with regulations promulgated by the United States Securities and Exchange Commission;

(F) Credit Enhancement and Liquidity: to make modifications or adjustments necessary, appropriate, or desirable to accommodate Credit Facilities, Reserve Facilities, and Liquidity Facilities delivered in connection with a Series of Bonds;

(G) Book-Entry Modifications: to amend, modify, or eliminate the book entry registration system for the Bonds;

(H) Preservation of Tax-Exemption: to make such provisions as are necessary or appropriate to ensure the exclusion of interest on any Tax-Exempt Bonds from gross income for federal income tax purposes; and

(I) No Material Effect: for any other purpose that does not materially and adversely affect the interests of the Owners of the Bonds.

**Section 12.02. Supplemental Indentures with Consent of Owners or Credit Enhancers.**

(A) Consent of Owners. This Indenture and the rights and obligations of the Authority, the Owners of the Bonds, and the Trustee may be modified or amended from time to time and at any time by a Supplemental Indenture, which the Authority and the Trustee may enter into when the written consent of the Authority and the Owners of a majority in aggregate principal amount of the Bonds then Outstanding have been filed with the Trustee; provided that, if such modification or amendment will, by its terms, not take effect so long as any Bonds of any particular maturity remain Outstanding, the consent of the Owners of such Bonds is not required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Bonds Outstanding under this Section.

(B) Consent of Credit Providers. This Indenture and the rights and obligations of the Authority and of the Owners of the Bonds and of the Trustee may also be modified or amended at any time by a Supplemental Indenture entered into by the Authority and the Trustee, which becomes binding when the written consents of the Authority and each Credit Provider have been filed with the Trustee, provided that at such time the payment of all the principal of and interest on all Outstanding Bonds are insured by a Credit Facility the Credit Provider of which is a financial institution or association having unsecured debt obligations rated, or insuring or securing other debt obligations rated on the basis of such insurance or letters of credit, in one of the two highest Rating Categories of any Rating Agency then rating the Bonds.

(C) Limitations on Amendments. No such modification or amendment shall (1) extend the fixed maturity of any Bond, or reduce the principal amount thereof, or extend the time of payment or reduce the amount of any mandatory redemption payment provided for any Bond, or reduce the rate of interest thereon, or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof, without the consent of the Owner of each Bond so affected, or (2) reduce the aforesaid percentage of principal of Bonds the consent of the Owners of which is required to effect any such modification or amendment, or permit the creation of any lien on the Net System Revenues and other assets pledged under this Indenture prior to or on a parity with the lien created by this Indenture, or deprive the Owners of the Bonds of the lien created by this Indenture on such assets (in each case, except as expressly provided in this Indenture), without the consent of the Owners of all of the Bonds then Outstanding.

(D) Form of Consent. It is not necessary for the consent of the Owners to approve the particular form of any Supplemental Indenture, but it is sufficient if such consent approves the substance thereof.

**Section 12.03. Notice of Amendment.** Promptly after the execution and delivery by the Trustee and the Authority of any Supplemental Indenture pursuant to this Section, the Trustee shall mail a notice, setting forth in general terms the substance of such Supplemental Indenture, or attaching a copy thereof, to the Owners of the Bonds at the addresses shown on the Bond Register. Any failure to give such notice, or any defect therein, does not, however, in any way impair or affect the validity of any such Supplemental Indenture.

**Section 12.04. Execution of Supplemental Indentures.** In executing, or accepting the additional trusts created by, any Supplemental Indenture permitted by this Article or the modification thereby of the trusts created by this Indenture, the Trustee is entitled to receive, and, subject to Section 11.02 (Certain Duties and Responsibilities), is fully protected in relying upon, an Opinion of Counsel stating that the execution of such Supplemental Indenture is authorized or permitted by this Indenture. The Trustee may, but is not obligated to, enter into any such Supplemental Indenture that affects the Trustee's own rights, duties, or immunities under this Indenture or otherwise.

**Section 12.05. Effect of Supplemental Indentures.** From and after the time any Supplemental Indenture becomes effective pursuant to this Article, this Indenture shall be deemed to be modified and amended in accordance therewith, and the respective rights, duties, and obligations under this Indenture of the Authority, the Trustee, and all Owners of Bonds Outstanding shall thereafter be determined, exercised, and enforced hereunder subject in all respects to such modification and amendment, and all the terms and conditions of any such Supplemental Indenture shall be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

**Section 12.06. Endorsement of Bonds; Preparation of New Bonds.** Bonds delivered after any Supplemental Indenture becomes effective pursuant to this Article may, and if the Trustee so determines shall, bear a notation by endorsement or otherwise in form approved by the Authority and the Trustee as to any modification or amendment provided for in such Supplemental Indenture, and, in that case, upon demand of the Owner of any Bond Outstanding at the time of such execution and presentation of his Bond for such purpose at the Corporate Trust Office or at such additional offices as the Trustee may select and designate for that purpose, a suitable notation shall be made on such Bond. If the Supplemental Indenture shall so provide, new Bonds so modified as to conform, in the opinion of the Authority and the Trustee, to any modification or amendment contained in such Supplemental Indenture, shall be prepared and executed by the Trustee and, upon demand of the Owners of any Bonds then Outstanding and upon surrender for cancellation of such Bonds, shall be exchanged at the Corporate Trust Office, without cost to any Owner, for Bonds then Outstanding in equal aggregate principal amounts of the same tenor and maturity.

**Section 12.07. Amendment of Particular Bonds.** The provisions of this Article do not prevent any Owner from accepting any amendment as to the particular Bonds held by him, provided that due notation thereof is made on such Bonds.

## **ARTICLE XIII CREDIT FACILITIES**

**Section 13.01. Credit Provider Consent Rights.** Notwithstanding any contrary provision hereof, the Credit Providers have the following rights hereunder:

Any provision of this Indenture expressly recognizing or granting rights in or to a Credit Provider may not be amended in any manner that affects the rights of such Credit Provider hereunder without the prior written consent of such Credit Provider. Each Credit Provider reserves the right

to charge the Authority a fee for any consent or amendment to this Indenture while its Credit Facility, as applicable, is outstanding.

Unless otherwise provided in this Section, the consent of the Credit Providers is required in lieu of the consent of the Owners of Bonds insured by them, when the consent of such Owners is required, for the following purposes: (i) execution and delivery of any amendment or supplement to this Indenture, (ii) removal of the Trustee and selection and appointment of any successor Trustee; and (iii) initiation or approval of any action not described in (i) or (ii) above that requires the consent of any such Owner.

Any reorganization or liquidation plan with respect to the Authority must be acceptable to the Credit Providers. In the event of any reorganization or liquidation, each Credit Provider has the right to vote on behalf of the Owners of all Bonds insured by it, absent a default by such Credit Provider under the applicable Credit Facility.

**Section 13.02. Credit Provider Remedies.** Anything in this Indenture to the contrary notwithstanding, upon the occurrence and continuance of an Event of Default as defined herein, each Credit Provider is entitled to exercise all rights and remedies, with respect to the enforcement and control of proceedings, that have been granted to the Owner of any Bond insured by it, as if it were such Owner and for the benefit of such Owner under this Indenture.

**Section 13.03. Notice Rights.**

Upon request of a Credit Provider and while the applicable Credit Facility is in effect, the Authority shall send the following items to such Credit Provider, addressed to the “Surveillance Department” or equivalent:

- (1) a copy of any financial statement, audit and/or annual report of the Authority;
- (2) a copy of any notice to be given to the Owners, including, without limitation, notice of any redemption of or defeasance of Bonds, and any certificate rendered pursuant to this Indenture relating to the security for the Bonds;
- (3) All notices to be delivered pursuant to any continuing disclosure certificate or agreement entered into by the Authority with respect to any Bonds; and
- (4) such additional information it may reasonably request.

While a Credit Facility is in effect, the Authority or the Trustee, as applicable, shall furnish the following items to the applicable Credit Provider, addressed to the “General Counsel” or equivalent:

- (1) Written notice from the Authority to each Credit Provider of any failure of the Authority to provide relevant notices or certificates pursuant to this Indenture, if it has actual knowledge of such failure;

(2) Notwithstanding any other provision of this Indenture, written notice from the Trustee to each Credit Provider if at any time there are insufficient moneys to make any payments of principal and/or interest as required and immediately upon the occurrence of any event of default hereunder;

(3) All notices to be delivered pursuant to any continuing disclosure certificate or agreement entered into by the Authority with respect to any Bonds; and

(4) such additional information it may reasonably request.

The Authority and the Agency will permit each Credit Provider to discuss the affairs, finances and accounts of the Authority and the Agency or any information such Credit Provider may reasonably request regarding the security for the Bonds with appropriate officers of the Authority or the Agency. The Authority will permit each Credit Provider to have access to and to make copies of all books and records relating to the Bonds at any reasonable time.

**Section 13.04. Effect of Credit Facility Payments.** Notwithstanding anything herein to the contrary, if the principal and/or interest due on any Bond is paid by a Credit Provider pursuant to its Credit Facility, such Bond remains Outstanding for all purposes, is not defeased or otherwise satisfied, and shall not be considered paid by the Authority, and the pledge of the Net System Revenues and all covenants, agreements and other obligations of the Authority to the Owner thereof continue to exist and run to the benefit of such Credit Provider, and such Credit Provider is subrogated to the rights of such Owner.

IN WITNESS WHEREOF, the MIDDLE FORK PROJECT FINANCE AUTHORITY and the PLACER COUNTY WATER AGENCY have caused this Indenture to be signed in their respective names by their duly authorized officers and THE U.S.BANK, N.A., in token of its acceptance of the trusts created hereunder, has caused this Indenture to be signed by one of the officers thereunder duly authorized, all as of the day and year first above written.

**MIDDLE FORK PROJECT FINANCE  
AUTHORITY**

By: \_\_\_\_\_  
Chair

**Countersigned:**

\_\_\_\_\_  
Secretary

**PLACER COUNTY WATER AGENCY**

By: \_\_\_\_\_

**Attest:**

\_\_\_\_\_

**THE U.S.BANK, N.A.**

By: \_\_\_\_\_  
Authorized Officer

**EXHIBIT A**  
**FORM OF SERIES 2020 REFUNDING BOND**  
MIDDLE FORK PROJECT FINANCE AUTHORITY  
REVENUE BONDS, SERIES 2020 REFUNDING

R-\_\_\_\_\_ \$ \_\_\_\_\_

MATURITY DATE	INTEREST RATE PER ANNUM	ORIGINAL ISSUE DATE	CUSIP:
April 1, ____			

REGISTERED OWNER: CEDE & CO.

PRINCIPAL SUM: \$ \_\_\_\_\_

The MIDDLE FORK PROJECT FINANCE AUTHORITY, a joint exercise of powers agency duly organized and validly existing under and pursuant to the laws of the State of California (the "Authority"), for value received hereby, promises to pay (but only out of the Net System Revenues hereinafter referred to) to the registered owner identified above or registered assigns, on the maturity date specified above (subject to any right of prior redemption hereinafter provided for) the principal sum specified above, together with interest on such principal sum from their original issue date specified above until the principal hereof shall have been paid at the interest rate per annum specified above, payable on October 1, 2020, and semiannually thereafter on each April 1 and October 1. Interest due on or before the maturity or prior redemption of this Bond shall be payable by check mailed by first class mail to the registered owner hereof or, upon the written request of any owner of \$1,000,000 or more in aggregate principal amount of bonds (in accordance with the terms of the Indenture described below), by wire transfer. The principal hereof is payable in lawful money of the United States of America at the corporate trust office of U.S. Bank, N.A., as trustee (the "Trustee"). Notwithstanding the foregoing, so long as this Bond is registered in the name of Cede & Co., principal of and redemption premium, if any, and interest on this Bond shall be payable by wire transfer to the registered owner.

This Bond is one of a duly authorized issue of bonds of the Authority designated as its "Revenue Bonds, Series 2020 Refunding" (the "Series 2020 Refunding Bonds") in the aggregate principal amount of \$[PRINCIPAL AMOUNT], all of like tenor and date (except for such variations, if any, as may be required to designate varying numbers, maturities and interest rates), and is issued under and pursuant to the provisions of the Joint Exercise of Powers Act (being Chapter 5 of Division 7 of Title 1 of the California Government Code, as amended) and all laws amendatory thereof or supplemental thereto (the "Act") and under and pursuant to the provisions of a Indenture dated March 1, 2020 (the "Indenture"), between the Authority, the Placer County Water Agency (the "Agency"), and the Trustee (copies of which are on file at the corporate trust office of the Trustee).

The Bonds are limited obligations of the Authority and are payable, as to interest thereon and principal thereof, solely from electric power revenues (the "System Revenues") held in certain funds and accounts pursuant to the Indenture. The Authority is not obligated to pay interest on and principal of the Bonds except from the System Revenues. All Bonds are equally and ratably

secured in accordance with the terms and conditions of the Indenture by a pledge of and charge and lien upon the Revenues. The Revenues constitute a trust fund for the security and payment of the interest on and principal of the Bonds as provided in the Indenture.

The full faith and credit of the Authority and the Agency are not pledged for the payment of the interest on or principal of the Bonds. No tax shall ever be levied or collected to pay the interest on or principal of the Bonds. The Bonds are not secured by a legal or equitable pledge of or charge or lien upon any property of the Authority or the Agency or any of their income or receipts except the Net System Revenues. The Bonds are not a debt of the Agency, and the Agency is not liable for the payment of the interest on or the principal of the Bonds.

Reference is hereby made to the Act and to the Indenture and any and all amendments thereof and supplements thereto for a description of the terms on which the Bonds are issued, the provisions with regard to the nature and extent of the System Revenues, the rights of the registered owners of the Bonds, security for payment of the Bonds, remedies upon default and limitations thereon, and amendment of the Indenture (with or without consent of the registered owners of the Bonds). All the terms of the Indenture are hereby incorporated herein and constitute a contract between the Authority and the registered owner of this Bond. The registered owner of this Bond, by acceptance hereof, agrees and consents to all the provisions of the Indenture.

*[insert redemption provisions when final]*

Notice of redemption of this Bond shall be given by first class mail not less than thirty (30) days nor more than sixty (60) days before the redemption date to the registered owner hereof, subject to and in accordance with provisions of the Indenture with respect thereto. If notice of redemption has been duly given as aforesaid and money for the payment of the above-described redemption price is held by the Trustee, then this Bond shall, on the redemption date designated in such notice, become due and payable at the above-described redemption price; and from and after the date so designated, interest on this Bond ceases to accrue and the registered owner of this Bond has no rights with respect hereto except to receive payment of the redemption price hereof.

If an event of default, as defined in the Indenture, occurs, the principal of all Bonds may be declared due and payable upon the conditions, in the manner and with the effect provided in the Indenture, except that the Indenture provides that in certain events such declaration and its consequences may be rescinded under the circumstances as provided therein.

This Bond is transferable by the registered owner hereof in person or by his duly authorized attorney upon payment of the charges provided in the Indenture and upon surrender of this Bond together with a written instrument of transfer satisfactory to the Trustee duly executed by the registered owner or his duly authorized attorney, and thereupon a new fully registered Bond or Bonds in the same aggregate principal amount in authorized denominations will be issued to the transferee in exchange therefor. The Authority and the Trustee may deem and treat the registered owner hereof as the absolute owner hereof for the purpose of receiving payment of the interest hereon and principal hereof and for all other purposes, whether or not this Bond shall be overdue, and neither the Authority nor the Trustee shall be affected by any notice or knowledge to the contrary; and payment of the interest on and principal of this Bond shall be made only to such

registered owner, which payments shall be valid and effectual to satisfy and discharge liability on this Bond to the extent of the sum or sums so paid.

This Bond are not entitled to any benefit, protection or security under the Indenture or become valid or obligatory for any purpose until the certificate of authentication attached hereto shall have been executed and dated by the Trustee.

Unless this Bond is presented by an authorized representative of The Depository Trust Company to the Trustee for registration of transfer, exchange or payment, and any Bond issued is registered in the name of Cede & Co. or such other name as requested by an authorized representative of The Depository Trust Company and any payment is made to Cede & Co., ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL since the registered owner hereof, Cede & Co., has an interest herein.

The rights and obligations of the Authority and of the registered owners of the Bonds may be modified or amended at any time in the manner, to the extent, and upon terms provided in the Indenture, which provide, in certain circumstances, for modifications and amendments without the consent of or notice to the registered owners of Bonds.

It is hereby certified that all acts, conditions and things required by law to exist, to have happened and to have been performed precedent to and in the issuance of this Bond do exist, have happened and have been performed in due time, form and manner as required by law and that the amount of this Bond, together with all other indebtedness of the Authority, does not exceed any limit prescribed by the Constitution or laws of the State of California and is not in excess of the amount of Bonds permitted to be issued under the Indenture.

IN WITNESS WHEREOF, the Middle Fork Project Finance Authority has caused this Bond to be executed in its name and on its behalf by the Chair of the Authority and countersigned by the Secretary of the Authority, and has caused this Bond to be dated as of the original issue date specified above.

MIDDLE FORK PROJECT FINANCE  
AUTHORITY

By: \_\_\_\_\_  
Chair

Countersigned:

\_\_\_\_\_  
Secretary

CERTIFICATE OF AUTHENTICATION

This is one of the Bonds described in the within mentioned Indenture which has been authenticated on \_\_\_\_\_.

**U.S. BANK, N.A.,**  
as Trustee

By: \_\_\_\_\_  
Authorized Officer

ASSIGNMENT

For value received the undersigned do(es) hereby sell, assign and transfer unto \_\_\_\_\_ the within Bond and do(es) hereby irrevocably constitute and appoint \_\_\_\_\_ attorney, to transfer the same on the bond register of the Trustee, with full power of substitution in the premises.

Dated: \_\_\_\_\_

\_\_\_\_\_  
NOTE: The signature(s) to this Assignment must correspond with the name(s) on the face of the within Bond in every particular, without alteration or enlargement or any change whatsoever.

Signature(s) Guaranteed by:

\_\_\_\_\_  
NOTE: Signature(s) must be guaranteed by an eligible guarantor institution (being banks, stock brokers, savings and loan associations, and credit unions with membership in an approved signature guarantee medallion program pursuant to Securities and Exchange Commission Rule 17A(d)15.

Social Security Number, Tax Identification Number, or other identifying number of Assignee: \_\_\_\_\_

## LEGAL OPINION

The following is a true copy of the opinion rendered by Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, in connection with the issuance of, and dated as of the date of the original delivery of, the Bonds described therein. A signed copy is on file in my office.

---

Secretary of the Authority

**KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD**  
**A Professional Corporation**  
**400 Capitol Mall, 27th Floor**  
**Sacramento, CA 95814-4417**

[closing date]

Members of the Board  
Middle Fork Project Finance Authority  
[ADDRESS]

Re: Middle Fork Project Finance Authority  
Revenue Bonds, Series 2020 Refunding  
(Final Opinion of Bond Counsel)

Ladies and Gentlemen:

We have acted as bond counsel in connection with the issuance by the Middle Fork Project Finance Authority (the “Authority”) of \$[PRINCIPAL AMOUNT] aggregate principal amount of its Revenue Bonds, Series 2020 Refunding (the “Bonds”). The Bonds are authorized to be issued pursuant to the provisions of the Marks Roos Local Bond Pooling Act of 1985 (the “Act”) (Article 4, Chapter 5, Division 7, Title 1 of the California Government Code) and all laws of the State of California supplemental thereto and pursuant to the provisions of the Indenture (the “Indenture”), dated March 1, 2020, between the Authority, The Placer County Water Agency, and U.S. Bank, N.A., as trustee (the “Trustee”). Capitalized terms not otherwise defined herein shall have the meanings set forth in the Indenture.

We have examined the law and such certified proceedings and other documents as we deem necessary to render this opinion. As to questions of fact material to our opinion, we have relied upon the representations of the Authority and the Agency contained in the Indenture and the certified proceedings and other certifications of public officials furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing, we are of the opinion, under existing law, as follows:

1. The Authority has been duly created and is validly existing as a public agency of the State of California with full power and authority to enter into the Indenture, to perform the agreements on its part contained in the Indenture, and to issue the Bonds.
2. The Indenture has been duly executed and delivered by the Authority and is a valid and binding obligation of the Authority. The aggregate principal amount of Bonds issued under the Indenture does not exceed any limitation imposed by law or by the Indenture.
3. The Indenture creates a valid pledge, to secure the payment of the principal of and interest on the Bonds, of the Net System Revenues, as such term is defined in the Indenture, and all other amounts held in any fund or account (other than the Rebate Fund) established pursuant to the Indenture, to the extent set forth in the Indenture and subject to the provisions of the Indenture that permit the Authority to apply the System Revenues and other amounts for the purposes and on the terms and conditions set forth in the Indenture.
4. The Bonds have been duly authorized, executed and delivered by the Authority and are valid and binding limited obligations of the Authority, payable solely from the Net System Revenues and other funds provided therefor in the Indenture.
5. The Bonds are not a lien or charge upon the funds or property of the Authority except to the extent of the aforementioned pledge. Neither the faith and credit nor the taxing power of the Agency, the State of California, or any subordinate entity or political subdivision of either is pledged to the payment of the principal of or interest on the Bonds. The Authority has no taxing power. The Bonds are not a debt of the Agency, the State of California, or any other political subdivision of the State of California, none of which is liable for the payment thereof.
6. Interest on the Bonds is exempt from State of California personal income taxes.

The opinions set forth above are further qualified as follows:

- a. The rights of the holders of the Bonds and the enforceability of the Bonds and the Indenture are subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium, and other similar laws affecting creditors' rights generally, the application of general principles of equity, including without limitation concepts of materiality, reasonableness, good faith, and fair dealing, the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or at law, and the limitations on legal remedies imposed on actions against public agencies in the State of California.
- b. We express no opinion as to the enforceability under certain circumstances of contractual provisions respecting various summary remedies without notice or opportunity for hearing or correction, especially if their operation would work a substantial forfeiture or impose a substantial penalty upon the burdened party.
- c. We express no opinion as to the effect or availability of any specific remedy provided for in the Indenture under particular circumstances, except that we believe such remedies are, in general, sufficient for the practical realization of the rights intended thereby.

d. We express no opinion as to the enforceability of any indemnification, contribution, choice of law, choice of forum, or waiver provisions contained in the Indenture.

e. We undertake no responsibility for the accuracy, completeness, or fairness of any offering materials relating to the Bonds and express no opinion herein with respect thereto.

f. The opinions expressed herein are based on an analysis of existing laws, regulations, rulings, and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine or to inform any person whether any such actions are taken or omitted or events do occur. We disclaim any obligation to update this opinion for events occurring after the date hereof.

Very truly yours,

KRONICK, MOSKOVITZ, TIEDEMANN &  
GIRARD  
A Professional Corporation

\$ \_\_\_\_\_  
**MIDDLE FORK PROJECT FINANCE AUTHORITY  
REVENUE BONDS, SERIES 2020 REFUNDING**

**BOND PURCHASE CONTRACT**

March \_\_, 2020

Middle Fork Project Finance Authority  
144 Ferguson Road  
Auburn, California 95604

Placer County Water Agency  
144 Ferguson Road  
Auburn, California 95604

Ladies and Gentlemen:

Goldman Sachs & Co., as underwriter (the “*Underwriter*”), acting on its own behalf and not as an agent or fiduciary to you, hereby offers to enter into this Bond Purchase Contract (this “*Purchase Contract*”) with the Middle Fork Project Finance Authority (the “*Authority*”) and the Placer County Water Agency (the “*Agency*”), which, upon acceptance of this offer by the Authority and approval by the Agency is binding upon the Authority, the Agency, and the Underwriter. This offer is made subject to acceptance of this Purchase Contract by the Authority and approval by the Agency on or before 5:00 p.m. California time on the date hereof, and, if not so accepted, is subject to withdrawal by the Underwriter upon written notice delivered to the Authority and the Agency at any time prior to such acceptance.

Capitalized terms used in this Purchase Contract and not otherwise defined herein have the meanings given to such terms by the Indenture dated March 1, 2020 (the “*Indenture*”), between the Authority, the Agency, and U.S. Bank, N.A., as trustee (the “*Trustee*”).

**Section 1. Purchase and Sale of the Bonds.**

(a) Purchase and Sale. Upon the terms and conditions and upon the basis of the representations set forth in this Purchase Contract, the Underwriter agrees to purchase from the Authority for reoffering to the public, and the Authority agrees to sell and deliver to the Underwriter, all (but not less than all) of the \$\_\_\_\_\_ principal amount of the Middle Fork Project Finance Authority Revenue Bonds, Series 2020 Refunding (the “*Bonds*”).

(b) Terms of the Bonds. The Bonds shall be dated their date of delivery and shall be issued in the principal amounts, shall mature on the dates and in the years, shall bear interest from their date at the rates per annum with the yield to maturity or redemption (as applicable), and shall be subject to redemption, all as set forth on Exhibit A attached hereto.

(c) Purchase Price. The purchase price for the Bonds is \$\_\_\_\_\_ (representing the \$\_\_\_\_\_ principal amount of the Bonds, plus \$\_\_\_\_\_ of net original issue premium, and less an Underwriter's discount in the amount of \$\_\_\_\_\_).

(d) Underwriter's Role. The Authority acknowledges and agrees that (i) the purchase and sale of the Bonds pursuant to this Purchase Contract is an arm's-length commercial transaction between the Authority and the Underwriter; (ii) the Underwriter is acting solely as an underwriter and a principal in connection with the matters contemplated by and with respect to all communications under this Purchase Contract and is not acting as the agent or fiduciary of the Authority or as a Municipal Advisor (as defined in Section 15B of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*")) of the Authority and its advisors in connection with the matters contemplated by this Purchase Contract; (iii) the Underwriter has financial and other interests that differ from those of the Authority; (iv) the Underwriter has neither assumed an advisory or fiduciary responsibility in favor of the Authority with respect to the offering of the Bonds or the process leading thereto (whether or not the Underwriter, or any affiliate of the Underwriter, has advised or is currently advising the Authority on other matters) nor has the Underwriter assumed any other obligation to the Authority except the obligations expressly set forth in this Purchase Contract; and (v) in connection with the purchase and sale of the Bonds, the Authority has consulted its own financial, legal and other advisors to the extent it has deemed appropriate.

(e) G-17 Disclosures. The Authority acknowledges that the Underwriter has provided to the Authority prior disclosures under Rule G-17 of the MSRB, which have been received by the Authority.

## **Section 2. The Bonds.**

(a) Authority for Issuance. Issuance of the Bonds is authorized by Article 4 of Chapter 5 of Division 7 of Title 1 of the California Government Code (the "*Act*"). The Bonds shall be issued and secured pursuant to the provisions of the Indenture.

(b) Purpose of the Bonds. The Bonds are being issued to provide funds to: (i) refund the Authority's Revenue Bonds, Series 2006 and (ii) pay certain costs associated with the issuance and delivery of the Bonds[, including the premiums for municipal bond insurance and a debt service reserve policy].

(c) [Insurance. The payment of principal of and interest on the Bonds will be secured by a municipal bond insurance policy (the "*Policy*") and a debt service reserve insurance policy (the "*Reserve Policy*") to be issued simultaneously with the issuance of the Bonds by \_\_\_\_\_ (the "*Insurer*").]

(d) Limited Obligations. The Bonds are valid and binding limited obligations of the Authority payable solely from the hydroelectric system revenues of the Authority and amounts held in certain funds and accounts established by the Indenture, subject only to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein. The Bonds are not an obligation of the Agency.

**Section 3. Use of Documents.** The Authority hereby authorizes the Underwriter to use, in connection with the offer and sale of the Bonds, this Purchase Contract, the Preliminary Official Statement (defined below), the Official Statement (defined below), the Indenture, and the Continuing Disclosure Certificate, and all information contained herein and therein and all of the documents, certificates or statements furnished by the Authority to the Underwriter in connection with the transactions contemplated by this Purchase Contract

**Section 4. Public Offering of the Bonds.** The Underwriter agrees to make a bona fide initial public offering of all the Bonds at prices no higher than, or yields not lower than, those set forth on Exhibit A hereto. Subsequent to such initial public offering, but subject to the provisions set forth in Section 5 below, the Underwriter reserves the right to lower such initial offering prices as the Underwriter deems necessary in connection with the marketing of the Bonds; provided, however, that the Underwriter may not change the interest rates set forth in Exhibit A. Subject to the provisions set forth in Section 5 below, the Underwriter may offer and sell the Bonds to certain dealers (including dealers depositing the Bonds into investment trusts) and others at prices lower than the initial public offering price or prices set forth in Exhibit A. The Underwriter also reserves the right to: (i) over-allot or effect transactions that stabilize or maintain the market price of the Bonds at levels above those that might otherwise prevail in the open market and (ii) discontinue such stabilizing, if commenced, at any time without prior notice.

**Section 5. Establishment of Issue Price**

(a) Actions to Establish Price. The Underwriter agrees to assist the Authority in establishing the issue price of the Bonds and shall execute and deliver to the Authority at Closing an “issue price” or similar certificate, together with the supporting pricing wires or equivalent communications, substantially in the form attached hereto as Exhibit B, with such modifications as may be appropriate or necessary, in the reasonable judgment of the Underwriter, the Authority, and Bond Counsel (as defined herein), to accurately reflect, as applicable, the sales price or prices or the initial offering price or prices to the public of the Bonds. All actions to be taken by the Authority under this section to establish the issue price of the Bonds may be taken on behalf of the Authority by the Authority’s municipal advisor, Montague DeRose and Associates, LLC (the “*Municipal Advisor*”), and any notice or report to be provided to the Authority may be provided to the Municipal Advisor.

(b) The 10% Test. Except as otherwise set forth in Exhibit A attached hereto, the Authority will treat the first price (meaning single) at which 10% of each maturity of the Bonds (the “*10% test*”) is sold to the public as the issue price of that maturity (if different interest rates apply within a maturity, each separate CUSIP number within that maturity will be subject to the 10% test). At or promptly after the execution of this Purchase Contract, the Underwriter shall report to the Authority the price or prices at which it has sold to the public each maturity of Bonds. If at that time the 10% test has not been satisfied as to any maturity of the Bonds, unless the hold-the-offering-price rule (described below) applies to such maturity, the Underwriter agrees to promptly report to the Authority the prices at which it sells the unsold Bonds of that maturity to the public. That reporting obligation shall continue, whether or not the Closing Date (as defined herein) has occurred, until either (i) the Underwriter has sold all Bonds of that maturity or (ii) the 10% test has been satisfied as to the Bonds of that maturity, provided that, the Underwriter’s reporting obligation after the Closing Date may be at reasonable periodic intervals or otherwise

upon request of the Authority or Bond Counsel (as defined herein). For purposes of this Section, if Bonds mature on the same date but have different interest rates, each separate CUSIP number within that maturity will be treated as a separate maturity of the Bonds.

(c) Hold-the-offering-price rule. The Underwriter confirms that it has offered the Bonds to the public on or before the date of this Purchase Contract at the offering price or prices (the “*initial offering price*”), or at the corresponding yield or yields, set forth in Exhibit A attached hereto, except as otherwise set forth therein. Exhibit A also sets forth, as of the date of this Purchase Contract, the maturities, if any, of the Bonds for which the Underwriter represents that (i) the 10% test has been satisfied (assuming orders are confirmed by the end of the day immediately following the day of execution of this Purchase Contract) and (ii) the 10% test has not been satisfied and for which the Authority and the Underwriter agree that the restrictions set forth in the next sentence shall apply, which will allow the Authority to treat the initial offering price to the public of each such maturity as of the sale date as the issue price of that maturity (the “*hold-the-offering-price rule*”). So long as the hold-the-offering-price rule remains applicable to any maturity of the Bonds, the Underwriter will neither offer nor sell unsold Bonds of that maturity to any person at a price that is higher than the initial offering price to the public during the period starting on the sale date and ending on the earlier of the following:

- (1) the close of the fifth (5<sup>th</sup>) business day after the sale date; or
- (2) the date on which the Underwriter has sold at least 10% of that maturity of the Bonds to the public at a price that is no higher than the initial offering price to the public.

(d) Selling Group Agreement; Third-Party Distribution Agreement. The Underwriter confirms that:

(1) any selling group agreement and any third-party distribution agreement relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each dealer who is a member of the selling group and each broker-dealer that is a party to such third-party distribution agreement, as applicable:

(i) (A) unless the hold-the-offering price rule applies to a maturity, to report the prices at which it sells to the public the unsold Bonds of each maturity allocated to it, whether or not the Closing Date has occurred, until either all Bonds of that maturity allocated to it have been sold or it is notified by the Underwriter that the 10% test has been satisfied as to the Bonds of that maturity, provided that the reporting obligation after the Closing Date may be at reasonable periodic intervals or otherwise upon request of the Underwriter, and (B) to comply with the hold-the-offering-price rule, if applicable, if and for so long as directed by the Underwriter,

(ii) to promptly notify the Underwriter of any sales of Bonds that, to its knowledge, are made to a purchaser who is a related party to an underwriter

participating in the initial sale of the Bonds to the public (each such term being used as defined below), and

(iii) to acknowledge that, unless otherwise advised by the dealer or broker-dealer, the Underwriter shall assume that each order submitted by the dealer or broker-dealer is a sale to the public.

(2) any selling group agreement relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each dealer that is a party to a third-party distribution agreement to be employed in connection with the initial sale of the Bonds to the public to require each broker-dealer that is a party to such third-party distribution agreement to (A) unless the hold-the-offering-price rule applies to a maturity, report the prices at which it sells to the public the unsold Bonds of each maturity allocated to it, whether or not the Closing Date has occurred, until either all Bonds of that maturity allocated to it have been sold or it is notified by the Underwriter or the dealer that the 10% test has been satisfied as to the Bonds of that maturity, provided that, the reporting obligation after the Closing Date may be at reasonable periodic intervals or otherwise upon request of the Underwriter or the dealer, and (B) comply with the hold-the-offering-price rule, if applicable, if and for so long as directed by the Underwriter or the dealer and as set forth in the related pricing wires.

(e) Authority Acknowledgments. The Authority acknowledges that, in making the representations set forth in this section, the Underwriter will rely on (i) in the event a selling group has been created in connection with the initial sale of the Bonds to the public, the agreement of each dealer who is a member of the selling group to comply with the requirements for establishing issue price of the Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to the Bonds, as set forth in a selling group agreement and the related pricing wires, and (ii) in the event that a third-party distribution agreement was employed in connection with the initial sale of the Bonds to the public, the agreement of each broker-dealer that is a party to such agreement to comply with the requirements for establishing issue price of the Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to the Bonds, as set forth in the third-party distribution agreement and the related pricing wires.

(f) Sales to the Public. The Underwriter acknowledges that sales of any Bonds to any person that is a related party to the Underwriter do not constitute sales to the public for purposes of this section. Further, for purposes of this section:

(i) “*public*” means any person other than an underwriter or a related party,

(ii) “*underwriter*” means (A) any person that agrees pursuant to a written contract with the Authority (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Bonds to the public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the public),

(iii) “*related party*”: a purchaser of any of the Bonds is a “related party” to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (i) at least 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(iv) “*sale date*” means the date of execution of this Purchase Contract by all parties.

## **Section 6. Official Statement.**

(a) Preliminary Official Statement. The Underwriter hereby represents that it has received and reviewed the Preliminary Official Statement with respect to the Bonds, dated February \_\_, 2020 (as disseminated in its printed physical form or in electronic form in all respects materially consistent with such physical form, the “*Preliminary Official Statement*”). The Authority represents that it deems the Preliminary Official Statement to be final as of its date, except for either revisions or additions to the offering price(s), interest rate(s), yield(s), selling compensation, aggregate principal amount, principal amount per maturity, delivery date, rating(s) and other terms of the Bonds that depend upon the foregoing as provided in and pursuant to Securities and Exchange Commission Rule 15c2-12 (the “*Rule*”). By the execution of this Purchase Contract, the Authority ratifies the use by the Underwriter of the Preliminary Official Statement. The Underwriter agrees that prior to the time the final Official Statement relating to the Bonds (described below) is available, the Underwriter will send to any potential purchaser of the Bonds, upon the request of such potential purchaser, a copy of the most recent Preliminary Official Statement. Such Preliminary Official Statement shall be sent by first class mail (or other equally prompt means) not later than the first business day following the date upon which each such request is received.

(b) Official Statement. The Underwriter agrees to provide the Authority with final pricing information on the Bonds upon execution of this Purchase Contract. The Authority will supply or cause to be supplied to the Underwriter, within seven business days of the date of this Purchase Contract, copies of a final Official Statement substantially in the form of the Preliminary Official Statement, with only such changes therein as shall have been accepted by the Underwriter and the **District** (such Official Statement with such changes, if any, and including the cover page and all appendices, exhibits, and statements included therein or attached thereto, and as disseminated in its printed physical form or in electronic form in all respects materially consistent with such physical form, being herein called the “*Official Statement*”) in such quantities as may be requested by the Underwriter in order to permit the Underwriter to comply with Securities and Exchange Commission Rule 15c2-12(b)(4) and the rules of the Municipal Securities Rulemaking Board (the “*MSRB*”); provided, however, that the failure of the Authority to comply with this requirement due solely to the acts of the Underwriter, its counsel or agents, is not cause for the Underwriter to refuse to accept delivery of and pay for the Bonds. The Underwriter hereby agrees

that it will not send any confirmation requesting payment for the purchase of any Bonds unless the confirmation is accompanied by or preceded by the delivery of a copy of the Official Statement. The Underwriter agrees to file the Official Statement with the MSRB through its Electronic Municipal Market Access system.

(c) Supplements. Each party hereto agrees that it will notify the other party hereto if, within the period from the date of this Purchase Contract to and including the date that is 25 days following the End of the Underwriting Period (as hereinafter defined), such party discovers any pre-existing or subsequent fact or becomes aware of the occurrence of any event, in any such case that might cause the Official Statement (as the same may have been theretofore supplemented or amended) to contain any untrue statement of a material fact or to omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. If, in the written opinion of the Authority or the Underwriter, the preparation and publication of a supplement or amendment to the Official Statement is, as a result of such fact or event (or any other event which becomes known to the Authority or the Underwriter during such period), necessary so that the Official Statement does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, the Authority shall, at its expense, supplement or amend the Official Statement in such a manner so that the Official Statement, as so supplemented or amended, does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and furnish copies of such supplement or amendment to the Underwriter in such numbers as the Underwriter may reasonably request. The Authority and the Underwriter agree that they will cooperate in the preparation of any such amendment or supplement. As used herein, the term “*End of the Underwriting Period*” means the later of such time as (a) the Authority delivers the Bonds to the Underwriter, or (b) the Underwriter does not retain, directly or as a member of an underwriting syndicate, an unsold balance of the Bonds for sale to the public. Unless the Underwriter gives notice to the contrary, the End of the Underwriting Period shall be deemed to be the Closing Date (as defined herein). Any notice delivered pursuant to this provision must be written notice delivered to the Authority at or prior to the Closing Date, and shall specify a date (other than the Closing Date) to be deemed the End of the Underwriting Period

**Section 7. Representations, Warranties and Covenants of the Authority.** The Authority represents and warrants to the Underwriter that:

(a) Authority Resolution. The Authority has, by Resolution No. 20-\_\_\_, adopted by a majority of the members of the Board at a meeting duly called, noticed and conducted, at which a quorum was present and acting throughout, on January 30, 2020 (the “*Authority Resolution*”), taken all official action necessary to be taken by it for (i) the execution, delivery and due performance of the Indenture, the Continuing Disclosure Agreement dated the Closing Date (the “*Continuing Disclosure Agreement*”), and this Purchase Contract (together, the “*Authority Agreements*”), (ii) the distribution of the Preliminary Official Statement and the execution, delivery and distribution of the Official Statement, (iii) the issuance, sale and delivery of the Bonds, and (iv) the taking of any and all such action as may be required on the part of the Authority to carry out, give effect to and consummate the transactions contemplated hereby;

(b) Due Organization; Power. The Authority is a joint exercise of powers agency duly organized and existing under the laws of the State of California (the “State”) and the Joint Exercise of Powers Agreement dated as of January 10, 2006 (the “JPA Agreement”), between the Agency and the County of Placer and has all necessary power and authority to adopt the Authority Resolution and to enter into and perform its duties under the Bonds and the Authority Agreements;

(c) Governmental Approvals. Except as may be required under Blue Sky or other securities laws of any state, there is no consent, approval, authorization or other order of, or filing or registration with, or certification by, any governmental authority, legislative body, board, agency, or commission having jurisdiction over the Authority required for the execution and delivery of the Authority Agreements or the execution, delivery and sale of the Bonds or the consummation by the Authority of the other transactions contemplated by the Authority Agreements that has not been obtained;

(d) Valid Obligations. Upon their execution and delivery, each of the Bonds and the Authority Agreements will constitute a valid and binding obligation of the Authority enforceable in accordance with its respective terms, except as enforceability may be limited by bankruptcy, insolvency, moratorium or other laws affecting the enforcement of creditors’ rights generally; and the execution and delivery of the Bonds and the Authority Agreements, and compliance with the provisions of each thereof, will not constitute a breach of or a default under any applicable law or administrative regulation of the State or the United States, or any applicable judgment, decree, agreement or other instrument to which the Authority is a party or is otherwise subject;

(e) Participating Generator Agreement. The Participating Generator Agreement dated August 7, 2012, between the Agency and the California Independent System Operator Corporation is in full force and effect.

(f) Accuracy of Preliminary Official Statement. As of the date thereof, and at the time of the Authority’s acceptance hereof, the Preliminary Official Statement (except for any information about [the Policy, the Reserve Policy, the Insurer, and] the book-entry system) did not and does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements in the Preliminary Official Statement, in light of the circumstances under which they were made, not misleading.Accuracy of Official Statement. As of the date hereof, and (unless an event occurs of the nature described in Section 6(c) (Supplements)) at all times subsequent hereto, up to and including the end of the underwriting period as described in Section 6(c) (Supplements), the information and statements in the Official Statement (excluding statements under the caption “UNDERWRITING”; information about [the Policy, the Reserve Policy, the Insurer, and] the book-entry system; and information as to bond prices on the cover of the Official Statement) do not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(h) Accuracy of Supplemented Official Statement. If the Official Statement is supplemented or amended pursuant to Section 6(c) (Supplements), at the time of each supplement or amendment thereto and (unless subsequently again supplemented or amended pursuant to such Section) at all times subsequent thereto up to and including the end of the underwriting period as

described therein, the Official Statement as so supplemented or amended (except for any information about the Insurer or DTC) will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(i) Financial Statements of Authority. The financial statements of the Authority contained in the Preliminary Official Statement and final Official Statement fairly present the financial position and results of operations of the Authority as of the dates and for the periods therein set forth, and, since the date thereof, there has been no material adverse change in the financial position or results of operations of the Authority.

(j) Continuing Disclosure Undertakings. The Authority has no previous undertakings entered into pursuant to the provisions of the Rule. Pursuant to the Continuing Disclosure Certificate, the Authority will undertake to provide certain annual financial information and notices of the occurrence of certain significant events. A description of this undertaking is set forth in the Preliminary Official Statement and will also be set forth in the final Official Statement.Litigation. As of the date hereof and except as may be described in the Official Statement, no action or proceeding before any court, governmental agency or arbitrator is pending, service of process having been accomplished, or overtly threatened in writing against the Authority, wherein an unfavorable decision, ruling or finding would: (i) affect the creation, organization, existence or powers of the Authority, or the titles of its officers, (ii) enjoin or restrain the issuance, sale or delivery of the Bonds or the use of any monies to be pledged under the Indenture for the payment of the Bonds, (iii) in any way question or affect any of the rights, powers, duties or obligations of the Authority with respect to the monies to be pledged to pay the principal of, premium, if any, or interest on the Bonds, (iv) in any way question or affect any authority for the issuance of the Bonds, or the validity or enforceability of the Bonds, or (v) in any way question or affect this Purchase Contract or the transactions contemplated by this Purchase Contract, the Authority Agreements, the Official Statement or any other agreement or instrument to which the Authority is a party relating to the Bonds;

(l) No Debt Issues Between the date hereof and the Closing Date, without the written consent of the Underwriter, which consent will not be unreasonably withheld, the Authority will not offer or issue any bonds, notes, or other obligations for borrowed money, or incur any material liabilities, direct or contingent, except in the course of normal business operations of the Authority.“Blue Sky” Qualification. The Authority will furnish such information, execute such instruments and take such other action in cooperation with the Underwriter may reasonably request, to qualify the Bonds for offer and sale under the Blue Sky or other securities laws and regulations of such states and other jurisdictions of the United States as the Underwriter may designate, and will assist, if necessary therefor, in the continuation of such qualifications in effect as long as required for the distribution of the Bonds; provided, however, that the Authority is not required to qualify as a foreign corporation or to file any general consents to service of process under the laws of any state;

(n) Application of Proceeds. The Authority shall apply the proceeds of the Bonds, including the investment earnings thereon, in accordance with the Indenture and as described in the Official Statement; and

(o) No Default. The Authority is not in default, and at no time has defaulted in any material respect, on any bond, note or other obligation for borrowed money or any agreement under which any such obligation is or was outstanding.

(p) No Violation of Law. The issuance, sale, and delivery of the Bonds, the execution and delivery of the Authority Agreements, the adoption of the Authority Resolution, and compliance with the Authority's obligations therein will not violate applicable provisions of statutory law or regulation or breach or violate any existing obligation of the Authority under any court order or consent decree.

(q) No Breach of Contracts. The issuance, sale, and delivery of the Bonds, the execution and delivery of the Authority Agreements, the adoption of the Authority Resolution, and compliance with the Authority's obligations herein and therein do not constitute a material breach of or default under any loan agreement, indenture, bond, note, resolution, agreement, mortgage, lease, or other instrument to which the Authority is a party or by which it is bound.

(r) Certificates of Officials. Any certificate signed by any official of the Authority authorized to do so shall be deemed a representation and warranty by the Authority to the Underwriter as to the statements made therein;

**Section 8. Representations, Warranties and Covenants of the Agency.** The Agency represents and warrants to the Underwriter that:

(a) Due Organization; Power. The Agency is a public agency duly organized and existing under the laws of the State and has all necessary power and authority to enter into and perform its duties under the Indenture.

(b) Agency Resolution. The Board of Directors of the Agency has, by Resolution No. \_\_\_\_\_, adopted by a majority of the members of the Board of Directors at a meeting duly called, noticed and conducted, at which a quorum was present and acting throughout, on January 16, 2020 (the "*Agency Resolution*"), taken all official action necessary to be taken by it for the execution, delivery and due performance of the Indenture and this Purchase Contract (together, the "*Agency Agreements*") and for the taking of any and all such action as may be required on the part of the Agency to carry out, give effect to and consummate the transactions contemplated hereby.

(c) Governmental Approvals. There is no consent, approval, authorization or other order of, or filing or registration with, or certification by, any governmental authority, legislative body, board, agency, or commission having jurisdiction over the Agency required for the execution and delivery of the Agency Agreement or the consummation by the Agency of the other transactions contemplated by the Agency Agreements that has not been obtained;

(d) Valid Obligations. Upon their execution and delivery, each of the Agency Agreements will constitute a valid and binding obligation of the Agency enforceable in accordance with its respective terms, except as enforceability may be limited by bankruptcy, insolvency, moratorium or other laws affecting the enforcement of creditors' rights generally; and the execution and delivery of the Authority Agreements, and compliance with the provisions of each thereof, will not constitute a breach of or a default under any applicable law or administrative

regulation of the State or the United States, or any applicable judgment, decree, agreement or other instrument to which the Agency is a party or is otherwise subject;

(e) Litigation. As of the date hereof and except as may be described in the Official Statement, no action or proceeding before any court, governmental agency or arbitrator is pending, service of process having been accomplished, or overtly threatened in writing against the Agency, wherein an unfavorable decision, ruling or finding would: (i) affect the creation, organization, existence or powers of the Agency or the titles of its officers; (ii) in any way question or affect the validity or enforceability of the Agency Agreements; or (iii) in any way question or affect this Purchase Contract, or the transactions contemplated by this Purchase Contract, the Official Statement, or any other agreement or instrument to which the Agency is a party relating to the Bonds;

(f) No Violation of Law. The execution and delivery of the Agency Agreements, the adoption of the Agency Resolution, and compliance with the Agency's obligations therein will not violate applicable provisions of statutory law or regulation or breach or violate any existing obligation of the Authority under any court order or consent decree.

(g) No Breach of Contracts. The execution and delivery of the Agency Agreements, the adoption of the Agency Resolution, and compliance with the Agency's obligations therein do not constitute a material breach of or default under any loan agreement, indenture, bond, note, resolution, agreement, mortgage, lease, or other instrument to which the Agency is a party or by which it is bound.

(h) Certificates of Officials. Any certificate signed by any official of the Agency authorized to do so shall be deemed a representation and warranty by the Agency to the Underwriter as to the statements made therein;

**Section 9. Closing**. At 8:30 a.m., Pacific time, on March \_\_, 2020, or on such earlier or later date as may be agreed upon by the Underwriter and the Authority (the date of "*Closing*"), the Authority will deliver or cause to be delivered to the Underwriter, through the facilities of The Depository Trust Company in New York, New York, the Bonds, duly executed, and at the offices of Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, in Sacramento, California, or such other place as shall have been mutually agreed upon by the Underwriter and the Authority, the other documents described herein, and pay the purchase price of the Bonds as set forth in this Purchase Contract in immediately available funds to the order of the Trustee.

The Bonds shall be issued in fully registered form. It is anticipated that CUSIP identification numbers will be inserted on the Bonds, but neither the failure to provide such numbers nor any error with respect thereto constitutes a cause for failure or refusal by the Underwriter to accept delivery of the Bonds in accordance with the terms of this Purchase Contract.

**Section 10. Further Conditions to the Purchase of the Bonds**. The Underwriter has entered into this Purchase Contract in reliance upon the representations, warranties, and agreements of the Authority and the Agency contained herein and to be contained in the documents and instruments to be delivered at Closing, and upon the performance by the Authority and the Agency of their respective obligations hereunder, both as of the date hereof and as of the date of

Closing. Accordingly, the obligations of the Underwriter under this Purchase Contract to purchase, to accept delivery of, and to pay for the Bonds are subject to the performance by the Authority and the Agency of their respective obligations to be performed hereunder and under such documents and instruments at or prior to Closing, and are also subject to the following conditions:

(a) Representations and Warranties. The representations and warranties of the Authority and the Agency contained herein are true, complete and correct on the date hereof and on and as of the date of Closing, as if made on the date of Closing.

(b) Agreements in Force; Obligations Performed. At the time of Closing (i) each of the Authority Agreements and the Agency Agreements is in full force and effect and has not been amended, modified, or supplemented, except as may have been agreed to by the Authority, the Agency, and the Underwriter, and (ii) the Authority and the Agency perform or have performed all of their respective obligations required under or specified in the Authority Agreements or the Agency Agreements, respectively, to be performed by the respective party at or prior to the date of Closing.

(c) Official Actions Taken. As of the date of Closing, all necessary official action of the Authority and the Agency relating to the Bonds and the Authority Agreements and the Agency Agreements, respectively, has been taken by the respective party and is in full force and effect and has not been amended, modified or supplemented in any material respect.

(d) No Adverse Determination. No decision, ruling or finding has been entered by any court or governmental authority since the date of this Purchase Contract (and not reversed on appeal or otherwise set aside) or, to the best knowledge of the Authority, is pending (in which service of process has been completed against the **District**) or threatened (either in state or federal courts) (i) seeking to restrain or enjoin the execution, sale or delivery of any of the Bonds, (ii) in any way contesting or affecting the authority for the execution, sale or delivery of the Bonds or the execution and delivery of the Indenture, the Continuing Disclosure Certificate, or this Purchase Contract, or (iii) in any way contesting the existence or powers of the Authority, or contesting in any way the completeness or accuracy of the Official Statement;

(e) Marketability Conditions. Between the date hereof and the Closing, the market price for the Bonds, or the market for or marketability or the ability of the Underwriter to enforce contracts for the sale of the Bonds at the initial offering prices set forth in the Official Statement, has not been materially adversely affected by reason of any of the following:

(1) Change in Law Affecting Tax Consequences of Interest Paid on the Bonds. any decision issued by a court of the United States (including the United States Tax Court) or of the State of California, by any ruling or regulation (final, temporary or proposed) issued by or on behalf of the Department of the Treasury of the United States, the Internal Revenue Service, or other governmental agency of the United States, or any governmental agency of the State of California, or by a tentative decision or announcement by any member of the House Ways and Means Committee, the Senate Finance Committee, or the Conference Committee with respect to contemplated legislation or by legislation enacted by, pending in, or favorably reported to either the House of Representatives or either House of the Legislature of the State of California, or

formally proposed to the Congress of the United States by the President of the United States or to the Legislature of the State of California by the Governor of the State of California in an executive communication, affecting the tax status of the Authority, its property or income, its bonds or the interest thereon or any tax exemption granted or authorized by the Act;

(2) Change in Law Affecting Securities Law Status. legislation enacted, or a decision by a court of competent jurisdiction rendered, any action taken, or rule or regulation promulgated by any governmental agency having jurisdiction of the subject matter made or proposed to the effect that the Bonds are not exempt from registration, qualification or other similar requirements of the Securities Act of 1933, as then in effect, or of the Trust Indenture Act of 1939, as then in effect or making the contemplated underwriting and sale of the Bonds pursuant to this Purchase Contract, a violation of federal or State law;

(3) National Emergency. the declaration of war or engagement in or escalation of major military hostilities by the United States or the occurrence of any other national or international emergency or calamity or crisis relating to the effective operation of the government or the financial community in the United States;

(4) Suspension of Trading. the general suspension of trading on any national securities exchange or fixing of minimum or maximum prices for trading or maximum ranges for prices for securities on any national securities exchange, whether by virtue or a determination by that exchange or by order of the Securities and Exchange Commission or any other governmental authority having jurisdiction;

(5) Disruptive Events in the Market. a material disruption in securities settlement, payment or clearance services or other disruptive events, occurrences or conditions in the securities or debt markets;

(6) Banking Moratorium. the declaration of a general banking moratorium by the United States, New York, or State authorities having jurisdiction;

(7) Administrative Action Affecting Securities Law Status. an order, decree, or injunction of any court of competent jurisdiction, or a stop order, ruling, regulation or official statement by, or on behalf of, the Securities and Exchange Commission, or any other governmental agency having jurisdiction over the subject matter thereof, issued or made to the effect that the issuance, offering or sale of obligations of the general character of the Bonds, or the issuance, offering or sale of the Bonds, as contemplated hereby or by the Official Statement, is or would be in violation of federal securities laws;

(8) Trading Restrictions. the imposition of additional material restrictions not in force as of the date hereof upon trading in securities generally by any governmental authority or by any national securities exchange;

(9) Credit Restrictions. the imposition by the Comptroller of the Currency, the New York Stock Exchange, or other national securities exchange, or any governmental authority, as to the Bonds or obligations of the general character of the Bonds, of any material restrictions not now in force, or the material increase of any such restrictions now in force, with respect to the

extension of credit by, or the charge to the net capital requirements of, or financial responsibility requirements of the Underwriter;

(10) Change in State Law. any legislation, ordinance, rule or regulation introduced in or enacted by any governmental body, department or agency in the State or a decision of a court of competent jurisdiction within the State rendered;

(11) Inaccuracy of Official Statement. any event occurring or information becoming known that, in the reasonable opinion of the Underwriter, makes untrue in any material respect any information or statement contained in the Official Statement, or has the effect that the Official Statement contains any untrue statement of a material fact or omits to state a material fact required or necessary to be stated therein in order to make the statements contained therein not misleading in light of the circumstances under which they were made;

(12) Financial or System Condition. the occurrence of any adverse change of a material nature in the financial condition or results of operation of the Authority or in the condition of the System; or

(13) Ratings Withdrawal or Downgrade. the withdrawal, suspension, or downgrading or placement on credit watch or notice of any intended downgrading, suspension, withdrawal or negative change in credit watch status of any rating of the Bonds or the Authority's outstanding indebtedness by any national rating agency;

(f) Receipt of Documents. At or prior to Closing, the Underwriter shall have received each of the following documents:

(1) Resolutions and Agreements. Certified copies of the Authority Resolution and the Agency Resolution and the executed copies of the Authority Agreements and the Agency Agreements;

(2) JPA Agreement. A copy of the JPA Agreement, together with a copy of the Notice of a Joint Powers Agreement dated February 2, 2006.

(3) Bond Counsel Opinion and Reliance Letter. An approving opinion of Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation ("*Bond Counsel*"), dated the date of Closing, substantially in the form attached as Appendix C-1 to the Official Statement, and a reliance letter with respect thereto addressed to the Underwriter and the Trustee;

(4) Special Tax Counsel Opinion. The opinion of Orrick, Herrington & Sutcliffe LLP ("*Special Tax Counsel*"), dated the date of Closing, substantially in the form attached as Appendix C-2 to the Official Statement, and a reliance letter with respect thereto addressed to the Underwriter;

(5) Supplemental Opinion of Bond Counsel. A supplemental opinion of Bond Counsel, dated the date of Closing, addressed to the Underwriter, to the effect that: (i) the Bonds are not subject to the registration requirements of the Securities Act of 1933, as amended, and the Indenture is exempt from qualification under the Trust Indenture Act of 1939, as amended; (ii) assuming due authorization, execution and delivery by all the parties thereto other than the

Authority and the Agency, the Continuing Disclosure Certificate and this Purchase Contract have each been duly executed and delivered by the **District** and constitute valid and binding obligations of the **District**, except as enforcement thereof may be limited by bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public agencies in the State (provided that no opinion need be rendered regarding the adequacy of the Continuing Disclosure Certificate for purposes of the Rule), and (iii) the statements contained in the Official Statement under the captions "THE 2020 BONDS" and "SECURITY FOR THE BONDS" are accurate in all material respects insofar as such statements expressly summarize certain provisions of the Indenture and the Bonds, and the statements contained in the Official Statement under the caption "LEGAL MATTERS," insofar as such statements expressly summarize the form and content of Bond Counsel's approving opinion, are accurate in all material respects;

(6) Supplemental Opinion of Special Tax Counsel. A supplemental opinion of Special Tax Counsel, dated the date of Closing, addressed to the Underwriter, to the effect that the statements contained in the Official Statement under the caption "TAX MATTERS," insofar as such statements expressly summarize the form and content of Special Tax Counsel's opinion, are accurate in all material respects;

(7) Authority Counsel Opinion. An opinion of Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, as counsel to the Authority, dated the date of Closing and addressed to the Authority, the Agency, and the Underwriter to the effect that:

(i) The Authority is duly created and validly existing under the laws of the State of California as a joint exercise of powers agency;

(ii) The Authority has full power and authority to execute, deliver and perform its obligations under the Authority Agreements;

(iii) The Authority Agreements have each been duly authorized, executed, and delivered by the Authority and, assuming due authorization, execution, and delivery by and enforceability against the other parties thereto, constitute valid and binding obligations of the Authority enforceable in accordance with their terms, except as enforcement thereof may be limited by bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public agencies in the State ;

(iv) The Authority has duly authorized the distribution of the Official Statement by the Underwriter for the marketing of the Bonds, and the Official Statement has been duly executed by the Authority;

(v) Except as may be required under federal securities laws and state Blue Sky or other securities laws in connection with the purchase or distribution of

the Bonds by the Underwriter, no approval, consent, or authorization of any governmental or public agency, authority, or person is required for the authorization, execution, and delivery by the Authority of the Authority Agreements or the performance by the Authority of its obligations thereunder or for the issuance, sale, or delivery of the Bonds that has not been obtained.

(vi) The authorization, execution, and delivery of the Authority Agreements by the Authority and compliance by the Authority with the provisions thereof do not: breach, or result in a default under, any material agreement or other instrument to which the Authority is a party or by which the Authority or its properties are bound; violate applicable provisions of statutory law or regulation; or to our current actual knowledge breach or otherwise violate any existing obligation of the Authority under any court order or consent decree.

(8) Agency Counsel Opinion. An opinion of Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, as counsel to the Agency, dated the date of Closing and addressed to the Authority, the Agency, and the Underwriter to the effect that:

(i) the Agency is a public agency duly organized and validly existing under the Constitution and laws of the State of California;

(ii) the Agency has full power and authority to execute, deliver and perform its obligations under the Agency Agreements;

(iii) the Agency Agreements have each been duly authorized, executed, and delivered by the Agency and, assuming due authorization, execution, and delivery by and enforceability against the other parties thereto, constitute valid and binding obligations of the Agency enforceable in accordance with their terms, except as enforcement thereof may be limited by bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public agencies in the State;

(iv) no approval, consent, or authorization of any governmental or public agency, authority, or person is required for the authorization, execution, and delivery by the Agency of the Agency Agreements or the performance by the Agency of its obligations thereunder that has not been obtained;

(v) the authorization, execution, and delivery of the Agency Agreements by the Agency and compliance by the Agency with the provisions thereof do not constitute a material breach or result in a default under any material agreement or other instrument to which the Agency is a party or by which the Agency or its properties are bound; violate applicable provisions of statutory law or regulation; or to our current actual knowledge breach or otherwise violate any existing obligation of the Agency under any court order or consent decree.

(9) Disclosure Counsel Letter. The letter of Jones Hall, a Professional Law Corporation (“*Disclosure Counsel*”), dated the date of Closing and addressed to the Authority, the Agency, and the Underwriter, to the effect that, based on such counsel’s participation in conferences with representatives of the Authority, the Agency, the Municipal Advisor, the Underwriter, Nixon Peabody LLP, as counsel to the Underwriter, and others, during which the contents of the Preliminary Official Statement and the Official Statement and related matters were discussed, and based upon the information made available to them in the course of their participation in the preparation of the Preliminary Official Statement and the Official Statement (which did not extend beyond the date of the Official Statement), and without passing on and without assuming any responsibility for the accuracy, completeness and fairness of the statements in the Preliminary Official Statement and Official Statement, and having made no independent investigation or verification thereof, no facts have come to their attention that lead them to believe that the Preliminary Official Statement as of its date and the date of the Purchase Contract or the Official Statement as of its date and as of the date of Closing (except for any CUSIP numbers; any financial, accounting, statistical, economic or demographic data; numbers, charts, tables, graphs, estimates, projections, assumptions or expressions of opinion, or management discussions and analysis; any information about DTC or its book-entry system; litigation, ratings, rating agencies, the Underwriter, underwriting, or relationships among the parties; [information as to the Insurer or the Insurance Policy or the Reserve Policy;] and Appendices [\_\_, \_\_, \_\_ and \_\_], included or referred to therein or omitted therefrom, as to which no opinion or view need be expressed) contained or contains any untrue statement of a material fact or omitted or omits to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(10) Authority Certificate. A certificate dated the date of Closing and executed by a duly authorized officer of the Authority to the effect that:

(i) The representations and warranties of the Authority contained herein are true and correct in all material respects on and as of the date of Closing as if made on the date of Closing;

(ii) To the best of their knowledge, no event affecting the Authority has occurred since the date of the Official Statement that should be disclosed in the Official Statement in order to make the statements therein not misleading in any respect; and

(iii) No action or proceeding before any court, governmental agency or arbitrator is pending, service of process having been accomplished, or overtly threatened in writing against the Authority: (a) to restrain or enjoin the issuance, sale or delivery of the Bonds; (b) that in any way contests or affects the validity of the Authority Resolution, the Bonds, or the Authority Agreements; or (c) that in any way contests the existence or powers of the Authority;

(11) Agency Certificate. A certificate dated the date of Closing from a duly authorized official of the Agency to the effect that:

(i) The representations and warranties of the Agency contained herein are true and correct in all material respects on and as of the date of the Closing as if made on the such date;

(ii) To the best of their knowledge, no event affecting the Agency has occurred since the date of the Official Statement that should be disclosed in the Official Statement in order to make the statements therein regarding the Agency not misleading; and

(iii) No action or proceeding before any court, governmental agency or arbitrator is pending, service of process having been accomplished, or overtly threatened in writing against the Agency: (a) that in any way contests or affects the validity of this Purchase Contract or the Agency Agreements, or (b) that in any way contests the existence or powers of the Agency;

(12) Trustee Certificate. A certificate of the Trustee dated the date of Closing to the effect that:

(i) The Trustee is a national banking association duly organized and validly existing under the laws of the United States of America and has full power and is qualified to accept the duties of trustee under the Indenture and comply with the terms thereof and to perform its obligations stated therein;

(ii) The Trustee has accepted the duties and obligations imposed on it by the Indenture;

(iii) No consent, approval, authorization or other action by any governmental or regulatory authority having jurisdiction over the Trustee that has not been obtained is or will be required for the consummation by the Trustee of the transactions contemplated by the Indenture to be undertaken by the Trustee;

(iv) Compliance with the terms of the Indenture will not conflict with, or result in a violation or breach of, or constitute a default under, any loan agreement, indenture, bond, note, resolution or any other agreement or instrument to which the Trustee is a party or by which it is bound, or, to the best knowledge of the Trustee, after reasonable investigation, any law, rule, regulation, order or decree of any court or governmental agency or body having jurisdiction over the Trustee or any of its activities or properties (except that no representation, warranty or agreement is made by the Trustee with respect to any Federal or state securities or Blue Sky laws or regulations); and

(v) To the best knowledge of the Trustee, there is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court or governmental agency, public board or body served on or threatened against or affecting the existence of the Trustee, or in any way contesting or affecting the validity or enforceability of the Bonds or the Indenture or contesting the powers of the Trustee or its authority to enter into and perform its obligations under the

Indenture or the Bonds, wherein an unfavorable decision, ruling or finding would adversely affect the validity of the Bonds or the Indenture;

(13) Tax Certificate. A Tax Certificate of the Authority, in form satisfactory to Special Tax Counsel, executed on behalf of the Authority by a duly authorized officer;

(14) Form 8038-G. A completed and executed Information Return for Tax-Exempt Governmental Bonds, Form 8038-G, ready for filing.

(15) Ratings. Evidence that the Bonds have been assigned the [underlying] rating of “\_\_” by S&P Global Ratings (“S&P”) and “\_\_” by Moody’s Investors Service (“Moody’s”) [and that the [insured] Bonds have been assigned the rating of “\_\_” by S&P and “\_\_” by Moody’s], and that such ratings have not been withdrawn or downgraded for any reason;

(16) DTC Letter of Representations. A copy of the Blanket Letter of Representations executed by the Authority and delivered to The Depository Trust Company, New York, New York, relating to the book-entry system for the Bonds;

(17) Underwriter’s Counsel Opinion. An opinion of Nixon Peabody LLP, as counsel to the Underwriter, in form and substance acceptable to the Underwriter;

(18) [Insurance Policy and Reserve Policy. A copy of the Insurance Policy and the Reserve Policy.]

(19) [Insurer’s Counsel Opinion. A legal opinion of counsel to the Insurer, addressed to the Underwriter and the Agency, dated the Closing Date, in form and substance acceptable to the Underwriter, to the effect that:

(i) The Insurer is a \_\_\_\_\_ insurance company and is duly qualified to conduct an insurance business in the State of California; and

(ii) The Insurance Policy and the Reserve Policy have been duly executed and are valid and binding obligations of the Insurer enforceable in accordance with their respective terms except that the enforcement of the Insurance Policy and the Reserve Policy may be limited by laws relating to bankruptcy, insolvency, reorganization, moratorium, receivership and other similar laws affecting creditor’s rights generally and by general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).]

(20) [Insurer’s Certificate. A certificate, dated the Closing Date and signed by such officers of the Insurer as are satisfactory to the Underwriter, to the effect that the information with respect to the Insurer and the Insurance Policy and the Reserve Policy in the Official Statement is true and correct in all material respects on and as of the Closing Date.]

(21) Other Legal Opinions and Documents. Such additional legal opinions, certificates, instruments and documents as the Underwriter may reasonably request to evidence the truth and accuracy, as of the date hereof and as of the date of Closing, of the Authority’s and the Agency’s representations and warranties contained herein and of the statements and information

contained in the Official Statement and the due performance or satisfaction by the Authority and the Agency on or prior to the date of Closing of all agreements then to be performed and all conditions then to be satisfied by the Authority and the Agency.

**Section 11. Conditions to Obligations of the Authority and the Agency.** The performance by the Authority and the Agency of their respective obligations is conditioned upon (i) the performance by the Underwriter of its obligations hereunder; and (ii) the receipt by the Authority, the Agency, and the Underwriter of the opinions and certificates being delivered at the Closing by persons and entities other than the Authority or the Agency.

**Section 12. Termination.** Notwithstanding anything to the contrary herein contained, if for any reason whatsoever the Bonds have not been delivered by the Authority to the Underwriter prior to 5:00 p.m. Pacific Time on the Closing date, then the obligation to purchase Bonds hereunder terminates and is of no further force or effect.

If the Authority is unable to satisfy the conditions to the Underwriter's obligations contained in this Purchase Contract or if the Underwriter's obligations are terminated for any reason permitted by this Purchase Contract, this Purchase Contract may be canceled by the Underwriter at, or at any time prior to, the scheduled time of Closing. Notice of such cancellation must be given to the Authority in writing, or by telephone or other electronic means, confirmed in writing. Notwithstanding any provision herein to the contrary, the performance of any and all obligations of the Authority hereunder and the performance of any and all conditions contained herein for the benefit of the Underwriter may be waived by the Underwriter in writing at its sole discretion.

**Section 13. Expenses.**

(a) Authority Expenses. The Underwriter is under no obligation to pay, and the Authority shall pay the following expenses incident to the performance of the Authority's obligations hereunder: (i) the fees and disbursements of Bond Counsel, Special Tax Counsel, Disclosure Counsel, and the Municipal Advisor; (ii) the cost of preparation and delivery of the Bonds; (iii) the cost of printing and distribution of the Preliminary Official Statement and the Official Statement (and any amendment or supplement prepared pursuant to this Purchase Contract); (iv) the fees of the rating agencies, accountants, advisers and of any other experts or consultants retained by the Authority or the Agency; (v) the initial fees of the Trustee and related fees and expenses; [(vi) the premiums for the Insurance Policy and the Reserve Policy;] and (vii) any other expenses and costs of the Authority or the Agency incident to the performance of their obligations in connection with the authorization, issuance, sale, and delivery of the Bonds, including out-of-pocket expenses and regulatory expenses, and any other expenses agreed to by the Underwriter, the Authority and the Agency.

(b) Underwriter's Expenses. The Underwriter shall pay all expenses incurred by it in connection with the public offering and distribution of the Bonds including, but not limited to: (i) all advertising expenses in connection with the offering of the Bonds; (ii) the fees and disbursements of Underwriter's Counsel, and (iii) all out-of-pocket disbursements and expenses incurred by the Underwriter in connection with the offering and distribution of the Bonds (including travel and other expenses, CUSIP Service Bureau fees, fees of the California Debt and

Investment Advisory Commission and any other fees and expenses), except as provided in (a) above or as otherwise agreed to by the Underwriter, the Authority and the Agency. **Notices.** Any notice or other communication to be given to the Authority or the Agency under this Purchase Contract may be given by delivering the same in writing at the Authority's address set forth above (with a copy to the Agency) or the Agency's address, and any notice or other communication to be given to the Underwriter under this Purchase Contract may be given by delivering the same in writing to: Goldman Sachs & Co, 555 California Street, 45th Floor, San Francisco, California 94104; Attention: Christopher Higgins, Vice President.

**Section 15. Parties in Interest.** This Purchase Contract is made solely for the benefit of the Authority, the Agency, and the Underwriter (including their successors and assigns), and no other person has or will have any right hereunder or by virtue hereof.

**Section 16. Survival of Representations and Warranties.** All of the representations, warranties and agreements of the Authority and of the Agency contained in this Purchase Contract remain operative and in full force and effect regardless of: (a) any investigations made by or on behalf of the Underwriter or (b) delivery of and payment for the Bonds pursuant to this Purchase Contract. The agreements contained in this Section and in Section 13 (Expenses) survive any termination of this Purchase Contract.

**Section 17. Severability.** If any provision of this Purchase Contract is held invalid or unenforceable by any court of competent jurisdiction, such holding does not invalidate or render unenforceable any other provision of this Purchase Contract.

**Section 18. Section Headings and References.** The headings or titles of the sections and subsections of this Purchase Contract are solely for convenience of reference and do not affect the meaning, construction, or effect of any provision of this Purchase Contract.

**Section 19. Governing Law.** This Purchase Contract is governed by and shall be interpreted and construed in accordance with the laws of the State.

**Section 20. Entire Agreement.** The parties agree that the terms and conditions of this Purchase Contract supersede those of all previous agreements between the parties, and that this Purchase Contract contains the entire agreement between the parties hereto.

**Section 21. Counterparts.** This Purchase Contract may be executed in any number of counterparts, all of which taken together constitute one agreement, and any of the parties hereto may execute this Purchase Contract by signing any such counterpart.

**Section 22. Effective Date.** This Purchase Contract is effective as of the date set forth below upon the execution of the acceptance and approval hereof, respectively, by an authorized officer of the Authority and the Agency, and is valid and enforceable as of the time of such acceptance and approval.

*[Signature page follows]*

IN WITNESS WHEREOF, the parties hereto have caused this Bond Purchase Contract to be executed by their duly authorized officers.

**GOLDMAN SACHS & CO**

By: \_\_\_\_\_  
Authorized Officer

**Accepted:**

**MIDDLE FORK PROJECT FINANCE  
AUTHORITY**

By: \_\_\_\_\_  
Chair

Countersigned:

\_\_\_\_\_  
Secretary

**Approved:**

**PLACER COUNTY WATER AGENCY**

By: \_\_\_\_\_  
Director of Financial Services

The above is hereby accepted and approved as of March \_\_, 2020, at \_\_\_\_\_ p.m. Pacific Time.

**EXHIBIT A**

**MATURITIES, PRINCIPAL AMOUNTS, INTEREST RATES, YIELDS AND PRICES**

Maturity (April 1)	Principal Amount	Interest Rate	Yield	Price	10% Test Satisfied	Subject to Hold- The-Offering- Price Rule
2021						

\_\_\_\_\_  
\*Term Bond

c= yield to call at par on April 1, 20\_\_

**Redemption**

Casualty Loss or Governmental Taking. The Bonds are subject to redemption prior to maturity as a whole on any date or in part (in such maturities as may be specified by the Authority and at random within a maturity) on any Interest Payment Date from funds received by the **Agency** due to a casualty loss or governmental taking of the System or portions thereof by eminent domain proceedings, under the circumstances and upon the conditions and terms prescribed in the Indenture, at a redemption price equal to the sum of the principal amount thereof plus accrued interest thereon to the date fixed for redemption, without premium.

Optional Redemption. The Bonds are subject to redemption prior to their stated maturities at the option of the Authority, from any source of available funds, as a whole or in part (in Authorized Denominations and by such maturities as may be specified by the Authority and at random within a maturity) on any date on and after April 1, 20\_\_, at the stated principal amount of the Bonds called for redemption, without premium, plus accrued interest to the date fixed for redemption.

**Mandatory Redemption of Term Bonds**

(1) Term Bonds due April 1, 20\_\_. The Term Bonds maturing on April 1, 20\_\_, are subject to redemption prior to their stated maturity, in part, at random from Mandatory Sinking Account Payments in the following amounts and on the following dates, at the principal amount thereof on the date fixed for redemption, without premium, but which amounts will be proportionately reduced by the principal amount of all 20\_\_ Term Bonds optionally redeemed:

**20\_\_ Term Bonds**

**Mandatory Redemption Dates**  
**(April 1)**

**Principal Amount**

\*

**Total**

\_\_\_\_\_  
*\*final maturity*

(2) Term Bonds due April 1, 20\_\_. The Term Bonds maturing on April 1, 20\_\_, are subject to redemption prior to their stated maturity, in part, at random from Mandatory Sinking Account Payments in the following amounts and on the following dates, at the principal amount thereof on the date fixed for redemption, without premium, but which amounts will be proportionately reduced by the principal amount of all 20\_\_ Term Bonds optionally redeemed:

**20\_\_ Term Bonds**

**Mandatory Redemption Dates**  
**(April 1)**

**Principal Amount**

\*

**Total**

\_\_\_\_\_  
*\*final maturity*

**EXHIBIT B**

\$ \_\_\_\_\_

**MIDDLE FORK PROJECT FINANCE AUTHORITY  
REVENUE BONDS, SERIES 2020 REFUNDING**

**FORM OF ISSUE PRICE CERTIFICATE**

Dated: March \_\_, 2020

The undersigned, on behalf of Goldman Sachs & Co (the “Underwriter), based upon information available to it, hereby certifies as set forth below with respect to the sale and issuance of the above-captioned obligations (the “Bonds”).

**1. Sale of General Rule Maturities.**

As of the date of this Certificate, for each Maturity of the General Rule Maturities, the first price at which at least 10% of such Maturity of the Bonds was sold to the Public is the respective price listed on Schedule 1 attached hereto.

**2. Initial Offering Price of the Hold-the-Offering-Price Maturities.**

(a) The Underwriter offered the Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the “Initial Offering Prices”) on or before the Sale Date. A copy of the pricing wire or equivalent communication for the Bonds is attached to this certificate as Schedule B.

(b) As set forth in the Bond Purchase Contract dated March \_\_, 2020, between the Underwriter, the Middle Fork Project Finance Authority (the “Authority”), and the Placer County Water Agency, the Underwriter has agreed in writing that, (i) for each Maturity of the Hold-the-Offering-Price Maturities, it would neither offer nor sell any of the Bonds of such Maturity to any person at a price that is higher than the Initial Offering Price for such Maturity during the Holding Period for such Maturity (the “hold-the-offering-price rule”), and (ii) any selling group agreement shall contain the agreement of each dealer who is a member of the selling group, and any retail distribution agreement shall contain the agreement of each broker-dealer who is a party to the retail distribution agreement, to comply with the hold-the-offering-price rule. Pursuant to such agreement, no Underwriter (as defined below) has offered or sold any Maturity of the Hold-the-Offering-Price Maturities at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period.

**3. Defined Terms.**

(A) *General Rule Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “General Rule Maturities.”

(B) *Hold-the-Offering-Price Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “Hold-the-Offering-Price Maturities.”

(C) *Holding Period* means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day

after the Sale Date (March \_\_, 2020), or (ii) the date on which the Underwriter has sold at least 10% of such Hold-the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.

(D) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate Maturities.

(E) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a related party to an Underwriter. The term “related party” for purposes of this certificate generally means any two or more persons who have greater than 50 percent common ownership, directly or indirectly.

(F) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is March \_\_, 2020.

(G) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Authority (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the Public).

#### **4. Use of Certificate.**

The representations set forth in this certificate are limited to factual matters only. Nothing in this certificate represents the Underwriter’s interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. Accordingly, the Underwriter makes no representations as to the legal sufficiency of the factual matters set forth herein. The undersigned understands that the foregoing information will be relied upon by the Authority with respect to certain of the representations set forth in the Tax Certificate and with respect to compliance with the federal income tax rules affecting the Bonds, and by Orrick Herrington & Sutcliffe LLP in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Authority from time to time relating to the Bonds. Except as expressly set forth above, the certifications set forth herein may not be relied upon or used by any third party or for any other purpose.

**GOLDMAN SACHS & CO**

By: \_\_\_\_\_  
Authorized Officer

**SCHEDULE A**

**SALE PRICES OF THE GENERAL RULE MATURITIES AND INITIAL OFFERING  
PRICES OF THE HOLD-THE-OFFERING-PRICE MATURITIES**

<b>Maturity Date</b>	<b>Principal Amount</b>	<b>Price (percentage of par)</b>	<b>General Rule Maturities</b>	<b>Subject to Hold-The- Offering- Price Rule</b>
April 1 2021				

Total \_\_\_\_\_

**SCHEDULE B**  
**PRICING WIRE OR EQUIVALENT COMMUNICATION**

*(Attached)*

**PRELIMINARY OFFICIAL STATEMENT DATED FEBRUARY \_\_, 2020****NEW ISSUE – BOOK ENTRY ONLY****Rating: S&P: “\_\_”**

*In the opinion of Orrick Herrington & Sutcliffe LLP, Special Tax Counsel to the Authority, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. In the further opinion of Special Tax Counsel, interest on the Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Special Tax Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds. See “TAX MATTERS.”*

\$ \_\_\_\_\_ \*

**MIDDLE FORK PROJECT FINANCE AUTHORITY  
SERIES 2020 REFUNDING BONDS**

Dated: Date of Delivery

Due: April 1, as shown on the inside cover

**Bonds.** The bonds captioned above (the “Bonds”) are being issued by the Middle Fork Project Finance Authority (the “Authority”) pursuant to an Indenture, dated as of March 1, 2020 (the “Indenture”), by and between the Authority, the Placer County Water Agency (the “Agency”) and U.S. Bank, N.A., as trustee (the “Trustee”) to provide funds, together with other available funds of the Authority, to (i) pay and prepay the outstanding 2006 Bond (described herein), (ii) make a deposit to a reserve fund for the Bonds, and (iii) pay certain costs incurred in connection with the execution and delivery of the Bonds. The Authority is a joint exercise of powers agency formed in 2006 between the County of Placer (the “County”) and the Placer County Water Agency (the “Agency”) to serve the mutual interests of the County and Agency with respect to the electric power generating facilities of the Middle Fork American River Hydroelectric Project that are owned and operated by the Agency (as further defined herein, the “System”).

The Bonds will be initially delivered in denominations of \$5,000 or any integral multiple thereof only in book-entry form, registered to Cede & Co. as nominee of The Depository Trust Company (“DTC”), which will act as securities depository of the Bonds. Interest and principal represented by the Bonds are payable by the Trustee to DTC, which remits such payments to its Participants for subsequent distribution to the beneficial owners of the Bonds. See APPENDIX F – DTC and the Book-Entry Only System.” Interest with respect to the Bonds will be payable on April 1 and October 1 of each year, commencing October 1, 2020.

**Security for the Bonds.** The obligation of the Authority to pay debt service on the Bonds is a special obligation of the Authority payable from the Net System Revenues of the System, and certain funds and accounts created under the Indenture. See “SECURITY FOR THE 2020 BONDS.”

**Parity Debt.** Upon issuance of the Bonds, there will be no other obligations payable from the Net System Revenues on a parity with the Bonds. However, in the future, the Authority may issue additional bonds, notes or other obligations payable from the Net System Revenues on parity with the Bonds, subject to the conditions set forth in the Indenture. See “SECURITY FOR THE 2020 BONDS – Issuance of Parity Debt.”

**Redemption.** The Bonds are subject to redemption prior to maturity as described in this Official Statement. See “THE 2020 BONDS – Redemption Provisions.”

The obligation of the Authority to pay debt service on the Bonds does not constitute a debt of the Authority in contravention of any constitutional or statutory debt limit or restriction, nor does it constitute an obligation for which the Authority, the County, the Agency, the State of California or any political subdivision thereof is obligated to levy or pledge any form of taxation or for which the Authority, the County, the Agency, the State of California or any political subdivision thereof levied or pledged any form of taxation.

**This cover page contains information for reference only. Investors must read the entire Official Statement to obtain information essential in making an informed investment decision. See “BOND OWNERS’ RISKS” for a discussion of factors that should be considered, in addition to the other matters set forth in this Official Statement, in evaluating the investment quality of the Bonds.**

The Bonds will be offered when, as and if executed and delivered and received by Goldman, Sachs & Co. LLC, as underwriter, subject to the approval as to their legality by Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, Sacramento, California, Bond Counsel. In addition, certain legal matters will be passed upon for the Authority by Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, as General Counsel to the Authority, by Orrick Herrington & Sutcliffe LLP, Special Tax Counsel to the Authority, and by Jones Hall, A Professional Law Corporation, San Francisco, California, as Disclosure Counsel to the Authority. Nixon Peabody LLP is serving as counsel to the underwriter. It is anticipated that the Bonds in definitive form will be available for delivery through the facilities of DTC on or about March \_\_, 2020.

**Goldman, Sachs & Co. LLC**

Dated: \_\_\_\_\_, 2020

## MATURITY SCHEDULE

\$\_\_\_\_\_ Serial Bonds

<b>Maturity (April 1)</b>	<b>Principal Amount</b>	<b>Interest Rate</b>	<b>Yield</b>	<b>CUSIP<sup>†</sup> No. (_____)</b>
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† CUSIP<sup>®</sup> is a registered trademark of the American Bankers Association. CUSIP data is provided by CUSIP Global Services (CGS) which is managed on behalf of the American Bankers Association by S&P Capital IQ. CUSIP<sup>®</sup> data is not intended to create a database and does not serve in any way as a substitute for the CUSIP<sup>®</sup> Service Bureau. CUSIP<sup>®</sup> numbers are provided for convenience of reference only. Neither the Authority nor the Underwriter assumes any responsibility for the accuracy of the CUSIP data.

**MIDDLE FORK PROJECT FINANCE AUTHORITY  
(PLACER COUNTY, CALIFORNIA)**

**BOARD OF DIRECTORS**

Jim Holmes, *Chair*  
Primo Santini, *Vice Chair*  
Mike Lee, *Boardmember*  
Robert Weygandt, *Boardmember*

**AUTHORITY STAFF**

Einar Maisch, P.E., *Executive Director*  
Todd Leopold, *Secretary*  
Joseph Parker, CPA, *Treasurer*

---

**MUNICIPAL ADVISOR**

Montague DeRose and Associates, LLC  
*Westlake Village, California*

**BOND COUNSEL AND  
AUTHORITY COUNSEL**

Kronick, Moskovitz, Tiedemann & Girard,  
A Professional Corporation  
*Sacramento, California*

**SPECIAL TAX COUNSEL**

Orrick Herrington & Sutcliffe LLP

**DISCLOSURE COUNSEL**

Jones Hall, A Professional Law Corporation  
*San Francisco, California*

**TRUSTEE**

U.S. Bank National Association

## GENERAL INFORMATION ABOUT THIS OFFICIAL STATEMENT

**Use of Official Statement.** This Official Statement is submitted in connection with the offer and sale of the Bonds referred to in this Official Statement and may not be reproduced or used, in whole or in part, for any other purpose. This Official Statement is not to be construed as a contract with the purchasers of the Bonds.

**Estimates and Forecasts.** When used in this Official Statement and in any continuing disclosure by the Authority in any press release and in any oral statement made with the approval of an authorized officer of the Authority or any other entity described or referenced in this Official Statement, the words or phrases “will likely result,” “are expected to,” “will continue,” “is anticipated,” “estimate,” “project,” “forecast,” “expect,” “intend” and similar expressions identify “forward looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated in such forward-looking statements. Any forecast is subject to such uncertainties. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between forecasts and actual results, and those differences may be material. The information and expressions of opinion in this Official Statement are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, give rise to any implication that there has been no change in the affairs of the Authority or any other entity described or referenced in this Official Statement since the date hereof.

The information and expressions of opinions in this Official Statement are subject to change without notice and neither delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority or any other entity described or referenced in this Official Statement since the date hereof. All summaries of the documents referred to in this Official Statement are made subject to the provisions of such documents, respectively, and do not purport to be complete statements of any or all of such provisions.

**Limit of Offering.** No dealer, broker, salesperson or other person has been authorized by the Authority to give any information or to make any representations in connection with the offer or sale of the Bonds other than those contained in this Official Statement and if given or made, such other information or representation must not be relied upon as having been authorized by the Authority or the Underwriter. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Bonds by a person in any jurisdiction in which it is unlawful for such person to make such an offer, solicitation or sale.

**Stabilization of Prices.** In connection with this offering, the Underwriter may over allot or effect transactions that stabilize or maintain the market price of the Bonds at a level above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time. The Underwriter may offer and sell the Bonds to certain dealers and others at prices lower than the public offering prices set forth on the cover page hereof and said public offering prices may be changed from time to time by the Underwriter.

THE BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, IN RELIANCE UPON AN EXCEPTION FROM THE REGISTRATION REQUIREMENTS CONTAINED IN SUCH ACT. THE BONDS HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE.

**Website Not Incorporated.** The Authority maintains a website; however, the information it contains is not part of this Official Statement and should not be relied on in making investment decisions with respect to the Bonds.

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# OFFICIAL STATEMENT

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**MIDDLE FORK PROJECT FINANCE AUTHORITY  
SERIES 2020 REFUNDING BONDS**

## INTRODUCTION

### General

This Official Statement, which includes the cover page and appendices hereto, provides certain information concerning the sale and delivery by the Middle Fork Project Finance Authority (the “**Authority**”) of its Series 2020 Refunding Bonds (the “**Bonds**”). Capitalized terms not otherwise defined in this Official Statement have the meaning given to them in the Indenture. See “APPENDIX B – Summary of Principal Legal Documents.”

**Investors must read the entire Official Statement to obtain information essential in making an informed investment decision. See “BOND OWNERS’ RISKS” for a discussion of factors that should be considered, in addition to the other matters set forth in this Official Statement, in evaluating the investment quality of the Bonds.**

### The Bonds

The Bonds are being issued by the Authority pursuant to an Indenture, dated as of March 1, 2020 (the “**Indenture**”), by and between the Authority, the Placer County Water Agency (the “**Agency**”) and U.S. Bank National Association, as trustee (the “**Trustee**”) to provide funds, together with other available funds of the Authority, to (i) pay and prepay the outstanding 2006 Bond (described herein), (ii) make a deposit to a reserve fund for the Bonds, and (iii) pay certain costs incurred in connection with the execution and delivery of the Bonds.

The Bonds will be initially delivered in denominations of \$5,000 or any integral multiple thereof only in book-entry form, registered to Cede & Co. as nominee of The Depository Trust Company (“**DTC**”), which will act as securities depository of the Bonds. Interest and principal represented by the Bonds are payable by the Trustee to DTC, which remits such payments to its Participants for subsequent distribution to the beneficial owners of the Bonds. See APPENDIX F – DTC and the Book-Entry Only System.” Interest with respect to the Bonds will be payable on April 1 and October 1 of each year, commencing October 1, 2020. See “THE 2020 Bonds – Redemption Provisions.”

### The Authority and the System

The Authority is a joint exercise of powers agency formed in 2006 between the County of Placer (the “**County**”) and the Placer County Water Agency (the “**Agency**”) to serve the mutual interests of the County and Agency with respect to the electric power generating facilities of the Middle Fork American River Hydroelectric Project that are owned and operated by the Agency (as further defined below, the “**System**”). The Authority is governed by a four-member Board of Directors composed of two members of the County’s Board of Supervisors and two members of

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\* Preliminary; subject to change.

the Agency's Board of Directors. Each respective board appoints two members of the Authority's Board. See "THE AUTHORITY" for additional details regarding the Authority.

As used in the Indenture, "**System**" means the electric power generating facilities of the Middle Fork American River Hydroelectric Project, currently consisting of:

- five powerhouses (French Meadows, Hell Hole, Middle Fork, Ralston, and Oxbow Powerhouses),
- five diversion impoundments (Duncan Creek Diversion, North Fork Long Canyon Creek Diversion, South Fork Long Canyon Creek Diversion, Middle Fork Afterbay, and Ralston Afterbay),
- five tunnels (Duncan Creek-Middle Fork, French Meadows-Hell Hole, Hell Hole-Middle Fork, Middle Fork-Ralston, Ralston-Oxbow Tunnels), and
- two reservoirs (French Meadows Reservoir and Hell Hole Reservoir),

which facilities are owned and operated by the Agency, and all other properties, structures or works hereafter acquired and constructed by the Agency and determined to be a part of the hydroelectric power project, together with all additions, betterments, extensions or improvements to such facilities, properties, structures or works or any part thereof hereafter acquired and constructed. See "SECURITY FOR THE BONDS" and "THE SYSTEM."

For the first 50 years of the life of the System, 100% of the electricity generated by the System was furnished to Pacific Gas & Electric ("**PG&E**") pursuant to a power purchase agreement ("**PPA**") in exchange for funds for bond payments, an operating budget and project insurance. The PPA expired on April 30, 2013, after which a new short term contract was entered into with PG&E that expired on December 31, 2017. On January 1, 2018, the Agency became its own scheduling coordinator to sell System power directly through the CAISO energy markets and energy products via bilateral contracts.

The System operates under a Federal Power permit with the Federal Energy Regulatory Commission ("**FERC**"). Water flows to protect and maintain environmental resources are defined in the FERC license. Operation of the System was authorized in 1963 under an initial 50-year FERC license that expired on February 28, 2013. From 2007 to 2012, prior to the expiry of the FERC operating license, Agency staff prepared and concluded all technical, environmental, and economic assessments to support re-licensing of the System. Since the expiration of the license in 2013, the Agency has continued to operate the System under an annual FERC license that is issued from year-to-year with terms and conditions of the prior license until a new license will be issued. The Agency anticipates being granted a new license with a term of at least 40 years sometime between January and April 2020.

The Authority sells the generated electric power in the "spot market" managed by the California Independent System Operator ("**CAISO**") and via bilateral contracts for capacity products. The CAISO manages the flow of electricity for about 80% of California and a small part of Nevada, which encompasses all of the investor-owned utility territories and some municipal utility service areas. There are some pockets where local public power companies manage their own transmission systems. The CAISO is the largest of about 38 balancing authorities in the western interconnection, handling an estimated 35% of the electric load in the Western United States. A balancing authority is responsible for operating a transmission control area. It matches generation with load and maintains consistent electric frequency of the grid, even during extreme weather conditions or natural disasters. System power is delivered to California's electric grid via

the PG&E transmission system. See “THE SYSTEM” and “DEVELOPMENTS IN THE ENERGY MARKETS.”

### **Financing Plan**

A portion of the proceeds of the Bonds, together with other legally available moneys, will be applied to pay and refund the Authority’s Revenue Bond, Series 2006 (the “**2006 Bond**”), which is currently outstanding in the amount of \$71,028,392.87. The 2006 Bond is held by the County Treasurer, and was issued for the purpose of financing the relicensing costs and certain betterments incurred by the Authority to renew the FERC license with respect to the System. See “FINANCING PLAN.”

### **Feasibility Study**

In connection with the issuance of the Bonds, the Authority has commissioned Horizons Energy, Dublin, Ohio (the “**Feasibility Consultant**”) to prepare a feasibility study to demonstrate the ability of the Authority to generate revenues sufficient to pay debt service on the Bonds from Net System Revenues. See “SYSTEM FINANCES – Feasibility Study” and APPENDIX A – Feasibility Study.”

### **Security for the Bonds; Bond Reserve Fund**

The obligation of the Authority to pay debt service on the Bonds is a special obligation of the Authority payable from the Net System Revenues of the System, and certain funds and accounts created under the Indenture. See “SECURITY FOR THE 2020 BONDS.”

[A Bond Reserve Fund is being established under the Indenture, and will be funded in connection with the issuance of the Bonds in an amount equal to \_\_\_\_\_.]

### **Redemption Prior to Maturity**

The Bonds are subject to redemption prior to maturity as described in this Official Statement. See “THE 2020 BONDS – Redemption Provisions.”

### **No Senior Debt; Parity Debt**

The Authority has no obligations outstanding that are senior to, or on a parity with, pledge of Net System Revenues in favor of the Bonds. However, the Authority may issue additional bonds, notes or other obligations payable from the Net System Revenues on parity with the Bonds in the future. See “SECURITY FOR THE 2020 BONDS – Issuance of Parity Debt.”

### **Continuing Disclosure**

The Authority has covenanted for the benefit of the holders and beneficial owners of the Bonds to provide (i) certain financial information and operating data relating to the Authority by not later than six months following the end of the Authority’s fiscal year (which fiscal year currently ends on December 31), and (ii) notices of the occurrence of certain enumerated events. The specific nature of the information to be contained in each annual report or event notice is provided in “APPENDIX D – Form of Continuing Disclosure Certificate.” See “CONCLUDING INFORMATION – Continuing Disclosure” herein.

### **Tax Matters**

In the opinion of Orrick Herrington & Sutcliffe LLP, Special Tax Counsel to the Authority, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming,

among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. In the further opinion of Special Tax Counsel, interest on the Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Special Tax Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds. See "TAX MATTERS."

### **Miscellaneous**

This Official Statement contains brief descriptions of, among other things, the Authority, the Agency, the Bonds, and the Indenture. The descriptions do not purport to be comprehensive or definitive. All references in this Official Statement to documents are qualified in their entirety by reference to such documents, and references to the Bonds are qualified in their entirety by reference to the form of Bonds included in the Indenture. During the offering period for the Bonds, copies of the forms of the Indenture and other documents described in this Official Statement may be obtained at the principal offices of the Underwriter. Copies of these documents may be obtained from the Trustee or the Authority after delivery of the Bonds.

### **Forward Looking Statements**

Certain statements included or incorporated by reference in this Official Statement constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "project," "budget" or other similar words. Such forward-looking statements include, but are not limited to, certain statements contained in the information under the caption "THE SYSTEM" and "SYSTEM FINANCES".

THE ACHIEVEMENT OF CERTAIN RESULTS OR OTHER EXPECTATIONS CONTAINED IN SUCH FORWARD-LOOKING STATEMENTS INVOLVE KNOWN AND UNKNOWN RISKS, UNCERTAINTIES AND OTHER FACTORS WHICH MAY CAUSE ACTUAL RESULTS, PERFORMANCE OR ACHIEVEMENTS DESCRIBED TO BE MATERIALLY DIFFERENT FROM ANY FUTURE RESULTS, PERFORMANCE OR ACHIEVEMENTS EXPRESSED OR IMPLIED BY SUCH FORWARD-LOOKING STATEMENTS. THE AUTHORITY DOES NOT PLAN TO ISSUE ANY UPDATES OR REVISIONS TO THE FORWARD-LOOKING STATEMENTS SET FORTH IN THIS OFFICIAL STATEMENT.

## THE FINANCING PLAN

### Refunding of the 2006 Bond

The net proceeds of the Bonds will be used to pay and optionally redeem the Authority's Revenue Bond, Series 2006 (the "**2006 Bond**"), which is currently outstanding in the amount of \$71,028,392.87. The 2006 Bond is held by the Placer County Treasurer, is subject to optional redemption on any date, without premium, and is anticipated to be redeemed on or about the closing date for the Bonds.

### Estimated Sources and Uses of Proceeds

The table below sets forth the estimated sources and uses of proceeds of the Bonds.

#### Sources of Funds

Par Amount of Bonds	\$
Plus/Less: [Net] Original Issue Premium/Discount	
Total Sources	<hr/> \$

#### Uses of Funds

Refunding of 2006 Bond	\$
Deposit to Reserve Fund	
Delivery Costs <sup>(1)</sup>	
Underwriter's Discount	
Total Uses	<hr/> \$

(1) Includes legal, financial advisory, rating agency, printing, and other miscellaneous delivery costs.

## THE 2020 BONDS

### General

The Bonds will be executed and delivered in the aggregate principal amount set forth on the cover, will be dated their date of execution and delivery, will represent interest from such date at the rates per annum set forth on the inside cover page hereof, payable semiannually on April 1 and October 1 in each year (each, an “**Interest Payment Date**”), commencing October 1, 2020, and will mature on the dates set forth on the inside cover page hereof. The Bonds will be delivered only in fully registered form and, when executed and delivered, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company (“**DTC**”). DTC will act as securities depository for the Bonds. Ownership interests in the Bonds may be purchased in book-entry form only in denominations of \$5,000 or any integral multiple thereof. See “APPENDIX F – DTC and the Book-Entry Only System” in this Official Statement. In the event the book-entry only system described in APPENDIX F is discontinued, the principal and redemption premium (if any) evidenced by any Bonds are payable to the Owner thereof, upon surrender of the Bonds, in lawful money of the United States of America at the corporate trust office of the Trustee.

Interest evidenced by each Bond is payable by check mailed by first class mail or, upon the written request of any Owner of \$1,000,000 or more in aggregate amount of principal of Bonds who has provided the Trustee with wire transfer instructions, by wire transfer on each Interest Payment Date to the Owner thereof at its account in the United States, as of the close of business on the Regular Record Date. The Regular Record Date for the Bonds shall be the 15th day of the calendar month immediately preceding the relevant Interest Payment Date.

Any interest represented by any Bonds that is payable but is not punctually paid or duly provided for on any Interest Payment Date will cease to be payable to the Owner on the relevant Regular Record Date. Such defaulted interest shall be paid to the person in whose name the Bond is registered at the close of business on a Special Record Date (a date fixed by the Trustee for the payment of any defaulted interest) for the payment of such defaulted interest to be fixed by the Trustee. In the name and at the expense of the Authority, the Trustee shall cause notice of the payment of such defaulted interest and the Special Record Date to be mailed, first-class postage prepaid, to each owner of a Bond at his address as it appears in the Bond Register not fewer than ten days prior to such Special Record Date.

In the event that any date for the payment of the interest or principal or Redemption premiums, if any, evidenced and represented by any Bond falls on a day which is not a Business Day, the interest or principal or Redemption premium, if any, represented by such Bonds which are due and payable on such date shall be paid by the Trustee on the next succeeding Business Day.

### Redemption Provisions\*

**Optional Redemption.** The Bonds are subject to redemption prior to their stated maturities, at the option of the Authority, from any source of available funds, as a whole or in part (in Authorized Denominations and by such maturities as may be specified by the Authority and at random within a maturity) on any date on and after April 1, 20\_\_, at the stated principal amount of the Bonds called for redemption, without premium, plus accrued interest to the date fixed for redemption.

**Mandatory Sinking Fund Redemption.** The Bonds maturing on April 1, 20\_\_, are subject to redemption prior to their stated maturity, in part, at random from Mandatory Sinking Account Payments in the following amounts and on the following dates, at the principal amount

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\* Preliminary; subject to change.

thereof on the date fixed for redemption, without premium, but which amounts will be proportionately reduced by the principal amount of all Bonds optionally redeemed:

Mandatory Redemption Dates ( <u>April 1</u> )	Principal <u>Amount</u>
---	----------------------------

Mandatory Redemption Dates ( <u>April 1</u> )	Principal <u>Amount</u>
---	----------------------------

**Casualty Loss or Governmental Taking Redemption.** The Bonds are subject to redemption prior to maturity as a whole on any date or in part (in such maturities as may be specified by the Authority and at random within a maturity) on any Interest Payment Date, from funds received by the Authority due to a casualty loss or governmental taking of the System or portions thereof by eminent domain proceedings, under the circumstances and upon the conditions and terms prescribed herein, at a redemption price equal to the sum of the principal amount thereof plus accrued interest thereon to the date fixed for redemption, without premium.

**Selection of Bonds to be Prepaid.** Whenever redemption of less than all of the Bonds is required, the Authority may designate the maturities to be prepaid, and the Trustee will select Bonds for redemption by lot within a single maturity. As to any Bond, such redemption will be in the amount of \$5,000 or any integral multiple thereof.

**Notice of Redemption.** Each notice of redemption shall state the date of such notice, the date of issue of the Bonds, the redemption date, the amount of any redemption premium, the place or places of redemption (including the name and appropriate address or addresses of the Trustee), the CUSIP number (if any) of the maturity or maturities, and, if less than all of any such maturity, the distinctive certificate numbers of the Bonds of such maturity to be redeemed and, in the case of Bonds to be redeemed in part only, the respective portions of the principal amount represented thereby to be redeemed. Each such notice shall also state that on said date there will become due and payable on each of said Bonds the principal amount thereof or specified portion of the principal amount thereof in the case of a Bond to be redeemed in part only, together with premium (if any) and interest thereon accrued to the date fixed for redemption, and that from and after such redemption date interest thereon ceases to accrue, and shall require that such Bonds be then surrendered at the address or addresses of the Trustee specified in the redemption notice. Neither the Authority nor the Trustee has any responsibility for any defect in the CUSIP number that appears on any Bond or in any redemption notice with respect thereto, and any such redemption notice may contain a statement to the effect that CUSIP numbers have been assigned by an independent service for convenience of reference and that neither the Authority nor the Trustee is liable for any inaccuracy in such numbers.

**Conditional Notices; Right to Rescind.** The Authority may, at its option, specify in any notice of optional redemption that redemption is conditional upon the availability of money

sufficient to pay the Redemption Price of all the Bonds that are to be redeemed on the date fixed for redemption. The Authority may, at its option, prior to the date fixed for optional redemption in any notice of redemption, rescind and cancel such notice of optional redemption by written notice to the Trustee on or prior to the date fixed for redemption. Any notice of redemption will be cancelled and annulled if for any reason funds are not available on the date fixed for redemption for the payment in full of the Bonds then called for redemption, and such cancellation will not constitute a default under this Trustee Agreement. Neither the Authority nor the Trustee has any liability to the Owners or any other party as a result of the Authority's failure to redeem Bonds as a result of insufficient money.

***Deposit of Redemption Price.*** Prior to any date for redemption of Bonds, the Authority shall deposit with the Trustee an amount of money sufficient to pay the Redemption Price of all the Bonds that are to be redeemed on that date. Such money shall be held in trust for the benefit of the persons entitled to such Redemption Price. Prior to any date for optional redemption of Bonds, the Authority must pay in full all amounts due to each issuer of a Reserve Facility.

***Effect of Redemption.*** Notice of redemption having been duly given as set forth in the Indenture and moneys for payment of the Redemption Price of the Bonds so to be redeemed being held by the Trustee, on the redemption date designated in such notice (i) the Bonds so to be redeemed become due and payable at the Redemption Price specified in such notice, (ii) interest on such Bonds ceases to accrue, (iii) such Bonds cease to be entitled to any benefit or security under the Indenture, and (iv) the Owners of such Bonds have no rights in respect thereof except to receive payment of said Redemption Price. Upon surrender of any such Bond for redemption in accordance with said notice, such Bond shall be paid by Trustee at the Redemption Price. Installments of interest due on or prior to the Redemption Date shall be payable to the Owners of the Bonds on the relevant Record Dates according to the terms of such Bonds and the provisions of the Indenture.

The table below shows the annual schedule of debt service on the 2020 Bonds, assuming no optional redemption.

<b>Year Ending <u>Dec. 31</u></b>	<b><u>Principal</u></b>	<b><u>Interest</u></b>	<b><u>Total</u></b>
Totals	_____	_____	_____

Source: Underwriter.

## SECURITY FOR THE BONDS

### Pledge of Net System Revenues

In order to secure the payment of the principal of, premium, if any, and interest on the Bonds in accordance with their terms and the provisions of the Indenture, and subject only to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein, the Authority pledges all of the Net System Revenues and any other amounts (including proceeds of the sale of Bonds) held in any fund or account established pursuant to the Indenture, other than amounts on deposit in the Rebate Fund. This pledge constitutes a first pledge of and charge and lien upon such assets for the payment of the Bonds in accordance with their terms and is valid and binding from and after issuance of the Bonds, without any physical delivery thereof or further act. The pledge is made irrevocable until all of the Bonds are no longer outstanding.

As used in the Indenture, the following terms have the following meanings:

**“Net System Revenues”** means, for any Fiscal Year, the System Revenues during such Fiscal Year less the Operation and Maintenance Costs during such Fiscal Year.

**“System Revenues”** means all gross income and revenue received or receivable by the Authority from the operation of the System, determined in accordance with Generally Accepted Accounting Principles, including, without limiting the generality of the foregoing:

- (1) all revenue received by the Authority from the sale of electric energy or capacity and any other electric-power-related services of the System and all other income and revenue howsoever derived by the Authority from the operation of the System or arising from the System,
- (2) the earnings on and income derived from the investment of all such income or other moneys,
- (3) the proceeds derived by the Authority directly or indirectly from the sale, lease, or other disposition of a part of the System, and
- (4) the payments received or made under a **“Financial Products Agreement,”** which is defined as any interest rate or energy transaction swap, cap, collar, option, floor, forward or other hedging agreement, arrangement or security, however denominated, identified to the Trustee in a Certificate of the Authority as having been entered into with a Qualified Provider not for investment purposes but with respect to Bonds (which Bonds shall be specifically identified in the Certificate of the Authority) for the purpose of (1) reducing or otherwise managing the risk of interest rate changes or energy market prices or (2) effectively converting interest rate exposure or energy market risk exposure, in whole or in part, from a fixed rate exposure to a variable rate exposure or from a variable rate exposure to a fixed rate exposure.

**“Operation and Maintenance Costs”** means the reasonable and necessary costs paid or incurred by the Agency or the Authority for maintaining and operating the System, determined in accordance with Generally Accepted Accounting Principles, including (without limitation) all reasonable expenses of maintenance and repair and other expenses necessary to maintain and preserve the System in good repair and working order, and all administrative costs of the Agency or the Authority that are charged directly or apportioned to the operation of the System, such as salaries and wages of employees, overhead, taxes (if any) and insurance premiums, costs to comply with state or federal regulations, and including all other reasonable and necessary costs of the Authority or charges required to be paid by it to comply with the terms hereof or of any

resolution authorizing the issuance of any Bonds or of such Bonds, such as compensation, reimbursement and indemnification of the trustee for any such Bonds and fees and expenses of Independent Certified Public Accountants, Independent Engineers, Independent Financial Consultants, Insurance Consultants, and the Agency's or the Authority's financial advisor; but excluding in all cases (a) depreciation, replacement and obsolescence charges or reserves therefor, amortization of intangibles, losses or gains on subsidiaries accounted for on any equity basis, or other bookkeeping entries of a similar nature, (b) intergovernmental transfers by the Agency or the Authority that are not reimbursements or payments for overhead or other administrative expenses incurred by the Agency or the Authority, and (c) all interest charges and charges for the payment of principal or amortization of bonded or other indebtedness of the Authority.

### **Limited Liability of Authority**

The Authority is not required to advance any money derived from any source other than the System Revenues for the payment of the interest on or principal of or redemption premiums, if any, on the Bonds or for the performance of any agreements or covenants contained in the Indenture. The Authority may, however, advance funds for any such purpose so long as such funds are derived from a source legally available for such purpose without incurring any indebtedness.

### **System Revenue Fund**

In order to carry out and effectuate the pledge and lien on the Net System Revenues, the Authority agrees and covenants in the Indenture that (a) all System Revenues shall be deposited when and as received in the "System Revenue Fund," which fund the Authority agrees and covenants to maintain so long as any Bonds remain unpaid. The Authority and the Agency shall, from the moneys in the System Revenue Fund, pay all Operation and Maintenance Costs of the System as they become due and payable.

### **Payments to Trustee; Bond Fund**

Not later than 15 days before each Interest Payment Date, the Authority shall pay to the Trustee from the System Revenue Fund such amount as is required by the Trustee to make the transfers and deposits required in such month by the Indenture with respect to the Bonds. Each transfer by the Authority to the Trustee must be in lawful money of the United States of America and paid to the Trustee at the Corporate Trust Office. The Trustee shall forthwith deposit the amounts received from the Authority in a trust fund designated as the "Bond Fund," which fund the Trustee shall designate and maintain, so long as any Bonds remain unpaid. All moneys at any time held in the Bond Fund shall be held in trust for the benefit of the Owners of the Bonds and shall be disbursed, allocated, and applied solely for the uses and purposes set forth in the Indenture and described below under "–Allocation of System Revenues."

### **Allocation and Use of System Revenues**

So long as any Bonds are Outstanding, the Trustee shall set aside the moneys in the Bond Fund in the following respective funds or accounts (each of which the Trustee shall establish, maintain and hold in trust for the benefit of the Owners of the Bonds) in the following amounts, in the following order of priority, the requirements of each such fund (including the making up of any deficiencies in any such fund resulting from lack of moneys sufficient to make any earlier required deposit) at the time of deposit to be satisfied before any deposit is made to any fund subsequent in priority, and the amounts shall be used for the following purposes:

**Interest Fund.** On each Interest Payment Date, the Trustee shall set aside in the Interest Fund an amount equal to the aggregate amount of interest becoming due and payable on the Outstanding Bonds on such Interest Payment Date. No deposit need be made into the Interest Fund if the amount contained therein is at least equal to the interest due and payable on such Interest Payment Date upon all of the Bonds then Outstanding (but excluding any moneys on deposit in the Interest Fund from the proceeds of the Bonds or other source and reserved as capitalized interest to pay interest on any future Interest Payment Dates following such Interest Payment Date).

All money in the Interest Fund shall be used and withdrawn by the Trustee solely for the purpose of paying interest on the Bonds as it shall become due and payable (including accrued interest on any Bonds purchased or redeemed prior to maturity).

**Principal Fund; Sinking Accounts.** On each Principal Payment Date, the Trustee shall deposit in the Principal Fund an amount equal to (a) the aggregate amount of principal becoming due and payable on the Outstanding Serial Bonds, and (b) the aggregate principal amount of Bonds to be redeemed on such date from the respective Sinking Accounts for the Term Bonds. No deposit need be made into the Principal Fund so long as there shall be in such fund (i) moneys sufficient to pay the principal of all Serial Bonds then Outstanding and maturing by their terms on such Principal Payment Date plus (ii) the aggregate principal amount of all Term Bonds required to be redeemed on such Principal Payment Date, but less any amounts deposited into the Principal Fund during the preceding twelve-month period and theretofore paid from the Principal Fund to redeem or purchase Term Bonds during such twelve-month period.

All amounts in the Principal Fund shall be used and withdrawn by the Trustee solely for the purposes of paying the principal of the Bonds when due and payable, except that all amounts in the Sinking Account shall be used and withdrawn by the Trustee solely to purchase or redeem or pay Bonds at maturity, as provided in the Indenture. On any date upon which Term Bonds are subject to mandatory redemption, the Trustee shall transfer the amount of the principal then redeemable from the Principal Fund to the applicable Sinking Account. With respect to each Sinking Account, on each mandatory redemption date established for such Sinking Account, the Trustee shall apply the amount required on that date to the redemption (or payment at maturity, as the case may be) of Term Bonds of such maturity for which such Sinking Account was established, upon the notice and in the manner provided herein; provided that, at any time prior to giving such notice of such redemption, the Trustee shall, upon receipt of a Request of the Authority, apply moneys in such Sinking Account to the purchase (in whole or in part) of Term Bonds of such maturity at public or private sale, as and when and at such prices (including brokerage and other charges, but excluding accrued interest, which is payable from the Interest Fund) as is directed by the Authority, except that the purchase price (excluding accrued interest) shall not exceed the principal amount represented thereby. If, during the twelve-month period immediately preceding said mandatory redemption date, the Trustee has purchased Term Bonds of such maturity with moneys in such Sinking Account, or, during said period and prior to giving said notice of redemption, the Authority has deposited Term Bonds of such maturity with the Trustee, or Term Bonds of such maturity were at any time purchased or redeemed by the Trustee from the Redemption Fund and allocable to said mandatory redemption, such Term Bonds so purchased or deposited or redeemed shall be applied, to the extent of the full principal amount represented thereby, to reduce the amount required for deposit on the mandatory redemption date in the Sinking Account.

**Reserve Accounts; Rebate Fund.** Any moneys remaining in the Bond Fund after the foregoing transfers have been made shall be deposited, in order of priority, (i) into

each Reserve Account to the extent that the amount therein is less than the Series Required Reserve, and (ii) into the Rebate Fund if so directed by the Authority. Amounts not required to be so deposited shall be transferred on the same Business Day to the Authority. The Authority may use and apply any moneys when received by it for any purpose with respect to the System, including the redemption of Bonds upon the terms and conditions set forth herein and the purchase of Bonds as and when and at such prices as it may determine.

## **Bond Reserve Fund**

**General.** The Trustee shall establish and maintain a separate fund designated as the “Bond Reserve Fund” (the “**Reserve Fund**”), and with respect to each Series of Bonds for which the Series Required Reserve is greater than zero, a separate account therein. Upon the delivery of each Series of Bonds, if and to the extent required, the Authority shall deposit into the Reserve Account for the Series either the amount of the Series Required Reserve (if the Reserve Account secures a single Series of Bonds) or the amount necessary to increase the balance in the Reserve Account to the Series Required Reserve with respect to all Bonds of all Series secured by that Reserve Account (if the Reserve Account secures more than one Series).

**Substitution of Cash.** The Authority may at any time substitute cash for all or part of the amount available to be paid to the Trustee under any Reserve Facility delivered pursuant to this Section to satisfy the Series Required Reserve.

**Replenishment of Reserve Accounts.** The Authority shall deposit as soon as possible in each month in each Reserve Account, except as otherwise provided in the Indenture, upon the occurrence of any deficiency therein, 1/12th of the aggregate amount of each unreplenished prior withdrawal from that Reserve Account and 1/4 of the aggregate amount of any deficiency due to any required valuations of the investments in that Reserve Account until the total of the cash balance in the Reserve Account and the amount available under any Reserve Facility is at least equal to the Series Required Reserve.

In lieu of making the Series Required Reserve replenishment deposits in compliance with the foregoing, or in replacement of moneys then on deposit in a Reserve Account (which shall be transferred by the Trustee to the Authority), the Authority may deliver to the Trustee an irrevocable letter of credit meeting the requirements of the Indenture. See APPENDIX B.

**Use of Reserve Accounts.** All amounts in a Reserve Account (including all amounts that may be obtained from Reserve Facilities on deposit in that Reserve Account) shall be used and withdrawn by the Trustee solely for the purpose of paying debt service on the Bonds of the related Series in the event of any deficiency in the Interest Fund or the Principal Fund, or (together with any other moneys available therefor) for the payment or redemption of all Bonds of such Series then Outstanding, or for the payment of the final principal and interest payment with respect to the Bonds of any Series of Bonds secured by that Reserve Account (provided that following such payment the amounts in the Reserve Account (including the amounts that may be obtained from Reserve Facilities on deposit therein) will equal the Series Required Reserve.

The Trustee shall first draw on the portion of the Reserve Account held in cash or Permitted Investments and then, on a pro rata basis with respect to amounts held in the form of Reserve Facilities (calculated by reference to the maximum amounts of such Reserve Facilities), draw on or collect under each Reserve Facility issued with respect to the Reserve Account, in a timely manner and pursuant to the terms of such Reserve Facility to the extent necessary in order to obtain sufficient funds on or prior to the date such funds are needed to pay the principal of and interest on the Bonds of such Series when due.

If the Trustee has notice that any payment of principal or interest represented by a Bond has been recovered from an Owner pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with the final, nonappealable order of a court having competent jurisdiction, the Trustee, pursuant to and provided that the terms of the Reserve Facility, if any, securing that Bond so provide, shall so notify the issuer thereof and draw on or collect under such Reserve Facility to the lesser of the extent required or the maximum amount of such Reserve Facility in order to pay to such Owner the principal and interest so recovered. If and to the extent that the Series Required Reserve is satisfied by a deposit of cash or Permitted Investments and one or more Reserve Facilities (or any combination thereof), the Trustee shall first draw on the portion of the Reserve Account held in cash or Permitted Investments and then make drawings on or collect under such Reserve Facilities on a pro rata basis (calculated by reference to the maximum amounts of such Reserve Facilities).

If the Trustee draws on or collects under a Reserve Facility, the Trustee shall use amounts deposited in the related Reserve Account by the Authority following such draw or collection first to make the payments required by the terms of the Reserve Facility or related reimbursement or loan agreement so that the Reserve Facility shall, absent the delivery to the Trustee of a substitute Reserve Facility acceptable to the Credit Providers that satisfies the requirements of this Section or the deposit in that Reserve Account of an amount sufficient to increase the balance in the Reserve Account to the Series Required Reserve, be reinstated in the amount of such draw or collection within one year of the date of the draw or collection. After such reinstatement, the Trustee shall use amounts deposited in that Reserve Account by the Authority for the replenishment of the portion of the Reserve Account held in cash or Permitted Investments.

### **Redemption Fund**

The Trustee shall establish, maintain and hold in trust a special fund designated as the “**Redemption Fund**.” All moneys deposited by the Authority with the Trustee for the purpose of redeeming Bonds shall, unless otherwise directed by the Authority, be deposited in the Redemption Fund. All amounts deposited in the Redemption Fund shall be used and withdrawn by the Trustee solely for the purpose of redeeming Bonds, in the manner, at the times and upon the terms and conditions specified in the Indenture; provided that, at any time prior to giving such notice of redemption, the Trustee shall, upon receipt of a Request of the Authority, apply such amounts to the purchase of Bonds at public or private sale, as and when and at such prices (including brokerage and other charges, but excluding accrued interest, which is payable from the Interest Fund) as is directed by the Authority, except that the purchase price (exclusive of such accrued interest) may not exceed the Redemption Price then applicable to such Bonds. All Term Bonds purchased or redeemed from the Redemption Fund shall be allocated to Mandatory Sinking Account Payments applicable to such maturity of Term Bonds as may be specified in a Request of the Authority.

### **No Senior Debt; Issuance of Parity Debt**

In the Indenture, the Authority covenants and agrees that it shall not incur any obligations that are secured by a pledge and lien on the Net System Revenues that is senior to the pledge and lien on the Net System Revenues securing the Bonds.

Following the refunding of the 2006 Bond, there will be no outstanding obligations of the Authority payable from the Net System Revenues on a parity with the Bonds. However, the Authority may issue additional bonds, notes or obligations secured under the Indenture equally and ratably with the Bonds, subject to the following conditions:

(1) **No Default.** No Event of Default has occurred and is then continuing under the Indenture.

(2) **Principal Amount.** The aggregate principal amount of bonds may not exceed any limitation imposed by law or by any Supplemental Indenture.

(3) **Payment Dates.** If and to the extent deemed practical in the reasonable judgment of the Authority with regard to the type of Bond to be issued, the principal payments of such additional Series of Bonds shall be due on April 1 in each year in which principal is to be paid and, if the interest on such Series of Bonds is to be paid semiannually, such interest payments shall be due on April 1 and October 1 in each year, as appropriate.

(4) **Debt Service.** The Indenture is amended so as to increase the Payments payable by the Authority thereunder by an amount at least sufficient to pay the interest on and principal of such Additional Bonds as the same become due.

(5) **Debt Service Feasibility.** The Authority must satisfy the debt service feasibility requirements, which are as follows:

*Project Financings.* With respect to the financing of the acquisition or construction of a Project, the Authority may satisfy either the historical coverage test or the projected coverage test. The Authority need not satisfy both coverage tests.

(i) *Historical Coverage.* The historical coverage test is satisfied if the Net System Revenues for either the most recent Fiscal Year for which audited financial statements are available or a period of 12 consecutive months during the 18 months immediately preceding the date of adoption (the “adoption date”) by the Board of the resolution authorizing the issuance of Bonds (the “measurement period”), as evidenced by both a calculation prepared by the Authority and a Coverage Report on such calculation on file with the Authority, shall have produced a sum equal to at least 120% of Annual Debt Service on all Outstanding Bonds and the Bonds to be issued in each of the 5 full Fiscal Years next succeeding the adoption date or in each of the 3 full Fiscal Years next succeeding the date through which interest with respect to the Bonds to be issued has been capitalized, whichever period ends later.

(ii) *Projected Coverage.* The projected coverage test is satisfied if the projected Net System Revenues for each of the 5 full Fiscal Years next succeeding the earlier of (x) the date through which interest with respect to the Additional Bonds to be issued has been capitalized or the execution date or issue date if no interest has been capitalized and (y) the date on which all Projects are expected to commence operations shall be at least 120% of Annual Debt Service in each such Fiscal Year on all Bonds to be Outstanding, as evidenced by both a calculation prepared by the Authority and a Coverage Report on such calculation on file with the Authority. In calculating debt service coverage for this purpose, projected Net System Revenues may include the estimated amount of additional Net System Revenues to accrue to the System from new sales of electric energy anticipated to be generated during such 5-year period by the additions or improvements to or extensions of the System.

*Refundings.* If any such Additional Bonds are issued for the purpose of discharging or defeasing Bonds or Additional Bonds then unpaid and outstanding, the debt service feasibility requirements will be satisfied if, upon such execution or issuance, either (a) the Authority meets the requirements under “—Project Financings” above or (b) a Coverage Report is filed with the Authority to the effect that Annual Debt Service on all Bonds and Additional Bonds to be Outstanding in each future Fiscal Year following such

discharge or defeasance would not exceed Annual Debt Service in that Fiscal Year had such discharge or defeasance not occurred.

**(6) Reserve Account.** Subject to the provisions of the Indenture, the Supplemental Indenture providing for the issuance of such Series shall require that, forthwith upon the receipt of the proceeds of the sale of such Series, either (1) the Reserve Account for such Series be funded in the amount of the Series Required Reserve for such Series (if greater than zero), or (2) if the Authority provides in the Supplemental Indenture providing for the issuance of such Series that such Series will be secured by the Reserve Account established with respect to another Series, the balance in the Reserve Account be increased, if necessary, to an amount at least equal to the Series Required Reserve with respect to all bonds of all Series to be secured by that Reserve Account that are to be considered Outstanding upon the issuance of such Series. The deposit may be made from the proceeds of the sale of such Series or from other funds of the Authority or from both such sources or in the form of a Reserve Facility.

Nothing in the Indenture prevents the Supplemental Indenture providing for the issuance of an additional Series from pledging or otherwise providing, in addition to the security given or intended to be given by the Indenture, additional security for the benefit of such additional Series or any portion thereof.

### **Insurance; Application of Net Proceeds**

The Agency will procure and maintain or cause to be procured and maintained insurance on the System with responsible insurers in such amounts and against such risks (including accident to or destruction of the System) as are usually covered in connection with utility systems similar to the System so long as such insurance is available from reputable insurance companies. In the event of any damage to or destruction of the System caused by the perils covered by such insurance, the Net Proceeds thereof shall be applied to the reconstruction, repair, or replacement of the damaged or destroyed portion of the System. The Agency shall begin such reconstruction, repair, or replacement promptly after such damage or destruction shall occur; shall continue and properly complete such reconstruction, repair, or replacement as expeditiously as possible; and shall pay out of such Net Proceeds all costs and expenses in connection with such reconstruction, repair, or replacement so that the same shall be completed and the System shall be free and clear of all claims and liens. If such Net Proceeds exceed the costs of such reconstruction, repair, or replacement, then the excess Net Proceeds shall be applied to the redemption of the Bonds. If such Net Proceeds are sufficient to enable the Authority to retire the entire obligation evidenced hereby prior to the final maturity of the Bonds, the Agency may elect not to reconstruct, repair, or replace the damaged or destroyed portion of the System, and thereupon such Net Proceeds shall be applied to the prepayment of Bonds.

In addition, the Agency will procure and maintain such other insurance that it deems advisable or necessary to protect its interests, which insurance shall afford protection in such amounts and against such risks as are usually covered in connection with utility systems similar to the System.

Any insurance required to be maintained pursuant to the Indenture may be maintained under a self-insurance or pooled risk program, so long as such self-insurance or pooled risk program is maintained in the amounts and manner usually maintained in connection with utility systems similar to the System. All policies of insurance required to be maintained herein shall provide that the Agency shall be given 30 days' written notice of any intended cancellation thereof or reduction of coverage provided thereby.

## Liquidity Reserve and Covenant

The Authority currently maintains an existing Operating Reserve, as set forth by Authority policy, with the target funding to be a minimum of one year of operating expenses. [The Liquidity Reserve will a component of the Operating Reserve at year of debt service.] [*From Agency -- Need to clarify*]

In addition, the Authority agrees in the Indenture to \_\_\_\_\_. [*Note: To be discussed.*]

## THE AUTHORITY

### Purpose and Powers

The Authority was created in January 2006 as a joint powers authority by the County and the Agency to serve the mutual interests of the County and the Agency to provide for the financing required to obtain a new FERC license for the Project. The Placer County Water Agency Act, which is part of the Water Code of the State of California, states that “no contract for the sale of electrical energy shall be executed, nor shall any revenues received pursuant to any contract for the sale of electrical energy entered into after January 1, 1975, be spent, unless previously approved by the Board of Supervisors of the County”. The JPA Agreement effectively conveyed the Agency’s and County’s interest in the Project and the related revenues to the Authority.

The Authority has the power to, among other things, (1) issue bonds to finance Project relicensing, improvements and operations, (2) review and approve the annual Authority operating budget, (3) review and approve contracts for the sale of electrical energy, and (4) distribute the net revenues from the sale of electrical energy.

### Board of Directors and Management

**Board of Directors.** The Authority is governed by a four-member Board of Directors composed of two members of the Placer County Board of Supervisors and two members of the Placer County Water Agency Board of Directors. Each Board appoints their two members of the Authority Board. The following persons currently comprise the Authority’s Board of Directors:

*Jim Holmes, County Board of Supervisors Member.* Mr. Holmes was elected in 2004 and assumed his seat on the Board of Supervisors January 4, 2005. He is currently serving his 4th term. He represents the 3rd District, an area that includes a portion of North Auburn, Ophir, Newcastle, Penryn, Loomis and the majority of Rocklin. An Auburn native with more than 29 years of business experience, Mr. Holmes has been dedicated to community service throughout his adult life, serving on various local agency boards and community groups. He graduated from Placer High School and Sierra College, and has a bachelor’s degree in political science from Humboldt State University.

*Mike Lee, Agency Board of Directors Member.* Mr. Lee was first elected to the Agency Board in November 2000 and represents District 3 of the Agency. District 3 includes most of the City of Rocklin and all of the communities of Loomis, where he resides, Penryn, Newcastle and Ophir. He has a strong background in public service, having served 16 years on the County Board of Supervisors. He also served as a director of the Agency from 1973 to 1975. Mr. Lee serves on the Board of Directors for Sacramento Valley Teen Challenge, the South Placer Heritage Foundation and the Lincoln Volunteer Center. He is a member and past president for the Lincoln Area Chamber of Commerce

and a member of the Loomis Lions' Club. Mr. Lee is a retired project manager of the Twelve Bridges (a master-planned community) in Lincoln.

*Robert Weygandt, County Board of Supervisors Member.* Mr. Weygandt has been a member of the Board of Supervisors since 1995, and currently lives on the same foothills ranch in rural Lincoln where he grew up. He represents the western portion of the County, including Lincoln, Sheridan, and the western portions of Rocklin and Roseville. He has lived in the County for over 50 years and was recently re-elected to his sixth four-year term. After graduating from Lincoln High School, he earned bachelor's and master's degrees in finance and management from the University of Southern California. He served as vice president, chief financial officer and part owner of WECO Aerospace Systems, an aircraft repair facility based in Lincoln. He also has past experience serving as a county planning commissioner, member of the county economic development board and community college instructor.

*Primo Santini, Agency Board of Directors Member.* Mr. Santini was appointed in June 2013 to the Agency Board and represents District 2 of the Agency. District 2 includes the City of Lincoln, parts of the City of Rocklin and unincorporated County agricultural and rural communities. He is a third-generation "Lincolnite" and a graduate of Lincoln schools and Stanford University. Since 1984, he has been an owner of Cornerstone Associates Insurance Services, Inc. located in downtown Lincoln. Prior to his appointment to the Board, Mr. Santini served two consecutive terms (2000 through 2008) on the Lincoln City Council and served twice (2003 and 2008) as mayor of his hometown. In addition, he served as the council representative on the Regional Water Authority Board, South Placer Regional Transportation Authority, and the ad hoc committee working toward the completion of the Placer County Conservation Plan. He also was the chair of the committee responsible for the award-winning update of the City of Lincoln's General Plan, adopted by the Lincoln City Council in 2008.

**Management.** The Authority's officers are officers of the Agency and the County.

*Einar Maisch, P.E., Executive Director/General Manager of the Agency.* Mr. Maisch was named General Manager of the Agency in February 2015. Mr. Maisch began his career with the Agency in 1985 as the Agency Engineer, serving as senior civil engineer, engineering administrator and director of planning and marketing before being named Director of Strategic Affairs in 2000. He earned a bachelor's degree in civil engineering from California State University, Sacramento in 1979 following service in the U.S. Army, which included a tour of duty in Vietnam. His early engineering career included work for a land development services engineering firm in Sacramento specializing in water resource projects.

*Todd Leopold, Secretary/County Executive Officer.* Mr. Leopold has served as the County Executive Officer for the County since January 2018. In that position, he is responsible for the efficient administration of County business and serves at the pleasure of the County Board of Supervisors. Mr. Leopold has more than 20 years of public sector experience, including in the State of Colorado where he served as the CEO for Adams County for five years. With more than 12 years of budget experience, he demonstrates competency with financial and budgetary responsibilities, business analytics and organizational strategic planning. He holds a bachelor's degree in political science from Eastern New Mexico University and a master's in public administration degree from the University of Colorado. He has been recognized with the National Association of Counties Innovation Award, multiple Alliance for Innovation awards and the Denver Regional Council of Governments Impact Award.

*Joseph Parker, CPA, Treasurer/Director of Financial Services of the Agency.* Mr. Parker joined the Agency in July 2002, prior to which he was a practicing certified public accountant. He has over 30 years of accounting and financial experience with governmental and special district organizations. His background includes 12 years with KPMG as an auditor, accountant and consultant for governmental and special districts. Mr. Parker earned a Masters of Economics from University of California, Santa Barbara (1985) and a Bachelor of Arts degree in Business Economics from University of California, Santa Barbara (1981). Mr. Parker is a certified public accountant (CPA), a member of the American Institute of Certified Public Accountants, a member of the California Society of CPAs, a member of the Government Finance Officers Association, a member of the Association of California Water Agencies and a member of the California Municipal Treasurers Association. Mr. Parker served on the Board and Finance Committee Chair of the Association of California Water Agencies for 10 years (2006-2015).

### **Authority Financial Policies**

The Authority has the following Board adopted Policies

- Energy Marketing Oversight Policy
- General Financial Policies
- Investment Policy
- General Administrative Policies
- Project Operations Protection Policies

### **THE AGENCY**

The Agency was created by a special act of the California State Legislature in 1957 for the purpose of developing and operating water facilities in the County. Pursuant to the Placer County Water Agency Act, the Agency has the powers necessary to form service zones, which are uniquely associated with a given geographic area, to provide sufficient water for the present and future beneficial uses of the lands and inhabitants within the jurisdiction of the Agency.

The Agency's boundaries are conterminous with the borders of the County, and from the establishment of the Agency in 1957 through 1974, the Board of Supervisors of the County served ex officio as the Board of Directors of the Agency. Since 1975, the Agency has been governed by an independent, elected five-member Board of Directors.

The Agency's territory extends over an area of approximately 1,500 square miles, which includes relatively level valley lands in its western portion and extends easterly into the Sierra Nevada mountains to Lake Tahoe and the Nevada state line. It is located immediately northeast of Sacramento County, approximately 100 miles northeast of the San Francisco Bay metropolitan area. Interstate 80 transects Placer County from west to east.

The Agency owns and operates the System and Agency employees manage and staff the operations. The Agency operates the System in accordance with all relevant federal, state and local regulations, licenses and permits, and in accordance with policies of the Agency Board of Directors which emphasize safety, reliability, facility integrity, water supply and generation revenue.

## THE SYSTEM

### Overview

The System is a multi-purpose water supply and hydro-generation project designed to conserve and control waters of the Middle Fork American River, the Rubicon River, and several associated tributary streams. Construction of the System began in 1963 and was completed in 1967. The System stores water from rain and snow during the fall and winter months and releases water all year to meet consumptive demands within western portions of the County, provide recreational experiences, contribute to natural resource preservation and generate hydroelectric power.

The System is located within the Middle Fork American River Watershed within the County at elevations ranging from approximately 1,100 feet to 5,300 feet. Agency personnel in the Agency's Power Division have operated and maintained the System since the commissioning thereof. The System consists of a staff of 33 engineers, operations and maintenance specialists. The System is a highly reliable source of electricity averaging over 90% of performance availability from 2009 to 2015, in addition to maintaining a low forced outage rate of 1%, which measures the portion of downtime due to unplanned factors.

The System diverts, stores, and transports water through a series of stream diversions, reservoirs, canals, and powerhouses before it is released back into the Middle Fork American River below Oxbow Powerhouse, approximately 29 miles upstream of Folsom Reservoir. Overall, the System consists of 5 hydroelectric power plants, 2 main storage reservoirs and 24 miles of tunnels. The System can reliably generate, at peak power, 232.4 megawatts that averages 1 million megawatt hours annually of hydroelectric power. Power generation is sold directly to the CAISO, while other energy products services (renewable energy credits, resource adequacy and carbon-free) are sold through bilateral contracts. All electricity generated by the System is delivered to PG&E's transmission system.

For the 50 years, all power from the System was sold to Pacific Gas & Electric Company ("PG&E") through a Power Purchase Agreement ("PPA") for a term of 50 years in exchange for funds for bond payments, an operating and capital budget, and project insurance. The PG&E PPA expired on April 30, 2013, after which a new short-term PPA was entered into with PG&E that expired on December 31, 2017. On January 1, 2018, the Agency became its own scheduling coordinator to sell the System's power directly through the CAISO energy markets and energy products via bilateral contracts.

The System operates under a Federal Power permit with the Federal Energy Regulatory Commission ("FERC") held by Agency. Water flows to protect and maintain environmental resources are defined in the FERC license. Operation of the System was authorized in 1963 under an initial 50-year FERC license that expired on February 28, 2013. From 2003 to 2012, prior to the expiry of the FERC operating license, Agency staff prepared and concluded all technical, environmental, and economic assessments to support re-licensing of the System. Since the expiration of the license in 2013, the Agency has continued to operate the System under an annual FERC license that is issued year-to-year with terms and conditions of the prior license until a new license will be issued. The Agency anticipates being granted a new license with a term of at least 40 years sometime between January and April 2020.

## System Facilities

The backbone of the System is its two principal water storage reservoirs (French Meadows and Hell Hole). These reservoirs are located on the Middle Fork American River and the Rubicon River, respectively, and have a combined gross storage capacity of 342,583 acre-feet. There is also a third storage reservoir (Ralston Afterbay) of 2,278 acre-feet, as described below.

**Reservoirs and Related Facilities.** Starting at the highest elevation of the System, water is diverted from Duncan Creek at the Duncan Creek Diversion and routed through the 1.5-mile-long Duncan Creek-Middle Fork Tunnel into French Meadows Reservoir (134,993 ac-ft of gross storage). Flows in the Middle Fork American River are captured and stored in French Meadows Reservoir along with diversions from Duncan Creek. From French Meadows Reservoir, water is transported via the 2.6-mile-long French Meadows-Hell Hole Tunnel, passed through the French Meadows Powerhouse (installed generating capacity of 15.3 MW) and released into Hell Hole Reservoir (207,590 ac-ft of gross storage). Flows in the Rubicon River are captured and stored in Hell Hole Reservoir along with water released from French Meadows Reservoir through French Meadows Powerhouse. Water released from Hell Hole Reservoir into the Rubicon River to meet instream flow requirements first pass through the Hell Hole Powerhouse (installed generating capacity of 0.73 MW), which is located at the base of Hell Hole Dam.

From Hell Hole Reservoir, water is also transported via the 10.4-mile-long Hell Hole-Middle Fork Tunnel, passed through the Middle Fork Powerhouse (installed generating capacity of 122.4 MW) and released into the Middle Fork Interbay (175 ac-ft of gross storage). Between Hell Hole Reservoir and Middle Fork Powerhouse, water is diverted from the North and South Forks of Long Canyon creeks directly into the Hell Hole-Middle Fork Tunnel. Water diverted from these creeks into the Hell Hole-Middle Fork Tunnel can either be stored in Hell Hole Reservoir or be used to augment releases from Hell Hole Reservoir to the Middle Fork Powerhouse.

Flows from the Middle Fork American River (including instream flow releases from French Meadows Reservoir) are captured at Middle Fork Interbay along with water released from Hell Hole Reservoir through Middle Fork Powerhouse. From Middle Fork Interbay, water is transported via the 6.7-mile-long Middle Fork-Ralston Tunnel, passed through the Ralston Powerhouse (installed generating capacity of 79.2 MW) and released into the Ralston Afterbay (2,782 ac-ft of gross storage). Flows from the Middle Fork American River (including instream releases from Middle Fork Interbay) and flows from the Rubicon River (including instream releases from Hell Hole Reservoir) are captured in Ralston Afterbay along with water transported from Middle Fork Interbay through Ralston Powerhouse. From Ralston Afterbay, water is transported via the 400-foot-long Ralston-Oxbow Tunnel, passed through the Oxbow Powerhouse (installed generating capacity of 6.1 MW) and released to the Middle Fork American River.

The Middle Fork and Ralston Powerhouse run in tandem, using water transported from Hell Hole Reservoir to Ralston Afterbay. Together the two Powerhouse have a reliable generating capacity of 210 MW and produce about 90% of the System's annual generation. Although Middle Fork Interbay is located between these Powerhouse, Interbay has little ability to re-regulate flows

because of its small storage capacity. If the flows through the Middle Fork and Ralston powerhouses are not matched Interbay would be either drained or overtopped within minutes.

**Other Hydroelectric Facilities.** In addition to the major water and power facilities, the System includes 35 project roads (totaling almost 18 miles) and 10 project trails (totaling approximately 0.5 miles). These roads and trails are used almost exclusively by the Agency personnel to access and maintain System facilities. The roads and trails represent less than 1% of the total miles of roads and trails in the watershed. There are also over 6 miles of System powerlines and communication lines, which provide power to operate System equipment and allow communication between facilities. In addition, numerous smaller facilities and features support System operations, including flow gaging stations and weirs, photovoltaic poles, microwave reflectors and radio towers, sediment disposal sites, generator and storage buildings, operator cottages, a maintenance shop, a dormitory facility, and security and public safety fences.

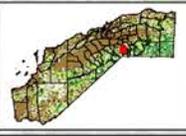
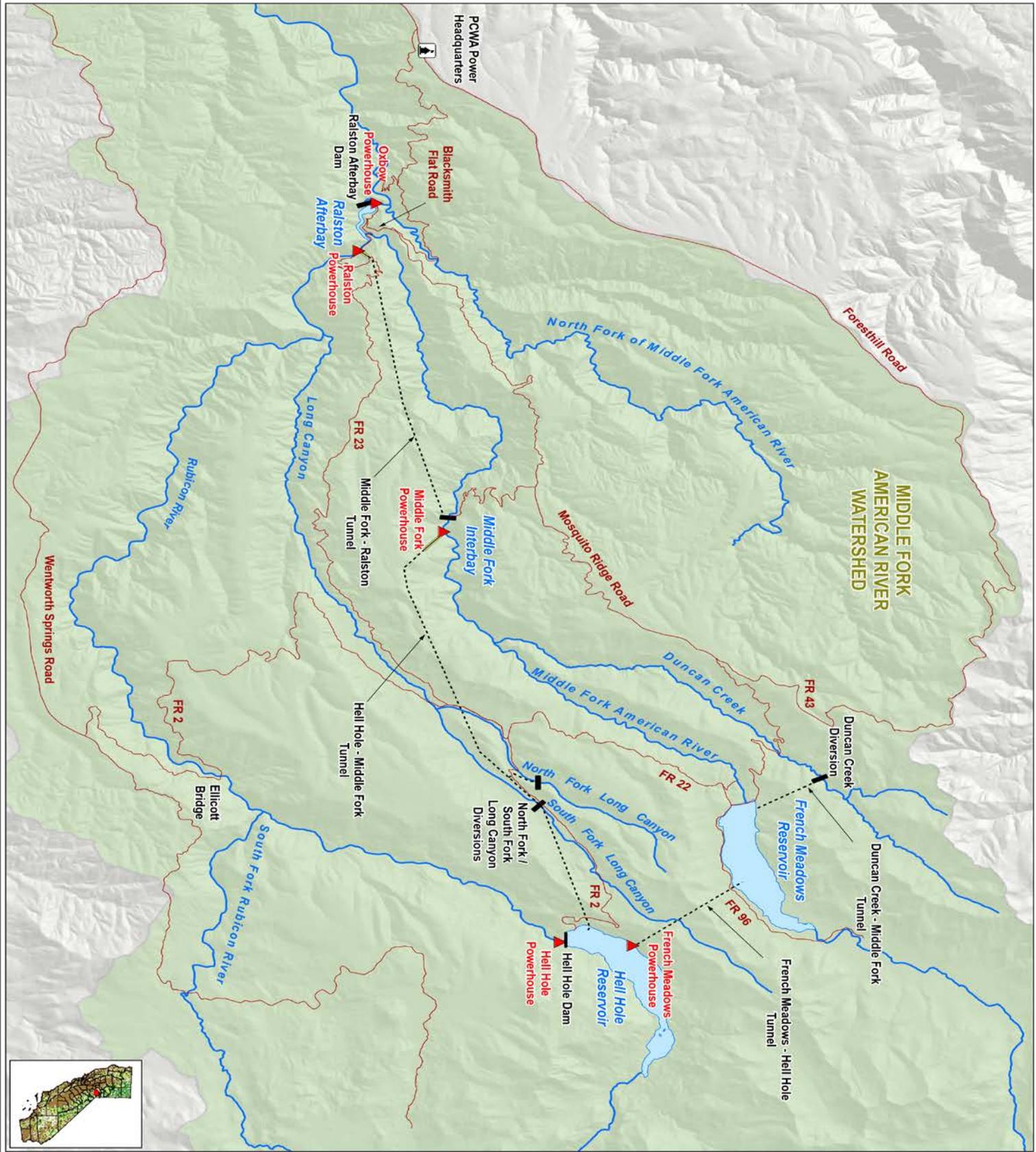
**Recreation Facilities.** The System also includes 21 developed recreation facilities to enable public access to public lands and reservoirs. The developed recreation facilities are concentrated around French Meadows Reservoir, Hell Hole Reservoir, South Fork Long Canyon Diversion Pool, and Ralston Afterbay. The Agency is responsible for operation and maintenance of these facilities. The System recreation facilities augment other recreation facilities in the watershed operated by other governmental agencies.

### **Regulatory**

The MFP is operated in compliance with numerous federal, state and local licenses, permits, rules and regulations, a partial list of which includes:

- Federal Energy Regulatory Commission (FERC) license and regulations, including operational, environmental and safety regulations. Annual inspections, five-year Part 12 Dam Safety Inspection, annual update of Emergency Action Plan.
- Division of Safety of Dams (DSOD), California entity regulating dam safety. Annual inspections and reports.
- United States Forest Service (USFS) permits and conditions, covering road, environmental, and recreation operations.
- State Water Resources Control Board (SWRCB) licenses and permits, covering water use, rater rights, and environmental conditions.
- OSHA, CDFW, EPA, Cal EPA, California State Forestry, California DWR, CARB, State Lands Commission, California State Parks – permits, coordination and regulations for safety, fire protection, aquatic environment, recreation, access and coordinated operations.

**System Map.** A map showing the facilities of the System is set forth on the following page.



**Project Facilities**

- ▲ Powerhouse
- Dam
- ..... Tunnel
- ..... Penstock

**Transportation**

- Road

**Hydrography**

- Watercourse
- Water Body
- Middle Fork American River Watershed\*

\*Modified from Calwater Ver. 2.2 to represent drainage above high-water mark of Folsom Lake



Pleaser County Water Agency  
Middle Fork American River Project

Map 1-1

Middle Fork American River  
Project and Vicinity



Projection: CA State Plane, Zone 2  
Datum: NAD 83

## Power Production and Demand

**Overview.** Hydroelectric power from the System is produced at five powerhouses with a combined reliable generating capacity of 232.4 MW. Systems operations for water supply and electric power generation are constrained by regulatory and contract requirements, the physical capacities of the System facilities, and water availability. Regulatory and contract requirements include conditions imposed by the FERC license (described below), water rights permits, water delivery contracts, and the existing power purchase contracts with PG&E. Water availability is influenced by carryover storage in the System reservoirs and the timing and quantity of annual runoff.

Water supply operations take priority over power generation operations. However, in all but dry years, current water supply demands are easily met as a by-product of power generation. Consumptive water and electrical demands tend to coincide seasonally and the System generally controls and releases far more water annually than the Agency requires to meet its consumptive water demand. The majority of the Agency's consumptive deliveries are withdrawn from Folsom Reservoir, where the United States Bureau of Reclamation ("**USBR**") allows for a 30-day balancing of supply and demand; thus, hourly or even daily releases from the System do not need to explicitly match consumptive deliveries from Folsom Reservoir. Only the re-diversion of water for consumptive demand at the American River Pump Station near Auburn (maximum 100 cfs) requires hourly balancing to meet continuous minimum instream flows requirements below the pumping station.

The System produces an average of 1,000,000 MWh annually on mean generation flows of 452,000 ac-ft. The highest annual generation was in 1983, a wet water year, when the System produced approximately 1,815,000 MWh on flows of 714,400 ac-ft. The lowest annual generation was in 1977, a critically dry water year, when the System only produced 211,000 MWh on flows of 75,000 ac-ft.

**Hydrology and Water Supply.** The System is situated in the foothills and mountainous uplands of the western slope of the central Sierra Nevada, primarily within the County. The System facilities are located on the Middle Fork American River, the Rubicon River, Duncan Creek, and the North and South forks of Long Canyon Creek, within an area referred to as the Middle Fork American River Watershed. The Watershed is characterized by hot, dry summers and mild, wet winters, with most of the precipitation falling between October and March. Precipitation falls as rain in the lower elevations and snow at elevations greater than 5,000 feet mean sea level (msl). Elevations higher than about 6,000 feet msl typically are covered with snow until May. Mean annual precipitation in the Watershed ranges from approximately 35 inches in dry years to 94 inches in wet years. The System is required to maintain minimum stream flows at 8 locations under the new license. The minimum stream flows will vary by 6 water year types (Wet, Above Normal, Below Normal, Dry, Critical and Extreme Critical), as determined by DWR's Bulletin 120 forecast of unimpaired inflow below Folsom Reservoir. The highest minimum flows will be required in the wettest years; the lowest minimum flows will be in the driest years and are the same as the existing dry year flow requirements. Overall, the highest minimum flows are required downstream of Oxbow Powerhouse, where the vast majority of the time hydro and water supply operations release flows well in excess of the minimum required. The Wet and Above Normal water year types would be considered "wetter" year types, and historically accounted for just over 55% of water years in the historic record. Of the "drier" year types, Critical and Extreme Critical account for only 7.5% of occurrences in the historic record, and Below Normal and Dry about 37.4%.

Precipitation, temperatures, soil moisture levels and snowfall accumulation are monitored in the vicinity of the System through a network of monitoring and recording stations operated by numerous entities, including the National Weather Service, California Department of Forestry

(CDF), United States Department of Agriculture-Forest Service (USDA-FS), United States Bureau of Reclamation (USBR), and the Agency. Measurements are collected at higher elevations near Duncan Creek (7,100 feet) down to the lower elevations near Folsom Dam (350 feet). The Agency uses this information flow to continuously monitor and plan for runoff conditions.

The amount of runoff derived from rainfall and snowmelt can vary greatly. Occasionally, very intense and localized winter rainstorms result in substantial runoff. The typical snowmelt period, when runoff and stream flows are high, is April through mid-June. Snowmelt runoff can occur earlier in drier years and last longer during wetter years. Total System inflow (combined flows from Duncan Creek, Middle Fork American River, Rubicon River, and Long Canyon Creek) for the period 1975 to 2019 averaged approximately 379,015 ac-ft and ranged from a low of approximately 62,638 ac-ft to a high of more than 790,820 ac-ft (more than a tenfold difference) [Agency: *Need to verify numbers*].

**Seasonal Variability.** The total annual flow through the System and the resulting total annual generation are highly variable. Typical annual operation of the System results in the capture of runoff which is diverted to increase storage in French Meadows and Hell Hole reservoirs in the winter and spring (filling period), and drawdown of the reservoirs during the summer, fall, and early winter (release period).

During the filling period, flows through the System powerhouses are highly dependent on projected and actual runoff conditions. In drier years, power releases are minimized during the filling period to increase the volume of water in storage to meet upcoming summer consumptive use and peak power demands. In wetter years, power releases during the filling period are increased to minimize spills from the reservoirs. In “normal” years, when minimum storage levels to meet consumptive demands are reasonably assured and the chance of spilling is low, power releases are adjusted through the filling season based on the volume of water in storage, projected runoff, and current and projected power values.

Daily and hourly releases for generation are very flexible. During the release period, flows are managed to: (1) meet storage and flow license requirements; (2) meet consumptive water supply requirements; (3) optimize power generation to meet peak electrical demand; and (4) achieve end of year carryover target storage levels.

The Agency’s staff utilizes a number of tools and models to continuously track real and projected inflow, reservoir elevations, and System conditions. Staff monitors current and forecast energy market conditions, in parallel to forward market indicators (e.g. natural gas), and daily CAISO market results. The Agency continuously updates its forecasts of anticipated market conditions, with the goal of generating only in the most valuable hours given the current fuel (water) supply. Water supply operations take priority over power generation operations. However, in all but very dry years, water supply demands are normally met as a by-product of power generation. The reason is that both consumptive water and electrical demands tend to coincide seasonally and generally far more water is controlled and released annually than the Agency requires to meet its consumptive water demand. In addition, the majority of Agency’s consumptive deliveries are withdrawn from Folsom Reservoir, where the Bureau of Reclamation allows for 30 day balancing of supply and demand. Only the re-diversion of water for consumptive demand at the American River Pump Station near Auburn requires real time balancing of releases and diversions to meet continuous minimum instream flows requirements below the pumping station.

The System’s hydro operating characteristics are flexible, allowing storage of fuel (water in the reservoirs) for generation during the most valuable seasons, and highly flexible release capabilities to respond to energy market signals on an hourly or sub-hourly time step. System powerhouses can ramp up from zero to full load within eight minutes, and back down to zero in

another eight minutes. The fast ramping capability allows maximum dispatch flexibility by the CAISO to manage increasing amounts of intermittent resources such as wind and solar.

The highest annual generation of record (1983) was approximately 1,815,000 MWh on throughput of 714,400 ac-ft. The lowest annual generation of record (1977) was 211,000 MWh on throughput of 75,000 ac-ft.

**Powerhouse Operations.** The Middle Fork and Ralston powerhouses are the heart of System's hydroelectrical generation. These two powerhouses generally run in tandem, using water transported from Hell Hole Reservoir to Ralston Afterbay. Together, the two powerhouses have a rated capacity of 201.6 MW and produce about 90% of the System's annual generation. Although Middle Fork Interbay is located between these powerhouses, Middle Fork Interbay has little ability to re-regulate flows because of its small storage capacity (175 acre-ft). If the flows through the Middle Fork and Ralston powerhouses are not matched, Middle Fork Interbay would be either drained or overtopped very quickly.

These powerhouses, running in tandem, are often used to help maintain reliable operations of the transmission grid by fine-tuning the flow of electricity in the grid to balance supply and demand. When operated to provide grid regulation, flow rates through the powerhouses vary quickly to meet constantly changing energy supply and demand conditions. These powerhouses are also frequently block loaded,. When block loaded, flows through the powerhouses are usually set at an efficient operating level and run for a prescribed number of hours per day, depending upon hydrology.. For the most part, hydrology permitting, PG&E operated the System by block loading (consistent unit generation hour-over-hour, as opposed to load-following) the generation to fulfill their load requirements

French Meadows Powerhouse is used when water is moved from French Meadows Reservoir to Hell Hole Reservoir. It is nearly always operated in block-loaded condition, with the duration of the block of operation set depending on the volume of water to be moved.

Ralston Afterbay and Oxbow Powerhouse are the final steps in the System. Oxbow Powerhouse frequently runs in tandem with Middle Fork and Ralston powerhouses. Presently, water is released from Oxbow Powerhouse to the Middle Fork American River at the same rate it enters Ralston Afterbay. However, Ralston Afterbay has sufficient operational storage capacity (about 1,200 acre-ft out of 2,782 acre-ft gross) to allow Oxbow Powerhouse to operate independently of Middle Fork and Ralston powerhouses for several hours at a time. This independent operational flexibility is used to meet the ramping rate requirement downstream of Oxbow Powerhouse, and to make weekend releases for whitewater rafting without requiring operation of the Middle Fork and Ralston powerhouses.

**Performance.** Under the former power purchase agreement with PG&E, PG&E marketed and dispatched generation to meet their customer energy portfolio needs. PG&E reimbursed the Agency for the operating costs and paid the debt service on the constructed asset. For the most part, hydrology permitting, PG&E operated the System the generation to fulfill its load requirements. On May 1, 2013, this changed with the expiration of the 50-year power purchase agreement. The Agency began marketing, dispatching and receiving the benefit of the generation. As a result, the Agency's marketing decisions focused on maximizing revenue based on hydrologic conditions and energy prices with those revenues being directed to the Authority.

Currently, the Agency's energy marketing staff ("Energy Marketing") manages the sale of System energy and capacity into forward, CAISO day-ahead and real-time markets with the primary goal of maximizing revenue. To that end, Energy Marketing assesses market fundamentals, including, but not limited to, infrastructure availability, hydro-conditions and outlook, natural gas supply-demand balances, California electric energy supply-demand

balances, and weather forecasts, formulating strategies to manage and optimize the sale of System energy and capacity among available market options. In benchmarking outcomes, staff compares monthly actual, realized System revenue to an optimal dispatch of available energy into the CAISO's day-ahead market. That optimal dispatch averages prices by hour for each month, ranks them from highest to lowest, and assumes System energy is dispatched to capture the highest priced hours. Since May 1, 2013, Energy Marketing has realized \$13.4 million or 8.7% in added value through its market management effort.

**FERC License.** The System is operated by the Agency in accordance with an annual FERC license; a new [40-year] FERC license is anticipated to be obtained between January and April 2020. [*Additional relevant details -- any material operational condition?*]

## Operations and Maintenance of the System

The System is owned and operated by the Agency. To maintain and protect system reliability, the Agency conducts annual inspections, testing, and maintenance of System facilities. Annual maintenance is scheduled at a time when the work can be expeditiously completed (during favorable flow and weather conditions) and have the least effect on water supply deliveries and power production. These activities typically occur for facilities in the lower area of the System beginning in late September, and require that the lower System powerhouses (Middle Fork, Ralston, and Oxbow) be taken out-of-service for 3-6 weeks. During the fall maintenance period, Middle Fork Interbay and Ralston Afterbay water levels are lowered to allow access to the facilities. Consumptive demands and instream flow requirements downstream of Oxbow Powerhouse during the fall outage are typically met by increasing flow releases from Hell Hole Reservoir into the Rubicon River.

Inspection, testing, and the maintenance of facilities in the upper area of the System (French Meadows and Hell Hole powerhouses), typically occur during the spring, once the roads to the System facilities are passable. The Agency also implements routine maintenance activities within and around System facilities.

**Historical Water Inflows; System Reliability and Power Sales.** Annual operations and hydroelectric generation are strongly influenced by inflows of water into the System facilities and its reliability; therefore, continual efforts are made to maintain the reliability of the System. The development of predictive maintenance and condition monitoring has proven to increase the health of the System and predict outages. The following table shows annual water inflows, outflows, availability of the System, power sold, average prices, and total power sales for the past 5 years.

**Table No. 1  
MIDDLE FORK PROJECT  
COMBINED HISTORICAL HYDROLOGY, AVAILABILITY, AND POWER SALES**

<u>Calendar Year</u>	<u>Annual Water Inflows (Acre-Feet)</u>	<u>Annual Water Outflows (Acre-Feet)</u>	<u>System Availability</u>	<u>Forced Outage Rate</u>	<u>Power Sold (MWh)</u>	<u>Avg On-Peak<sup>(1)</sup></u>	<u>Avg Off-Peak<sup>(1)</sup></u>	<u>Total Power Sales</u>
2014	502,161	582,749	91.9%	0.6%	514,966	\$42.89	\$50.71	\$29,176,690
2015	387,104	387,104	89.1%	1.6%	310,498	30.37	38.94	16,038,953
2016	1,432,817	1,037,246	90.0%	1.0%	1,009,316	23.66	30.25	31,137,534
2017	2,508,903	1,375,273	91.8%	0.4%	1,417,914	26.95	37.09	46,272,104
2018	860,058	983,457	89.5%	0.1%	838,442	31.10	42.20	41,073,464

(1) On / Off Peak Pricing is at the average CAISO price at the System/MFP node.  
Source: Middle Fork Project Finance Authority

**Power Generation Production.** The System is operated to meet consumptive water and electrical energy needs and is broken down into two categories as determined by the California Energy Commission (“CEC”): large hydro, which are facilities larger than 30 megawatts, and small hydro. Small hydro plants qualify as renewable energy under the Renewables Portfolio Standard. The following table shows the historical electrical energy generation grouped by facility size.

**Table No. 2  
MIDDLE FORK PROJECT  
ANNUAL ENERGY GENERATION (MWH)**

<u>Calendar Year</u>	<u>Large Hydro Generation (MWH)<sup>(1)</sup></u>	<u>Small Hydro Generation (MWH)<sup>(2)</sup></u>	<u>Total (MWH)</u>
2014	476,353	38,613	514,966
2015	290,622	19,876	310,498
2016	929,442	79,874	1,009,316
2017	1,288,703	129,211	1,417,914
2018	771,900	66,542	838,442

(1) Large hydro facilities are larger than 30 MW of generation capacity, which includes the Middle Fork and Ralston Powerhouses.

(2) Small hydro facilities are smaller than 30 MW of generation capacity, which includes the French Meadows, Oxbow and Hell Hole Powerhouses.

Source: Middle Fork Project Finance Authority.

**Electrical Demand Production.** The System is able to generate electricity during periods of peak demand, as shown in the following Figure 1. Within a day, California power demand peaks between 5 am and 8 am, and between 4 pm and 9 pm; however, solar power generating peaks around 2 pm, then declines rapidly, requiring other generation resources, such as hydrogenation, to quickly ramp down in the morning and ramp up in the early evening, allowing the market to balance and ensuring grid integrity.

**Figure No. 1  
MIDDLE FORK PROJECT  
SEASONAL POWER PRICES (MWH) AND SALES**

<u>Calendar Year</u>	<u>1<sup>st</sup> Quartile Price</u>	<u>Highest MWH Sales</u>	<u>2<sup>nd</sup> Quartile Price</u>	<u>2<sup>nd</sup> Highest MWH Sales</u>	<u>3<sup>rd</sup> Quartile Price</u>	<u>3<sup>rd</sup> Highest MWH Sales</u>	<u>4<sup>th</sup> Quartile Price</u>	<u>4<sup>th</sup> Highest MWH Sales</u>
2014								
2015								
2016								
2017								
2018								

Source: Middle Fork Project Finance Authority

**Figure 1 Graph**

**Capital Investment Program**

**History of Investments.** Over the past 20 years, the Agency’s Power System Maintenance team completed a significant number of upgrades and replacements projects for the System, enhancing reliability and operational flexibility. From 2000 through mid-2019 a total of

\$147.9 million has been spent on capital projects for the System. Much of the spending has been for upgrades and efficiency improvements. Representative projects include:

- Widening of the LL Anderson Dam (French Meadows Reservoir) Spillway (\$18.5M, 2014)
- New runners for Middle Fork and Ralston Powerhouses
- Rewind at Ralston Powerhouse (\$5.4M, 2008)
- French Meadows Low Level Outlet repair (\$1.5M, 2008)
- System Control & Instrumentation (\$1.3M, 2012)
- Middle Fork Powerhouse Runner Replacement (\$1.3M, 2011)
- Replaced Microwave communication system (\$1.2M, 2009)
- Power Resources Management (\$2.8M, 2013)
- Governor upgrades in Middle Fork and Ralston Powerhouses (\$1.9M, 2013)
- Middle Fork Powerhouse Excitation Upgrade (\$2.2M, 2016)
- Middle Fork Powerhouse Outlet Works upgrades \$1.1M, 2019)
- Duncan Creek Diversion Upgrade (\$1.3M, 2019)
- Communications Upgrade (\$13.2M, 2019)
- Oxbow Powerhouse Upgrade (\$0.4M, 2019)

**Current Five-Year CIP.** In October 2019, the Authority adopted the 2020 Budget, which includes a 5-year capital investment program (“CIP”) for the System covering the years 2020 – 2024. Because the new FERC license is anticipated to be received in early 2020, and as set forth in the new FERC license requirements, certain capital projects have specific construct-by dates with construction deadline of 3 years, 5 year after the license issuance, the Current Five Year CIP has significant FERC License Implementation Projects such as addition seasonal storage, diversion dam upgrade and road management and for recreation projects such as campground rehabilitation, water supply facilities, refuse facilities upgrade and boat ramp enhancements. The 5-year CIP for certain projected years was modified in the table below to align to anticipated cash flows

The following table sets forth the five-year CIP by category:

**Table No. 3  
MIDDLE FORK PROJECT FINANCE AUTHORITY  
CAPITAL INVESTMENT PROGRAM (CIP)<sup>(1)</sup>**

<u>CIP Category</u>	<u>Adopted Budget 2020</u>	<u>Projected 2021</u>	<u>Projected 2022</u>	<u>Projected 2023</u>	<u>Projected 2024</u>
Upgrades	\$3,350,000	\$1,300,000	\$290,000	\$450,000	\$575,000
Renewal, Replacement and Reliability	3,550,000	2,000,000	3,500,000	1,050,000	150,000
FERC License Implementation Projects <sup>(2)</sup>	<u>3,181,366</u>	<u>8,690,216</u>	<u>8,568,258</u>	<u>9,722,250</u>	<u>8,702,800</u>
<b>Total</b>	<b>\$10,081,366</b>	<b>\$11,990,216</b>	<b>\$12,358,258</b>	<b>\$11,222,250</b>	<b>\$9,427,800</b>

(1) The Authority funds the ongoing CIP with cash from operations.

(2) FERC License Implementation Projects are considered one-time capital projects. These projects have specific implementation requirements based on the anticipated new FERC license.

Source: Authority Budget and Authority Treasurer.

## CAISO, CPUC and CEC

**CAISO Controlled Grid.** The CAISO provides a market for the purchase and sale of electrical energy produced within the CAISO, as well as a market for energy imports into and exports out of, the CAISO. Under current CAISO operating protocols, users of the grid pay per MWh charges for uses of the transmission system for the flow power in, and out of the CAISO.

**California Public Utilities Commission (“CPUC”).** The Authority sells power into the wholesale energy market and does not have or set rates for retail customers. The Authority is not subject to the regulatory jurisdiction of the CPUC.

The CPUC defines three content categories for renewable generation facilities, depending on the location and connection status of the renewable generator. Portfolio Content Category (PCC) 1, 2 and 3 have different market values, with PCC-1 having the highest value. All of the System’s renewable-eligible resources (French Meadows, Oxbow, and Hell Hole) are PCC-1.

**California Energy Commission (“CEC”).** The CEC is authorized to evaluate rate policies for electric energy as related to goals of the Energy Resources Conservation and Development Act and make recommendations to the Governor, the Legislature and publicly-owned electric utilities. Historically, the CEC has not set power prices at which the Agency can sell power.

### **Operation of the System by the Agency**

*The System is owned and operated by the Agency. The Agency’s management and employees manage and operate the System, subject to the JPA Agreement of the Authority described above. The following sections provide additional information regarding the employees and insurance of the Agency.*

**Employee Relations.** The Agency has two formal employee bargaining units. The general employees’ bargaining units for both the Water Division and Power Division are represented by I.U.O.E. Stationary Engineers Local 39. The Department Managers, Mid-Management and Confidential bargaining units are unrepresented. The current memorandum of understanding for each group expires on December 31, 2020. The Agency considers its employee relations to be good, and has experienced no labor strikes.

**Insurance.** With respect to the System and the Agency’s Power Division, the Agency is obligated under the Indenture to maintain insurance on the System with responsible insurers in such amounts and against such risks (including accident to or destruction of the System) as are usually covered in connection with water systems similar to the System so long as such insurance is available from reputable insurance companies.

Any insurance required to be maintained pursuant to the Indenture may be maintained under a traditional insured program, self-insurance program or pooled risk program, so long as the insurance or pooled risk program is maintained in the amounts and manner usually maintained in connection with similar systems in California.

The Agency purchases an all-risk policy for the direct physical loss or damage including boiler explosion and machinery breakdown through an insurance tower with ACWA-JPIA. This insurance is furnished by a surplus market through Lloyd’s of London facilitated by Alliant Insurance. The specific policy has \$250,000,000 million in limits, with specific sub-limits and a 1,000,000 self-insured retention. This policy additionally covers business interruption for losses triggered by a covered property loss. Commercial General Liability Insurance is covered through American Alternative Insurance with an excess tower from Travelers Insurance. There is a total limit of \$25,000,000 Million in CGL coverage with a \$25,000 self-insured retention. In addition to these basic coverages Agency carries Workers’ Compensation, Public Officials, Pollution, Cyber Liability and Crime Bond coverage to round-out the insurance program

**Retirement Program.** *This caption contains certain information relating to PERS (defined below). The information is primarily derived from information produced by PERS, its independent accountants and actuaries. None of the Authority, the Agency, the Municipal Advisor and the*

Underwriter has independently verified the information provided by PERS and makes no representations and expresses no opinion as to the accuracy of the information provided by PERS. The comprehensive annual financial reports of PERS are available on its Internet website at [www.calpers.ca.gov](http://www.calpers.ca.gov). The PERS website also contains PERS' most recent actuarial valuation reports and other information concerning benefits and other matters. Such information is not incorporated by reference herein. None of the Agency, the Municipal Advisor and the Underwriter can guarantee the accuracy of such information.

Actuarial assessments are "forward-looking" statements that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may not materialize or may be changed in the future. Actuarial assessments will change with the future experience of the pension plans.

**Plan Description.** The Agency provides retirement benefits through the State of California Public Employees' Retirement System ("**PERS**"), an agent multiple-employer defined benefit retirement plan that acts as a common investment and administrative agent for various local and state governmental agencies within the State. All qualified permanent and probationary employees are eligible to participate in the Local Government's Miscellaneous Plan (the "**Plan**"), a. Benefit provisions under the Plans are established by State statute and Local Government resolution.

**Benefits Provided.** PERS provides service retirements and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full-time employment. The Public Employees' Pension Reform Act ("**PEPRA**") of 2013 was created with the passing of Assembly Bill 340 ("**AB 340**") signed by the Governor in September 2012. PEPRA implemented new benefit formulas, final compensation period and new contribution requirements for new employees hired on or after January 1, 2013, who meet the definition of "new member" under this bill.

Approximately 33 full-time equivalent employees (FTE) of the Agency, or 15% of total FTEs of the Agency, would be allocable to the operations of the System thus, a corresponding percentage of the PERS costs are reimbursed by the Authority.

**Funding Policy.** The Agency currently makes a portion of the contributions required of Agency classic member employees on their behalf and for their account. The contribution rates below are set by statute and therefore, generally remain unchanged from year to year. The present actuarially determined rates of annual covered payroll are as follows:

<u>Category</u>	<u>Classic Member Rates as a % of Wages</u>	<u>PEPRA Member Rates as a % of Wages</u>
Local Miscellaneous Members	8.00%	6.25%

The contribution requirements of the plan members are established by State statutes, and the employer contribution rate is established and may be amended by PERS. The table below reflects the Plans' provision and benefits in accordance with PEPRA at June 30, 2018:

	<u>Prior to Jan. 1, 2013</u>	<u>On or After Jan. 1, 2013</u>
Hire Date		
Benefit Formula	2.7% @ 55	2.0% @ 62
Benefit Vesting Schedule	5 Year Service	5 Year Service
Benefit Payments	Monthly for Life	Monthly for Life
Retirement Age	50-55	52-67
Monthly Benefits, as a % of Eligible Compensation	2.0% to 2.7%	1.0% to 2.5%
Required Employee Contribution Rates	8%	6.25%
Required Employer Contribution Rates	23.71%	23.71%

*Contribution Description.* Section 20814(c) of the California Public Employees' Retirement Law ("PERL") requires that the employer contribution rates for all public employers are determined on an annual basis by the actuary and shall be effective on July 1 following notice of a change in the rate. The total plan contributions are determined through the PERS annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. Employer contribution rates may change if plan contracts are amended. Payments made by the employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contribution requirements are classified as plan member contributions.

The table below shows the recent history of the Agency's actuarial accrued liability, the market value of assets, the funded ratio, and the annual covered payroll. Information for 2019 is not currently available.

**(Dollars in Thousands)**

<b>Valuation Date</b>	<b>Accrued Liabilities</b>	<b>Market Value of Assets</b>	<b>Unfunded Liability</b>	<b>Funded Ratio</b>	<b>Annual Covered Payroll</b>
6/30/12	\$86,443	\$54,719	\$31,723	63.3%	\$12,941
6/30/13	92,978	62,338	30,640	67.0	14,165
6/30/14	104,550	73,393	31,157	70.2	14,979
6/30/15	110,681	74,881	35,800	67.7	15,408
6/30/16	118,004	74,648	43,356	63.3	16,347
6/30/17	125,720	83,092	42,627	66.1	17,574
6/30/18	137,489	90,161	47,328	65.6	18,409

*Source: PERS Annual Valuation Report as of June 30, 2018.*

On July 18, 2016, PERS announced preliminary investment returns for the 12-month period ended June 30, 2016, of 0.61%. Such returns are significantly lower than PERS' assumed rate of investment return (7.50%) and, along with other factors (including future investment returns and contributions rates), may result in increased required contributions in the future.

*Recent Actions Taken by PERS.* During the period 2013 through 2016, the PERS' Board of Administration took various actions impacting the contributions owed by the Agency under the Plan, including relating to amortization and smoothing policies, demographic actuarial assumptions, funding risk mitigation policies and other matters. On December 21, 2016, the Board of Administration voted to lower its discount rate from 7.5% to 7.0%, over a three fiscal year period ending with Fiscal Year 2019-20.

*Pension Reform Act of 2013 (Assembly Bill 340).* On September 12, 2012, Governor Brown signed AB 340, a bill that enacted PEPPRA and amended various sections of the California Education and Government Codes, including the County Employees Retirement Law of 1937. AB 340 (i) increases the retirement age for new State, school, and city and local agency employees depending on job function, (ii) caps the annual PERS pension benefit payout for members hired after January 1, 2013, (iii) addresses numerous abuses of the system, (iv) requires State, school, and certain city and local agency employees hired after January 1, 2013 to pay at least half of the costs of their PERS pension benefits and (v) determines final compensation for members hired after January 1, 2013 based on the highest average annual pensionable compensation earned over a period of at least 36 consecutive months. PEPPRA will apply to all public employers *except* the University of California, charter cities and charter counties (except to the extent they contract

with PERS). The provisions of AB 340 went into effect on January 1, 2013 with respect to State employees hired on that date and after; local government employee associations, including employee associations of the Agency, will have a five-year window to negotiate compliance with AB 340 through collective bargaining. If no deal is reached by January 1, 2018, a city, public agency or school district could force employees to pay their half of the costs of PERS pension benefits, up to 8 percent of pay for civil workers and 11 percent or 12 percent for public safety workers.

**Other Post-Employment Benefits (OPEB).** Based on Memoranda of Understanding (“MOU”) between the Agency and the employees’ union, retirees may purchase health coverage with unused sick leave. The cost to the Agency in the year ended December 31, 2018, was \$12,784. The Agency also provides other post-employment healthcare benefits (“OPEB”) to retirees through PERS. In addition, the Agency contributes the larger of the Public Employees’ Medical and Hospital Care Act (“PEMHCA”) and MOU benefit. The cost to the Agency in 2018 was \$955,766.

As part of implementation of Governmental Accounting Standards Board’s Statement No. 45 (“**Statement No. 45**”), which requires, among other things, that the Agency account for post-employment benefits other than pension benefits, in 2008, the Agency elected to pursue a fully prefunded program and establish an irrevocable trust to provide a funding mechanism for OPEB and apply the provisions of Statement No. 45 on a prospective basis. The trust is administered by PERS through its California Employers Retiree Benefit Trust (“**CERBT**”) and managed by an appointed board that is not under the control of the Agency’s Board of Directors. CERBT is a tax-qualified irrevocable trust organized under Internal Revenue Code Section 115 and established to pre-fund retiree healthcare benefits. As of September 30, 2019, the Agency has set aside \$24,220,764 in its CERBT account.

## SYSTEM FINANCES

### Financial Statements

The Authority maintains its own financial statements, accounting for the revenues and expenditures of the System. In addition, the Agency prepares financial statements. In the Agency’s financial statements, the Power Division’s operations are accounted for as a separate enterprise fund. The Agency is reimbursed by the Authority for amounts expended by the Agency to operate the System and to construct capital improvements for the System. These amounts, as and to the extent reimbursed to the Agency, are shown in the Agency’s financial statements within the enterprise fund for the Power Division. The fund for the Power Division is not audited separately.

The Authority’s accounting principles conform to generally accepted accounting principles as applicable to governmental type organizations. The Authority’s [preliminary unaudited] financial statements, for the year ended December 31, 2019, are attached hereto as Appendix E.

### System Revenues

The Authority’s primary sources of revenue are payments for electrical energy supplied to purchasers through the CAISO. The Authority also receives interest income.

**Power Sales.** The Agency is a certified Scheduling Coordinator with the CAISO. Having an executed “SC” agreement with CAISO allows the Agency to buy and sell power directly to the CAISO. The Agency supplies the CAISO with hourly offers to sell power at a specific price. If the market price clears higher than the offer, the CAISO awards the Authority a sale for the time increment the CAISO market is running. The CAISO also has meters at all of the System’s power

plants that track actual generation output for each plant, and pays the Authority accordingly. The only customer for the System’s generating output is the CAISO. Although, there have been a few forward sales to Shell Energy North America and BP North America, these forward sales are scheduled and cleared through the CAISO.

PCWA has the ability to lock in forward energy prices via fixed-for-float swaps with Shell Energy and BP Energy. PCWA can moderate its exposure to the sometimes-volatile CAISO day-ahead energy market by selling energy for fixed prices to Shell or BP. Through these swaps, PCWA can sell blocks of energy (typically 6 days of 16 hours per day, for an entire month, in 25 MW increments). By locking in prices in advance for a portion of its output, PCWA can “lock in” prices it sees as favorable.

The CAISO Day Ahead and Real Time market is considered a “spot” market, as those markets only solve for the next day or hour. The “spot” market has a different price for every hour, whereas a forward sale has the same price for all the hours that are sold in the future.

**Energy Product Revenue.** The following table provides a history of revenue received for the past 5 years from bilateral contracts from the System, including resource adequacy (RA), renewable energy credits (REC), and carbon free. Renewable Energy Certificates (REC’s) are market instruments used to count, categorize and track renewable generation facility production in accordance with the CPUC’s rules for renewable content. Typically, when REC’s are transacted between the generator and purchaser, the transaction is defined as including ALL of the renewable characteristics of the generating facility. Thus, any facility that sells REC’s typically cannot sell other or additional environmental attributes (such as carbon-free energy).

**Table No. 4  
MIDDLE FORK PROJECT FINANCE AUTHORITY  
REVENUE BY ENERGY PRODUCT**

<u>Year</u>	<u>Bundled RA and RECs</u> <sup>(1)</sup>	<u>Resource Adequacy (RA)</u> <sup>(2)</sup>	<u>Renewable Energy Credits (RECs)</u> <sup>(2)</sup>	<u>Carbon-Free</u> <sup>(2)</sup>
2014	\$12,784,981	--	--	--
2015	12,238,637	--	--	--
2016	14,228,850	--	--	--
2017	14,611,253	--	--	--
2018	--	\$3,980,431	\$989,668	\$771,900

(1) Prior to December 31, 2017, the Agency sold all System energy products for resource adequacy and renewable energy credits to PG&E under a bundled contract

(2) As of 2018, the Agency entered into bi-lateral contracts with Tenaska and Pioneer Community Energy for the sale of RA, RECs and carbon free.

Sources: Middle Fork Project Finance Authority.

## Feasibility Study

In connection with the issuance of the Bonds, the Authority has commissioned Horizons Energy, Dublin, Ohio (the “**Feasibility Consultant**”) to prepare a feasibility study (the “**Feasibility Study**”) to demonstrate the ability of the Authority to generate revenues sufficient to pay debt service on the Bonds from Net System Revenues. A complete copy of the Feasibility Study is attached to this Official Statement as Appendix A, and is incorporated herein by reference.

Horizons Energy has over 60 years of combined experience in the North American energy industry providing consulting services, custom scenarios and conducting studies on behalf of over 50 clients. Horizons consultants contributed to over 30 North America integrated resource plans (IRP), including the predominately hydro power systems: TVA, BC Hydro, Manitoba Hydro, FortisBC (West Kootenay Hydro). Additionally, Horizons consultants have performed billions of dollars in valuation including KeySpan due diligence, Public Service Colorado resource bidding,

City of Lake Worth IRP, New York IPP battery valuations and the Public Service New Mexico abandonment and replacement power case. Horizons Energy semi-annually develops a North American advisory service and database containing a long-term outlook of the energy markets which includes a forecast of energy, capacity and fuel prices for 78 market areas through the year 2050.

The Feasibility Study includes, among other things, a description of existing System operations, facilities, and other relevant background information on the System, and an assessment of the adequacy of future revenues to fund operating expenses including debt service under certain conditions as described therein. It concludes with an assessment that, based on the assumptions and methodology set forth therein, the System, through the combination of annual Free Cash Flow and, when needed, Financial Risk Mitigation measures, has sufficient funds available to meet Annual Obligations, including the Bond P&I and therefore passes the tests of Financial Feasibility (all capitalized terms are as defined in the Feasibility Study).

Potential investors should review the complete copy of the Feasibility Study, which is attached in its entirety as Appendix A.

### **Outstanding System Obligations**

Following the refunding of the 2006 Bond, there will be no outstanding obligations that are payable from the Net System Revenues on a senior basis or parity basis to the Bonds. However, in the future, the Authority may incur additional parity obligations. See “SECURITY FOR THE BONDS – No Senior Debt; Issuance of Parity Debt.”

### **Historical Operating Results**

From May 1, 2013 through December 31, 2018, System revenues have totaled \$250 million, which has been sufficient to fund annual operating costs averaging \$28.5 million including debt service, appropriated \$70.1 million in capital projects, and funded cash reserves to \$45.1 million. Within this period there were two dry years, a drought year, two average years, and a record wet year. One-half of the water years were dry (2013, 2014 and 2015 were dry, very dry and drought years, respectively), while 2016 and 2018 were average hydrologic years and 2017 resulted in a very wet hydrologic year

### **Historical Revenues, Expenses and Debt Service Coverage**

The following table sets forth the audited revenues and expenses of the Authority over the last five years, and includes the System Revenues pledged to pay the Bonds, as well as the historical debt service coverage as defined in the Indenture.

**Table No. 5**  
**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**HISTORICAL REVENUES, EXPENSES AND COVERAGE**  
**Years Ending December 31, 2015 through 2019**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u> <sup>(2)</sup>
<b><u>System Revenues</u></b>					
Power Sales:					
Energy	\$16,038,953	\$31,137,535	\$46,272,104	\$41,073,465	\$53,224,452
Energy Products	12,238,637	14,228,850	14,611,253	5,741,999	8,675,496
Interest Income	<u>112,640</u>	<u>228,469</u>	<u>635,259</u>	<u>1,517,676</u>	<u>1,842,146</u>
Total System Revenues	28,390,230	45,594,854	61,518,616	48,333,140	63,967,146
<b><u>Operation and Maintenance Costs</u></b> <sup>(1)</sup>					
Power System Operations	16,774,175	17,492,215	18,318,141	20,322,912	22,038,856
Professional Services	7,863	11,568	15,988	15,912	26,487
Miscellaneous	<u>59,634</u>	<u>75,421</u>	<u>217,926</u>	<u>123,768</u>	<u>50,994</u>
Total Operations and Maintenance	<u>16,841,672</u>	<u>17,579,204</u>	<u>18,552,055</u>	<u>20,462,592</u>	<u>22,181,585</u>
<b>Net System Revenues</b>	<u>\$11,548,558</u>	<u>\$28,015,649</u>	<u>\$42,966,561</u>	<u>\$27,870,548</u>	<u>\$41,560,509</u>
Debt Service	2,845,365	5,690,729	5,690,729	5,690,729	5,690,729
<b>Debt Service Coverage Ratio</b>	4.06X	4.92X	7.55X	4.90X	7.30X
Net System Revenues Available for Capital, Reserve Funding and Other	8,703,193	22,324,920	37,275,832	22,179,819	35,869,780
<b>[Unrestricted] Cash and Cash Equivalents</b>	\$39,469,885	\$49,550,379	\$68,186,602	\$78,751,960	\$74,765,045
<b>Days Cash-on-Hand</b>	855	1,029	1,342	1,405	1,230

(1) Excludes depreciation, amortization of intangibles and similar non-cash items.

(2) 2019 amounts are preliminary as the year-end closing process is continuing.

Source: Middle Fork Project Finance Authority audited financial statements for years 2015 – 2018; year 2019 is preliminary and unaudited.

## Projected Revenues, Expenses and Debt Service Coverage

The following table shows projected System Revenues, Operation and Maintenance Costs and debt service coverage for years 2020 through 2024. The projections set forth in the following table and elsewhere in this Official Statement are not a guarantee of future performance. The Authority has made certain assumptions with regard to operations, revenues and expenses that it believes are reasonable, but it cannot guarantee that it will meet these assumptions. See “INTRODUCTION – Forward Looking Statements” in this Official Statement.

**Table No. 6**  
**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**PROJECTED REVENUES, EXPENSES AND COVERAGE**  
**Years Ending December 31, 2020 through 2024**

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<b><u>System Revenues</u></b>					
Power Sales: <sup>(1)</sup>					
Energy	\$37,553,000	\$37,917,000	\$38,109,000	\$39,096,000	\$39,546,000
Energy Products	7,890,000	16,678,000	16,678,000	17,831,000	19,310,000
Interest Income	<u>1,000,000</u>	<u>1,000,000</u>	<u>1,000,000</u>	<u>1,000,000</u>	<u>1,000,000</u>
Total System Revenues	46,443,000	55,595,000	55,787,000	57,927,000	59,856,000
<b><u>Operation and Maintenance Costs</u></b> <sup>(2)</sup>					
Power System Operations	27,219,305	28,049,657	28,496,074	28,158,526	28,637,039
Professional Services	50,000	51,300	52,600	54,000	55,400
Miscellaneous	<u>100,000</u>	<u>102,700</u>	<u>105,400</u>	<u>109,000</u>	<u>112,600</u>
Total Operations & Maintenance	<u>27,369,305</u>	<u>28,203,657</u>	<u>28,654,074</u>	<u>28,321,526</u>	<u>28,805,039</u>
<b>Net System Revenues</b>	<u>\$19,073,695</u>	<u>\$27,391,343</u>	<u>\$27,132,926</u>	<u>\$29,605,474</u>	<u>\$31,050,961</u>
Debt Service*	5,316,151	5,322,125	5,323,125	5,322,500	5,324,875
<b>Debt Service Coverage Ratio</b>	3.59X	5.15X	5.10X	5.56X	5.83X
Net System Revenues Available for Capital, Reserve Funding and Other	13,757,544	22,069,218	21,809,801	24,282,974	25,726,086

\* Preliminary; subject to change.

(1) Power Sales - Energy Revenue assumes 100% of average annual generation, or 1,000,000 MWh.

(2) Excludes depreciation, amortization of intangibles and similar non-cash items.

Source: Middle Fork Project Finance Authority.

## Investment Policy and Recent Results

The Authority's Investment Policy (the "Investment Policy") was last approved by the Board of Directors on January 16, 2020. The Investment Policy applies to all Authority funds.

The Treasurer annually reviews the Investment Policy as necessary, and recommended revisions are submitted as needed to the Board of Directors in order to ensure consistency and its relevance to current law, and financial and economic trends. The Treasurer also submits the Investment Policy to the Board of Directors for its review and approval during the first quarter of each year.

*Objectives and Criteria.* The Investment Policy states that the primary objective is to safeguard the principal of the funds. The secondary objective is to meet the liquidity needs of the Authority. The third objective is to achieve a maximum return on invested funds. It is the policy of the Authority to invest public funds in a manner to obtain the highest yield obtainable with the maximum security while meeting the daily cash flow demands of the Authority as long as investments meet the criteria established by the Investment Policy for safety and liquidity and conform to all laws governing the investment of Authority funds.

*Current Portfolio Information.* The following table summarizes certain information relating to the Authority's investment portfolio as of December 31, 2019.

**Table No. 7**  
**MIDDLE FORK PROJECT FINANCE AUTHORITY**  
**INVESTMENT PORTFOLIO SUMMARY**  
**As of December 31, 2019**

<u>Investments</u>	<u>Par Value</u>	<u>Market Value</u>
Local Agency Investment Fund <sup>(1)</sup>	\$47,845,018	\$47,845,018
Collateralized Bank Deposits	4,885,877	4,885,877
Medium Term Notes	12,000,000	12,183,990
Federal Agencies	<u>48,700,000</u>	<u>48,810,641</u>
Total	<b>\$113,430,895</b>	<b>\$113,725,526</b>

(1) Local Agency Investment Fund (LAIF) is maintained by the California State Treasurer. The Authority is a voluntary participant in this investment pool.

Source: Middle Fork Project Finance Authority.

## DEVELOPMENTS IN THE ENERGY MARKETS

### Background

The restructuring of energy markets in the United States began in 1996 with FERC orders 888 and 889. These orders opened the electricity transmission system so that unused transmission must be made available at a cost-based rate and defined the market mechanism by which these resources would be offered and purchased. Subsequently California enacted AB1890, the Electric Utility Restructuring Act, which transitioned two thirds of the State from a bilateral to a structured market with the creation of an independent system operator, the California Independent System Operator ("CAISO"). This market structure redefined electricity markets in California in fundamental ways by becoming the reliability and market clearing entity for most of California.

### CAISO Market

**CAISO Market Initiatives.** The CAISO markets are subject to continued change in response to FERC orders, the increased integration of intermittent renewable resources,

changing environmental constraints, the ongoing efforts to combat market manipulation and evolving reliability requirements. CAISO Tariff changes related to these and other issues are currently under discussion in CAISO stakeholder processes and in ongoing FERC proceedings. In most cases, these proposals are not sufficiently final in order to determine their likely impact on the Authority. However, the following issues and proposed CAISO operational and market changes may have significant impacts on the Authority or the System:

Increased Integration of Renewables. As part of the effort to integrate increased levels of intermittent renewable resources into the grid, the CAISO has proposed an array of changes to existing markets and to the resource adequacy structure that assures that sufficient resources are available to the markets. These proposals could affect the value of energy sold and purchases in the wholesale markets.

Resource Adequacy Requirements. Resource Adequacy requirements apply to the Authority to ensure that market participants have contracted for sufficient amounts of the right types of capacity to be available in the markets. To the extent that a load serving entity ("**LSE**") fails to procure sufficient capacity resources to meet its loads, it is subject to payment of CAISO procurement costs of replacement capacity. To the extent that a shortfall cannot be attributed to a specific LSE, the costs will be spread as part of market uplift charges. These risks apply in the same manner to all LSEs. Due to the increased integration of renewables, discussed above, the CAISO is contemplating what could be significant changes to the Resource Adequacy framework, with the potential for impacts on market participant costs. It is still too early to assess the potential impacts on the Authority. Although it does not appear that CAISO is considering proposing a centralized capacity market at this time, proposals from others are occasionally made. The CPUC has ongoing docket that could also result in changes to the Resource Adequacy and CAISO's markets. However, the details of such changes remain to be established.

Transmission Access Charge Review. The CAISO has undertaken a review of its Transmission Access Charge, with a view to potentially changing the methodology used for allocating transmission costs. Although the current proposal should not adversely impact the Authority, any change of this nature raises concerns and the Authority is unable to predict the outcome of the tariff revisions process.

All electricity sales that the Authority makes in the wholesale energy markets operated by the CAISO are subject to the CAISO tariff, which is a FERC-jurisdictional tariff. CAISO's tariff includes rules governing how sellers may bid electricity (i.e., offer for sale) into the energy markets and rules governing market power mitigation of sellers. CAISO regularly proposes changes to its tariff, subject to FERC approval. Additionally, FERC can, and does, order changes to CAISO's tariff if FERC (on its own initiative or prompted by a complaint) determines that CAISO's tariff is unjust, unreasonable, or unduly discriminatory. Such regulatory changes can impact prices for electricity and capacity. The CAISO provides an economic dispatch of resources to meet load requirements, as well as a liquid market for energy for generators such as the System. The CAISO market continues to evolve as market needs and regulatory forces influence it to change. See "Challenges an Industry Response" below

***CAISO Resource Adequacy Availability Incentives.*** Resources that load-serving entities designate as providing Resource Adequacy capacity are subject to obligations to offer energy to the CAISO markets in designated hours and, in certain circumstances, to provide substitute capacity if the resource is unavailable. CAISO's Resource Adequacy Availability Incentive Mechanism ("**RAAIM**") assesses a non-availability charge on resources that fall below 94.5% of their must-offer obligation and makes incentive payments to resources that exceed 98.5% of their must-offer obligation. Some of the Authority's resources do provide Resource

Adequacy capacity and are subject to the RAAIM. CAISO is currently considering changes to the program, and the final result is yet to be determined.

## State Legislation

Executive Orders and Bills affecting the electric utility industry are continually enacted by the Governor and the California Legislature. In general, these have provided for reduced greenhouse gas emission standards, resource adequacy, greater investment in energy-efficient and environmentally friendly generation and more stringent renewable resource portfolio standards. The following is a brief summary of executive orders and bills potentially impacting the System and System Finances.

**Greenhouse Gas Emissions.** Assembly Bill 32 (“**AB 32**”), the Global Warming Solutions Act of 2006 requires all California utilities to inventory and report greenhouse gas emissions beginning January 1, 2008 and the California Air Resources Board (“**CARB**”) to adopt enforceable greenhouse gas emission limits and emission reduction measures by regulation in order to reduce greenhouse gas emissions to 1990 levels by 2020. The AB 32 Scoping Plan called the creation of a cap-and-trade program to be revised every 5 years. And on December 14, 2010, CARB adopted regulations approving the cap-and-trade program for California became enforceable on January 1, 2012. Every one allowance for each ton of carbon dioxide-equivalent greenhouse gases (“CO<sub>2</sub>e”) up to the target level of CO<sub>2</sub>e for a given year (the cap) and parties responsible for CO<sub>2</sub>e emissions may purchase one allowance for each ton of CO<sub>2</sub>e they produced in either an auction or bilateral market (the trade). By reducing amount of available allowances through time, the state is able to meet its emission reduction targets.

The cap-and-trade program was implemented in phases. The first phase of the program (January 1, 2013 to December 31, 2014) introduced a hard emissions cap on electricity generators and industrial sources emitting more than 25,000 metric tons of CO<sub>2</sub>e per year. In 2015, the program expanded to cover transportation fuels, natural gas, propane and fossil fuels. The cap will decline each year.

The cap-and-trade program includes the distribution of carbon allowances. Each allowance is equal to one metric ton of CO<sub>2</sub>e. Initially, most of the carbon allowances were distributed for free. Additional allowances are auctioned quarterly. Utilities can acquire carbon allowances at these auctions or purchase allowances from third parties to meet their compliance obligations.

The System is considered a non-emitting resource and has value as a carbon neutral facility. The Agency can sell carbon credits based upon its energy production. The cap-and-trade program also allows the use of “offset credits” for compliance purposes (not exceeding 8% of a covered entity’s compliance obligation). Offsets can be generated by emission reduction projects in sectors that are not regulated under the cap-and-trade program. Approved project types include urban forest projects, reforestation projects, destruction of ozone-depleting substances, and livestock methane management projects. CARB may still consider changes to the cap-and-trade program’s electricity sector provisions in the future.

**Renewable Portfolio Standards (“RPS”).** There have been several renewable portfolio standards bills passed in California, relating to in-state and imported renewable energy. The most recent one being Senate Bill 350. Considered the most significant climate and clean energy legislation since the passage of AB 32; SB 350 Clean Energy and Pollution Reduction Act (de Leon), Chapter 547 was signed into law October 7, 2015. This landmark legislation establishes new clean energy, clean air and greenhouse gas reduction goals for 2030 and beyond. SB 350 increases California’s renewable electricity procurement goal from 33% by 2020 to 50% by 2030. In addition, it directs the CAISO to explore expanding its footprint into other western states. In

addition, in 2018, SB 100 (de Leon 2018) was signed into law, which again increased the RPS to 60% by 2030 and required all the state's electricity to come from carbon-free resources by 2045.

There are several implications for the Agency, resulting from all the executive orders and bills. One, the System's hydro energy is considered a clean energy source. Two, since most renewable energy comes from intermittent variable resources, such as wind and solar energy, flexible capacity from resources like the System as back up capacity, are important for integrating the variable energy resources.

***Distributed Solar and California New Construction Standards.*** In addition to new utility-scale renewable resources, retail solar installations in homes and small businesses is contributing to growth in solar energy production. California has continually increased the energy efficiency of new construction and appliances since the Warren Alquist Act of 1974. These standards will lead to the implementation of Zero Net Energy (“ZNE”) residential new construction starting in 2020, that requires new home construction be energy efficient homes combined with distributed generation, predominantly rooftop solar generation. The increase in retail solar installations is increasing the amount of variable energy resources.

### **Additional Developments**

Additional regulations impacting the System and System Finances have and likely will continue to be implemented in the future, including those that follow.

***Reduced Forward Power Price Volatility.*** Prices and supplies of natural gas and electricity have moderated in recent years. The combined effects of low cost shale gas production and renewable energy additions have contributed to lower forward power prices and less market volatility in day-ahead markets.

***Steep Ramp Rates.*** California utilities may be facing steep ramp rates as a result of fewer baseload resources and greater variable resources. This could result in increased real-time price volatility. A major upcoming challenge will involve the integration of renewal resources into the State's energy portfolio. The ambitious renewable goals in California have been primarily met with solar, and to a lesser degree, wind resources. These resources are classified by the term Variable Energy Resource (“VERs”). Solar and wind resources generally produce energy not when an operator directs them, but when the fuel source (in this case sunlight and wind) are available. In the case of solar energy, photovoltaic power plants only produce electricity between dawn and dusk, and can vary power output very quickly when a cloud passes over. This creates two challenges. First solar energy increases rapidly in the morning and decreases rapidly in the afternoon, when customer needs are increasing. Secondly, the amount of solar energy produced can vary quickly and unexpectedly as the weather changes. To address the challenge of rapidly changing power output, FERC passed order 764 in 2014. This ruling required markets to offer 15 minute trading in addition (or in place of) hourly trading. The more granular market allows the market to react better to the variable nature of solar and wind resources. The CAISO implemented a 15 minute market and in addition offered a 5 minute and 15 minute Energy Imbalance Market outside the CAISO region.

The CAISO has also modeled the changes over the day with loads and variable energy resources to understand the ramp rate effect on the system. The ramp rate represents the rate of change required to balance the load and resources over the course of the day. It is most acute in the early evening hours, when solar energy is not available and utility load increases.

*[Insert Duck Curve Graph]*

To address the rapidly decreasing solar load in the afternoon when the need for generation is increasing, the CAISO has implemented a flexible capacity market. This is a capacity market designed to meet the needs for flexibility VERs require, specifically the large afternoon increase in electricity requirements caused by the simultaneous decline of solar output and the increase in system load. With the retirement of higher emitting coal and older natural gas units, there will be fewer baseload resources available on the system to assist with the large up and down ramp rates. The System has flexible capacity that can be used to bridge that ramp rate on the system.

***Other Regional Developments – Western Regional Energy Market.*** The CAISO has developed a regional real-time market service, referred to as an “Energy Imbalance Market” (“EIM”). EIM may help to optimize management of the transmission system to help balance supply and demand across a larger footprint, across multiple balancing authorities. By developing the EIM between the balancing authorities, a broad array of resources can be shared and economically dispatched through the ISO five-minute market. According to the CAISO, the EIM has the potential to strengthen grid reliability. The purpose is to optimize the interconnected high-voltage system as market systems automatically handle electricity bottlenecks on transmission lines during the process of managing the flow of electricity.

Following FERC approval of the implementation agreement between the CAISO and PacifiCorp in June of 2013, PacifiCorp and the CAISO officially launched the EIM in November 2014. PacifiCorp, headquartered in Portland, Oregon, is a subsidiary of Berkshire Hathaway Energy and operates as a utility that serves 1.8 million customers across six western states. Since the launch of the EIM between CAISO and PacifiCorp, additional utilities across the western United States have signed EIM implementation agreements, officially stating their intent to participate in the EIM.

California Senate Bill 350 also directed the CAISO to explore how its expansion into the wider West could help the State meet that goal. After completion of multiple studies, the CAISO determined that a regional energy market would help to advance the State’s ambitious clean energy goals and to reduce the cost of energy in the western states and is an efficient, effective way to meet the demand for reliable, affordable and sustainable energy. According to the CAISO, a regional energy market would coordinate electricity systems across the West, utilizing the CAISO’s infrastructure to develop one western grid. If the CAISO footprint expands to a larger geographical area, then the System will be able to participate in a broader regional market.

### **Potential Impact on the Authority**

The effect of these developments in the California energy markets on the Authority cannot be fully ascertained at this time. Volatility in energy prices in California may return due to a variety of factors that affect both the supply and demand for electric energy in the western United States. These factors include, but are not limited to, the adequacy of generation resources to meet peak demands, the availability and cost of renewable energy, the impact of variable generation renewables such as wind and solar on general electric system cost, price volatility, and reliability the impact of greenhouse gas emission legislation and regulations, fuel costs and availability, weather effects on customer demand, transmission congestion, the strength of the economy in California and surrounding states and levels of hydroelectric generation within the region (including the Pacific Northwest). This price volatility may contribute to greater volatility in the Authority’s costs and revenues from the sale (and purchase) of electric energy and, therefore, could materially affect the financial condition of the Authority.

### **Future Federal Energy Legislation**

Numerous bills have been under consideration in Congress addressing United States energy policies and various environmental matters, including those related to energy supplies,

global warming and water quality. Many of these bills, if enacted into law, could have a material impact on the City and the electric utility industry generally. Proposed energy and climate change-related pieces of legislation have proposed, among other things, a cap-and-trade system to regulate and reduce the emission of carbon dioxide and other greenhouse gases and a federal renewable energy portfolio standard. The impact that federal greenhouse gas cap-and-trade legislation could have on the electric utility industry and business depends largely on the specific provisions of the legislation that ultimately become law. Some of the important factors to be addressed are the timing and magnitude of the emissions cap, the extent to which emissions allowances are either allocated or auctioned to the highest bidder, the extent to which emissions may be offset by other actions, whether there will be a cap on the price of emissions allowances and the allocation of proceeds from the auction of allowances. Other areas of consideration for energy legislation include, but are not limited to, the development and deployment of alternative fuels, renewable energy resources, and energy conservation measures. The timeline and impact of climate change legislation cannot be accurately assessed at this time, but it is expected that any such federal action will have a significant impact on fossil-fueled generation facilities.

## **Federal Environmental Regulation**

**General.** Federal, state and local standards and procedures that regulate the environmental impact of the electric sector are subject to change. These changes may arise from continuing legislative, regulatory and judicial action regarding such standards and procedures. Consequently, there is no assurance that any facility or project will remain subject to the laws and regulations currently in effect, will always be in compliance with future laws and regulations or will always be able to obtain all required operating permits. An inability to comply with environmental standards could result in additional capital expenditures, reduced operating levels or the shutdown of individual units not in compliance. In addition, increased environmental laws and regulations may create certain barriers to new facility development, may require modification of existing facilities and may result in additional costs for affected resources.

**Air Quality – National Ambient Air Quality Standards.** The Clean Air Act requires that the EPA establish National Ambient Air Quality Standards (“**NAAQS**”) for certain air pollutants. When a NAAQS has been established, each state must identify areas in its state that do not meet the EPA standard (known as “non-attainment areas”) and develop regulatory measures in its state implementation plan to reduce or control the emissions of that air pollutant in order to meet the standard and become an “attainment area.” During recent administrations, there were several new regulations initiated, which have been revised and repealed in recent years. Most of the recent clean energy initiatives have been state-driven as opposed to federally mandated, but it is possible future federal legislation or regulation could impact the Authority’s operations of the System.

## **PG&E Bankruptcy**

*The following statements in this section regarding PG&E’s financial condition, potential wildfire liabilities, and its actions and developments in connection with PG&E’s voluntary bankruptcy filing have been obtained from public sources that the Authority believes to be reliable, but such statements have not been independently verified by the Authority and the Authority assumes no responsibility for the accuracy or completeness thereof.*

On January 14, 2019, PG&E and its parent company, PG&E Corporation, announced their intention to file, on or about January 29, 2019, for bankruptcy protection under Chapter 11 of the United States Bankruptcy Code (the “**Bankruptcy Code**”). On January 29, 2019, PG&E and PG&E Corporation filed for bankruptcy protection under Chapter 11 of the Bankruptcy Code. A Chapter 11 case under the Bankruptcy Code is utilized to accomplish either a restructuring and/or liquidation of businesses.

In its bankruptcy filings, PG&E indicated that its voluntary bankruptcy filing was initiated to address extraordinary financial challenges. These are largely attributed to its potential liabilities associated with a number of wildfires which occurred in Northern California in 2017 and 2018. Units Form 8-K filing with the Securities and Exchange Commission reporting its intent to file voluntary bankruptcy (the “**PG&E SEC filing**”) and its subsequent bankruptcy filings, PG&E estimated if it were found liable for certain or all of the costs, expenses and other losses with respect to the 2017 and 2018 Northern California wildfires, the amount of such liability (exclusive of potential putative damages, fines and penalties or damages related to future claims) could exceed \$30 billion. SB 901, which was enacted by the California legislature in September 2018, addressed a portion of the liabilities PG&E faced in connection with the 2017 wildfires. That legislation, however, expressly excluded any similar relief for wildfires occurring in 2018.

[[The Authority is a party to a number of interconnection agreements with PG&E that provide the terms and conditions for connecting Authority power to the CAISO-controlled grid or PG&E's wholesale transmission system. Each of the Authority's generating facilities are interconnected within the CAISO Balancing Authority Area through PG&E's transmission system. To date, the Authority has not experienced any operational disruptions as a result of the PG&E bankruptcy filing. However, as PG&E emerges from bankruptcy, it is not clear if it will continue to operate the facilities, change the transmission rates or services, or if it will divest of the transmission.]] [*Note: Tom to review*]

PG&E has requested approval from the bankruptcy court to continue operations of both its electric and gas systems. In its SEC filing, PG&E stated that it expected to operate in the ordinary course of business following the Chapter 11 filing, including providing uninterrupted electric and natural gas service to customers. Units bankruptcy filings, PG&E has indicated that it has obtained approximately \$5.5 billion in secured debtor-in-possession financing from several financial institutions that would provide liquidity to fund its operations during the Chapter 11 process. Although it is too early to assess, PG&E's bankruptcy could have broader effects on the electric markets generally. Subject to Bankruptcy Court approval, Chapter 11 debtors have the power to assume or reject contractual arrangements. Chapter 11 debtors may seek to reject contracts that are uneconomic or otherwise burdensome to the debtor. In the event PG&E were to seek to reject some power purchase agreements, and if the court orders this, there may be further market impacts. In addition, it is possible that one or more other entities may ultimately assume or acquire all or a portion of PG&E's operations and activities in the future. Further, in its SEC filing, PG&E stated it is exploring possible sales or other dispositions of certain assets and businesses.

There are a number of uncertainties surrounding the PG&E bankruptcy and the proceedings could continue for many months and potentially a number of years. As a result, the Authority is unable to predict the full effects of the PG&E bankruptcy on the Authority, the System or the California electric markets at this time.

### **Other Factors**

The electric industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. Such factors include, among others, the following:

- (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described above;

- (b) changes resulting from conservation and demand-side management programs on the timing and use of electric energy;
- (c) changes resulting from a national energy policy;
- (d) effects of competition from other electric generator owners and new methods of, and new facilities for, producing low-cost electricity;
- (e) the proposed repeal of certain federal statutes that would have the effect of increasing the competitiveness of other generation technologies;
- (f) increased competition from independent power producers and marketers, brokers and federal power marketing agencies;
- (g) increased “self-generation” or “distributed generation” (such as microturbines and fuel cells) by industrial and commercial customers and others;
- (h) issues relating to the ability to issue tax-exempt obligations, including severe restrictions on the ability to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with outstanding tax-exempt obligations;
- (i) effects of inflation on the operating and maintenance costs of electric generation;
- (j) changes from projected future load requirements;
- (k) increases in costs and uncertain availability of capital;
- (l) shifts in the availability and relative costs of different fuels (including the cost of natural gas);
- (m) decline in market price for power;
- (n) new market rules with respect to, among other things, the purchase and sale of energy and transmission capacity;
- (o) other legislative changes, voter initiatives, referenda and statewide propositions;
- (p) other political risks impacting the Authority’s rates or other operational or financial matters;
- (q) effects of changes in the economy;
- (r) effects of possible manipulation of electric markets;
- (s) natural disasters or other physical calamities, including, but limited to, so earthquake and flood; and
- (t) changes to the climate that could impact hydro generation production or demand for energy.

Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility, including the System.

The Authority cannot predict what effects such factors will have on the business operations and financial condition of the System, but the effects could be significant. The foregoing is a brief discussion of these factors. The discussion in this Official Statement does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is, and will be, available from the legislative and regulatory bodies and other sources in the public domain.

## **BOND OWNERS' RISKS**

Payment of principal and interest represented by the Bonds depends primarily upon the Authority's ability to generate sufficient Net System Revenues each Fiscal Year. Some of the events, which could prevent the Authority from paying debt service on the Bonds are set forth below. The following discussion of risks is not meant to be an exhaustive list of the risks associated with the purchase of the Bonds and does not necessarily reflect the relative importance of the various risks.

### **Limited Obligations**

The Bonds are limited obligations of the Authority and are not secured by a legal or equitable pledge or charge or lien upon any property of the Authority or any of its income or receipts, except the Net System Revenues. The obligation of the Authority to pay debt service on the Bonds does not constitute an obligation of the Authority to levy or pledge any form of taxation or for which the Authority has levied or pledged any form of taxation.

### **Electric Generation; No Rate Covenant**

*[GS: Under the risk factor area, does there need to be longer disclosure about the project's production being dependent on hydrology and that changes, that the project is being optimized for water needs which can differ from power production value, and FERC license process? Any new constraints on operations anticipated by the new FERC license?]* Factors beyond the control of the Authority could impair the ability of the Authority to supply electric to the spot market in an amount sufficient to yield Net System Revenues sufficient to pay the Bonds when due. In particular, the Authority's revenues could become limited due to a loss of contract rights, lack of sufficient water flow (because of weather or otherwise), or due to restrictions imposed upon the ability of the Authority to continue receiving water from sources needed to generate hydroelectric power for the System. In addition, drought conditions and voluntary or mandatory conservation measures could decrease water that generates electricity produced by the System. See "THE SYSTEM" for a discussion of the System, the facilities of the System, and possible limitations thereon.

The Indenture does not contain a covenant for the Authority to maintain any level of debt service coverage ratio for the Bonds. This is because the Authority sells its energy into the spot market and cannot guarantee any particular rate level will be obtained, and in each Fiscal Year, the amount of water flow (and hence hydroelectric generation) is unpredictable.

### **Electric Demand**

There can be no assurance that the local demand for electricity in the spot market into which the Authority sells its power will continue according to historical or projected levels.

Electricity demand is driven by multiple factors, many of which are outside the control of the Authority.

### **Limited Recourse on Default**

Failure by the Authority to pay the Bonds when due constitutes an event of default under the Indenture and the Trustee is permitted to pursue remedies at law or in equity to enforce the Authority obligation to make such payments. Although the Trustee has the right to accelerate the total unpaid principal amount due on the Bonds, there is no assurance that the Authority will have sufficient funds to pay the accelerated payments.

The remedies available to the owners of Bonds and parity obligations upon the occurrence of an event of default are in many respects dependent upon judicial actions that are typically subject to discretion and delay and could prove both expensive and time consuming to obtain.

### **System Expenses**

There can be no assurance that the Authority's expenses for the System will remain at the levels described in this Official Statement. Changes in technology, energy or other expenses and increased costs could reduce the Authority's Net System Revenues. Given the Authority sells its power in the spot market, the Authority does not have the ability to raise rates to a level sufficient to ensure Net System Revenues are available for debt service on the Bonds.

### **Bankruptcy**

The rights and remedies provided in the Indenture may be limited by and are subject to the provisions of federal bankruptcy laws and to other laws or equitable principles that may affect the enforcement of creditors' rights. If the Authority were to file a petition under Chapter 9 of the Bankruptcy Code, the Owners of the Bonds and the Authority could be prohibited from taking any steps to enforce their rights under the Indenture.

### **Rate Regulation**

The authority of the Authority to impose and collect rates for energy sold and delivered to the spot market is not currently subject to the regulatory jurisdiction of the CPUC, FERC or any other State or federal agency. It is possible that future legislative changes could subject the rates or service areas of the Authority to the jurisdiction of the CPUC, FERC or to other limitations or requirements.

### **Environmental Laws and Regulations**

Hydroelectric facilities like the System are subject to a wide variety of local, State, and federal health and environmental laws. Such regulations, as they may be from time to time amended or subsequently enacted could affect the Net System Revenues available to pay the Bonds. See "DEVELOPMENTS IN THE ENERGY MARKETS" and "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY" for additional information.

### **Future Parity Obligations**

Under certain conditions, the Indenture permits the issuance of additional bonds, notes or other obligations of the Authority which are payable from Net System Revenues on a parity with the Bonds. See "SECURITY FOR THE BONDS – No Senior Debt; Issuance of Parity Debt." Such additional bonds, notes or other obligations would increase annual debt service payable

from the Net System Revenues and could adversely affect debt service coverage with respect to the Bonds.

## **Environmental Risks and Considerations**

**Seismic.** The areas in and surrounding the System, like those in much of California, may be subject to unpredictable seismic activity. If there were to be an occurrence of severe seismic activity in the area of the System, there could be an interruption in the service provided by the System resulting in a temporary reduction in the amount of System Revenues available to pay the Bonds.

**Drought.** California is subject to droughts from time-to-time. On April 1, 2015, for the first time in California's history, Governor Edmund G. Brown directed the State Wastewater Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25%. Following a wet winter in 2016-17, most of the mandatory water reductions were lifted. See "THE SYSTEM" for a discussion of the impact of the drought on the Authority's revenues. The Authority cannot predict if drought conditions will return, what effect drought conditions could have on revenues of the System, or whether or to what extent any water reduction requirements could affect the System and System Revenues.

**Wildfire.** In recent year, dry conditions in the State have led to increased risk of wildfire caused by electric distribution/transmission lines. In particular, PG&E's distribution/transmission lines have caused billions of dollars in property damage and the loss of lives. See "DEVELOPMENTS IN THE ENERGY MARKETS – PG&E Bankruptcy." The Authority currently uses PG&E's distribution/transmission lines to deliver its hydroelectric power to the spot market for sale. No assurance can be given the Authority could not be held liable for future wildfires causing damage and/or loss of lives in the State from its operation of the System.

## **Cybersecurity**

The Authority and the Agency, like many other large public and private entities, relies on a large and complex technology environment to conduct its operations, and faces multiple cybersecurity threats including, but not limited to, hacking, viruses, malware and other attacks on its computing and other digital networks and systems (collectively, "**Systems Technology**").

Cybersecurity incidents could result from unintentional events, or from deliberate attacks by unauthorized entities or individuals attempting to gain access to the Systems Technology of the Agency for the purposes of misappropriating assets or information or causing operational disruption and damage.

The Agency's personnel provides support for the System's electronic system cyber security. This includes audits and recommended improvements to facility hardware and software to keep systems up to date with the latest cyber treat tools.

## **Secondary Market for Bonds**

There can be no guarantee that there will be a secondary market for the Bonds or, if a secondary market exists, that any Bonds can be sold for any particular price. Prices of bond issues for which a market is being made will depend upon then-prevailing circumstances. Such prices could be substantially different from the original purchase price. No assurance can be given that the market price for the Bonds will not be affected by the introduction or enactment of any future legislation impacting the System or System Revenues.

## LEGAL MATTERS

### Certain Legal Matters

The legal opinion of Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, Sacramento, California, Bond Counsel, substantially in the form of Appendix C-1 hereto, will be made available to purchasers at the time of original delivery of the Bonds, and a copy thereof will accompany each Bond. Certain legal matters will be passed upon for the Authority and the Agency by its general counsel, Kronick, Moskovitz, Tiedemann & Girard and by Jones Hall, A Professional Law Corporation, San Francisco California, as Disclosure Counsel. Nixon Peabody LLP will pass on certain matters for the Underwriter, as its counsel.

*Payment of the fees and expenses of Bond Counsel, Disclosure Counsel and Underwriter's Counsel is contingent upon the execution and delivery of the Bonds.*

### Absence of Litigation

There is no action, suit or proceeding known to be pending or threatened, restraining or enjoining the issuance or sale of the Bonds or the Indenture or in any way contesting or affecting the validity of the foregoing or any proceedings of the Authority or the Agency taken with respect to any of the foregoing.

## TAX MATTERS

In the opinion of Orrick, Herrington & Sutcliffe LLP, Special Tax Counsel to the Authority ("Special Tax Counsel"), based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code and the Bonds and is exempt from State of California personal income taxes. Special Tax Counsel is of the further opinion that interest on the Bonds is not a specific preference item for purposes of the federal alternative minimum tax. A complete copy of the proposed form of opinion of Special Tax Counsel is set forth in APPENDIX C-2 hereto.

To the extent the issue price of any maturity of the Bonds is less than the amount to be paid at maturity of such Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the Bonds which is excluded from gross income for federal income tax purposes and State of California personal income taxes. For this purpose, the issue price of a particular maturity of the Bonds is the first price at which a substantial amount of such maturity of the Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the Bonds accrues daily over the term to maturity of such Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such Bonds. Beneficial Owners of the Bonds should consult their own tax advisors with respect to the tax consequences of ownership of Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such Bonds in the original offering to the public at the first price at which a substantial amount of such Bonds is sold to the public.

Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) (“Premium Bonds”) will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner’s basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Bonds. The Authority has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Bonds. The opinion of Special Tax Counsel assumes the accuracy of these representations and compliance with these covenants. Special Tax Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Special Tax Counsel’s attention after the date of issuance of the Bonds may adversely affect the value of, or the tax status of interest on, the Bonds. Accordingly, the opinion of Special Tax Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Special Tax Counsel is of the opinion that interest on the Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the Bonds may otherwise affect a Beneficial Owner’s federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner’s other items of income or deduction. Special Tax Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Bonds. Prospective purchasers of the Bonds should consult their own tax advisors regarding any pending or proposed federal or state tax legislation, regulations or litigation, as to which Special Tax Counsel is expected to express no opinion.

The opinion of Special Tax Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Special Tax Counsel’s judgment as to the proper treatment of the Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service (“IRS”) or the courts. Furthermore, Special Tax Counsel cannot give and has not given any opinion or assurance about the future activities of the Authority, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. The Authority has covenanted, however, to comply with the requirements of the Code.

Special Tax Counsel’s engagement with respect to the Bonds ends with the issuance of the Bonds, and, unless separately engaged, Special Tax Counsel is not obligated to defend the

Authority or the Beneficial Owners regarding the tax-exempt status of the Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than the Authority and its appointed counsel, including the Beneficial Owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which the Authority legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues, may affect the market price for, or the marketability of, the Bonds, and may cause the Authority or the Beneficial Owners to incur significant expense.

## CONCLUDING INFORMATION

### Continuing Disclosure

The Authority has covenanted for the benefit of the holders and beneficial owners of the Bonds to provide (i) certain financial information and operating data relating to the Authority by not later than six months following the end of the Authority's fiscal year (which fiscal year currently ends on December 31), commencing with the report for the fiscal year ending December 31, 2020 (the "**Annual Report**") due by June 30, 2021, and (ii) notices of the occurrence of certain enumerated events ("**Event Notices**"). The Authority will file, or cause to be filed, the Annual Report and any Event Notices with the Municipal Securities Rulemaking Board. The specific nature of the information to be contained in the Annual Report or Event Notices is provided in "APPENDIX D – Form of Continuing Disclosure Certificate." These covenants have been made in order to assist the Underwriter in complying with S.E.C. Rule 15c2-12(b)(5) (the "**Rule**").

The Authority has never been subject to a continuing disclosure undertaking under the Rule. The Authority will rely upon Agency staff, as well as U.S. Bank National Association, as dissemination agent, to assist with its continuing disclosure undertaking.

The Agency has entered into a number of prior continuing disclosure undertakings pursuant to the Rule in connection with the issuance of other long-term obligations, and has provided annual reports and event notices in accordance with those undertakings. To the best of its knowledge, the Agency has filed its annual reports prior to the due date and has complied, in all material respects, with the requirements of its continuing disclosure undertakings in the past five years.

### Rating

S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC business ("**S&P**") has assigned its municipal bond rating of "\_\_\_" to the Bonds. Such rating expresses only the views of the S&P and is not a recommendation to buy, sell or hold the Bonds. There is no assurance that such rating will continue for any given period of time or that they it not be revised, either downward or upward, or withdrawn entirely by S&P, if in its judgment, circumstances so warrant. Any such downward revision or withdrawal may have an adverse effect on the market price of the Bonds.

### Underwriting

The Bonds were sold to Goldman, Sachs & Co. LLC, as underwriter (the "**Underwriter**"). The Bonds are being purchased by the Underwriter at a purchase price of \$\_\_\_\_\_, which represents the aggregate principal amount of the Bonds, plus/less [net] original issue premium/discount of \$\_\_\_\_\_, less an Underwriter's discount of \$\_\_\_\_\_.

The Underwriter will be obligated to take and pay for all of the Bonds if any are taken. The Underwriter intends to offer and sell the Bonds to the public at the offering prices set forth on the inside cover page of this Official Statement. After the initial public offering, the public offering price may be varied from time to time by the Underwriter.

### **Municipal Advisor**

The Authority has retained Montague DeRose and Associate, LLC, Westlake Village, California, as municipal advisor (the "**Municipal Advisor**") in connection with the structuring, issuance and delivery of the Bonds. The Municipal Advisor is not obligated to undertake, and has not undertaken, an independent verification or assume responsibility for the accuracy, completeness, or fairness of the information contained in this Official Statement. The Municipal Advisor is an independent financial advisory firm and is not engaged in the business of underwriting, trading or distributing municipal securities or other public securities.

### **Miscellaneous**

References are made in this Official Statement to certain documents and reports, which are brief summaries thereof, and which do not purport to be complete or definitive, and reference is made to such documents and reports for a full and complete statement of the contents thereof.

This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or Owners of any of the Bonds.

The execution and delivery of this Official Statement have been duly authorized by the Board of Directors of the Authority.

**MIDDLE FORK PROJECT FINANCE  
AUTHORITY**

By: \_\_\_\_\_  
Executive Director

**APPENDIX A**  
**FEASIBILITY STUDY**

**APPENDIX B**  
**SUMMARY OF PRINCIPAL LEGAL DOCUMENTS**

**APPENDIX C-1**

**FORM OF OPINION OF BOND COUNSEL**

**APPENDIX C-2**

**FORM OF OPINION OF SPECIAL TAX COUNSEL**

## APPENDIX D

### FORM OF CONTINUING DISCLOSURE CERTIFICATE

\$ \_\_\_\_\_  
MIDDLE FORK PROJECT FINANCE AUTHORITY  
SERIES 2020 REFUNDING BONDS

This Continuing Disclosure Certificate (the “Disclosure Certificate”) is executed and delivered by the Middle Fork Project Finance Authority (the “Authority”) in connection with the execution and delivery of above-referenced bonds (the “Bonds”).

The Bonds are being issued pursuant to a Indenture, dated as of March 1, 2020 (the “Indenture”), between the Authority, the Placer County Water Agency (the “Agency”) and The Bank of New York Trust Company, N.A., as trustee (the “Trustee”).

The Authority covenants and agrees as follows:

Section 1. Purpose of this Disclosure Certificate. This Disclosure Certificate is being executed and delivered by the Authority for the benefit of the holders and beneficial owners of the Bonds and in order to assist the Participating Underwriter in complying with the Rule (as defined herein).

Section 2. Definitions. In addition to the definitions set forth above and in the Indenture, which apply to any capitalized term used in this Disclosure Certificate unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“*Annual Report*” means any Annual Report provided by the Authority pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

“*Annual Report Date*” means the date that is six months after the end of the Authority’s fiscal year (currently June 30 based on the Authority’s fiscal year end of December 31).

“*Dissemination Agent*” means U.S. Bank National Association or any successor Dissemination Agent designated in writing by the Authority and which has filed with the Authority a written acceptance of such designation.

“*Listed Events*” means any of the events listed in Section 5(a) of this Disclosure Certificate.

“*MSRB*” means the Municipal Securities Rulemaking Board, which has been designated by the Securities and Exchange Commission as the sole repository of disclosure information for purposes of the Rule, or any other repository of disclosure information that may be designated by the Securities and Exchange Commission as such for purposes of the Rule in the future.

“*Official Statement*” means the final official statement executed by the Authority in connection with the issuance of the Bonds.

“*Participating Underwriter*” means any of the original underwriters of the Bonds required to comply with the Rule in connection with offering of the Bonds.

“Rule” means Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as it may be amended from time to time.

Section 3. Provision of Annual Reports.

(a) The Authority shall, or shall cause the Dissemination Agent to, not later than the Annual Report Date commencing June 30, 2021, with the report for the Fiscal Year ending December 31, 2020, provide to the MSRB, in an electronic format as prescribed by the MSRB, an Annual Report that is consistent with the requirements of Section 4 of this Disclosure Certificate. Not later than 15 Business Days prior to the Annual Report Date, the Authority shall provide the Annual Report to the Dissemination Agent (if other than the Authority). If by 15 Business Days prior to the Annual Report Date the Dissemination Agent (if other than the Authority) has not received a copy of the Annual Report, the Dissemination Agent shall contact the Authority to determine if the Authority is in compliance with the previous sentence.

The Annual Report may be submitted as a single document or as separate documents comprising a package, and may include by reference other information as provided in Section 4 of this Disclosure Certificate; provided that the audited financial statements of the Authority may be submitted separately from the balance of the Annual Report, and later than the Annual Report Date if not available by that date. If the Authority’s fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(b). The Authority shall provide a written certification with each Annual Report furnished to the Dissemination Agent to the effect that such Annual Report constitutes the Annual Report required to be furnished by the Authority hereunder. The Dissemination Agent may conclusively rely upon such certification of the Authority and shall have no duty or obligation to review such Annual Report.

(b) If the Authority does not provide (or cause the Dissemination Agent to provide) an Annual Report by the Annual Report Date, the Authority shall provide (or cause the Dissemination Agent to provide) to the MSRB, in an electronic format as prescribed by the MSRB, a notice in substantially the form attached as Exhibit A.

(c) With respect to each Annual Report, the Dissemination Agent shall:

(i) determine each year prior to the Annual Report Date the then-applicable rules and electronic format prescribed by the MSRB for the filing of annual continuing disclosure reports; and

(ii) if the Dissemination Agent is other than the Authority, file a report with the Authority certifying that the Annual Report has been provided pursuant to this Disclosure Certificate, and stating the date it was provided.

Section 4. Content of Annual Reports. The Annual Report shall contain or incorporate by reference the following:

(a) The Authority’s audited financial statements prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board. If the Authority’s audited financial statements are not available by the Annual Report Date, the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

(b) Unless otherwise provided in the audited financial statements filed on or before the Annual Report Date, financial information and operating data with respect to the Authority for the preceding fiscal year, substantially similar to that provided in the corresponding statements and tables in the Official Statement:

**[To Come]**

(c) In addition to any of the information expressly required to be provided under provisions of this Disclosure Certificate, the Authority shall provide such further material information, if any, as may be necessary to make the specifically required statements, in the light of the circumstances under which they are made, not misleading.

(d) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Authority or related public entities, which are available to the public on the MSRB's Internet web site or filed with the Securities and Exchange Commission. The Authority shall clearly identify each such other document so included by reference.

Section 5. Reporting of Listed Events.

(a) The Authority shall give, or cause to be given, notice of the occurrence of any of the following Listed Events with respect to the Bonds:

- (i) Principal and interest payment delinquencies.
- (ii) Non-payment related defaults, if material.
- (iii) Unscheduled draws on debt service reserves reflecting financial difficulties.
- (iv) Unscheduled draws on credit enhancements reflecting financial difficulties.
- (v) Substitution of credit or liquidity providers, or their failure to perform.

(vi) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the security, or other material events affecting the tax status of the security.

- (vii) Modifications to rights of security holders, if material.
- (viii) Certificate calls, if material, and tender offers.
- (ix) Defeasances.

(x) Release, substitution, or sale of property securing repayment of the securities, if material.

- (xi) Rating changes.

(xii) Bankruptcy, insolvency, receivership or similar event of the Authority.

(xiii) The consummation of a merger, consolidation, or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material.

(xiv) Appointment of a successor or additional trustee or the change of name of a trustee, if material.

(xv) Incurrence of a financial obligation of the Authority, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the Authority, any of which affect security holders, if material (for the definition of “financial obligation,” see clause (e)).

(xvi) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the Authority, any of which reflect financial difficulties (for the definition of “financial obligation,” see clause (e)).

(b) Whenever the Authority obtains knowledge of the occurrence of a Listed Event, the Authority shall, or shall cause the Dissemination Agent (if not the Authority) to, file a notice of such occurrence with the MSRB, in an electronic format as prescribed by the MSRB, in a timely manner not in excess of 10 business days after the occurrence of the Listed Event. Notwithstanding the foregoing, notice of Listed Events described in subsections (a)(viii) and (ix) above need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to holders of affected Bonds under the Indenture.

(c) The Authority acknowledges that the events described in subparagraphs (a)(ii), (a)(vii), (a)(viii) (if the event is a certificate call), (a)(x), (a)(xiii), (a)(xiv) and (a)(xv) of this Section 5 contain the qualifier “if material” and subparagraph (a)(vi) contains the qualifier “material” with respect to certain notices, determinations or other events affecting the tax status of the Bonds. The Authority shall cause a notice to be filed as set forth in paragraph (b) above with respect to any such event only to the extent that the Authority determines the event’s occurrence is material for purposes of U.S. federal securities law.

(d) For purposes of this Disclosure Certificate, any event described in paragraph (a)(xii) above is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent, or similar officer for the Authority in a proceeding under the United States Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Authority, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement, or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of said party.

(e) For purposes of Section 5(a)(xv) and (xvi), “financial obligation” means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The

term financial obligation shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

Section 6. Identifying Information for Filings with the MSRB. All documents provided to the MSRB under the Disclosure Certificate shall be accompanied by identifying information as prescribed by the MSRB.

Section 7. Termination of Obligation. The Authority's obligations under this Disclosure Certificate shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Bonds. If such termination occurs prior to the final maturity of the Bonds, the Authority shall give notice of such termination in the same manner as for a Listed Event under Section 5(b).

Section 8. Dissemination Agent. The Authority may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any Dissemination Agent, with or without appointing a successor Dissemination Agent. The initial Dissemination Agent shall be U.S. Bank National Association. Any Dissemination Agent may resign by providing 30 days' written notice to the Authority.

Section 9. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Certificate, the Authority may amend this Disclosure Certificate, and any provision of this Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(a) if the amendment or waiver relates to the provisions of Sections 3(a), 4 or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature, or status of an obligated person with respect to the Bonds, or type of business conducted;

(b) the undertakings herein, as proposed to be amended or waived, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the primary offering of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) the proposed amendment or waiver either (i) is approved by holders of the Bonds in the manner provided in the Indenture for amendments to the Indenture with the consent of holders, or (ii) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the holders or beneficial owners of the Bonds.

If the annual financial information or operating data to be provided in the Annual Report is amended pursuant to the provisions hereof, the first Annual Report filed pursuant hereto containing the amended operating data or financial information shall explain, in narrative form, the reasons for the amendment and the impact of the change in the type of operating data or financial information being provided.

If an amendment is made to this Disclosure Certificate modifying the accounting principles to be followed in preparing financial statements, the Annual Report for the year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. The comparison shall include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information, in order to provide information to investors to

enable them to evaluate the ability of the Authority to meet its obligations. To the extent reasonably feasible, the comparison shall be quantitative.

A notice of any amendment made pursuant to this Section 9 shall be filed in the same manner as for a Listed Event under Section 5.

Section 10. Additional Information. Nothing in this Disclosure Certificate shall be deemed to prevent the Authority from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Certificate. If the Authority chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Certificate, the Authority shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

Section 11. Default. If the Authority fails to comply with any provision of this Disclosure Certificate, the Participating Underwriter or any holder or beneficial owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Authority to comply with its obligations under this Disclosure Certificate. A default under this Disclosure Certificate shall not be deemed an Event of Default under the Indenture, and the sole remedy under this Disclosure Certificate in the event of any failure of the Authority to comply with this Disclosure Certificate shall be an action to compel performance.

Section 12. Duties, Immunities and Liabilities of Dissemination Agent.

(a) The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Certificate, and the Authority agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which they may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The Dissemination Agent shall have no duty or obligation to review any information provided to it by the Authority hereunder, and shall not be deemed to be acting in any fiduciary capacity for the Authority, the Bonds holders or any other party. The obligations of the Authority under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

(b) The Dissemination Agent shall be paid compensation by the Authority for its services provided hereunder in accordance with its schedule of fees as amended from time to time, and shall be reimbursed for all expenses, legal fees and advances made or incurred by the Dissemination Agent in the performance of its duties hereunder.

Section 13. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the Authority, the Dissemination Agent, the Participating Underwriters and holders and beneficial owners from time to time of the Bonds, and shall create no rights in any other person or entity.

Section 14. Counterparts. This Disclosure Certificate may be executed in several counterparts, each of which shall be regarded as an original, and all of which shall constitute one and the same instrument.

Section 15. Governing Law. This Disclosure Certificate is to be construed in accordance with and governed by the laws of the State of California.

Dated: \_\_\_\_\_, 2020

MIDDLE FORK PROJECT FINANCE  
AUTHORITY

By: \_\_\_\_\_  
Executive Director

ACKNOWLEDGED AND ACCEPTED BY:

U.S. Bank National Association,  
as Dissemination Agent

By: \_\_\_\_\_  
Authorized Officer

**EXHIBIT A**

**NOTICE OF FAILURE TO FILE ANNUAL REPORT**

Name of Issuer: Middle Fork Project Finance Authority

Name of Issue: \$\_\_\_\_\_ Series 2020 Refunding Bonds

Date of Issuance: \_\_\_\_\_, 2020

NOTICE IS HEREBY GIVEN to the Municipal Securities Rulemaking Board that the Authority has not provided an Annual Report with respect to the above-named Certificates as required by that certain Continuing Disclosure Certificate, dated \_\_\_\_\_, 2020. The Authority anticipates that the Annual Report will be filed by \_\_\_\_\_.

Dated:\_\_\_\_\_

MIDDLE FORK PROJECT FINANCE AUTHORITY

By\_\_\_\_\_

cc: Trustee  
Dissemination Agent

**APPENDIX E**

**[PRELIMINARY UN]AUDITED FINANCIAL STATEMENTS FOR THE AUTHORITY  
FOR THE YEAR ENDED DECEMBER 31, 2019**

## APPENDIX F

### DTC AND THE BOOK-ENTRY ONLY SYSTEM

*The following description of the Depository Trust Company, New York, New York (“DTC”), the procedures and record keeping with respect to beneficial ownership interests in the bonds described in this Official Statement (the “Bonds”), payment of principal, interest and other payments on the Bonds to DTC Participants or Beneficial Owners, confirmation and transfer of beneficial ownership interest in the Bonds and other related transactions by and between DTC, the DTC Participants and the Beneficial Owners is based solely on information provided by DTC. Accordingly, no representations can be made concerning these matters and neither the DTC Participants nor the Beneficial Owners should rely on the foregoing information with respect to such matters, but should instead confirm the same with DTC or the DTC Participants, as the case may be.*

*Neither the issuer of the Bonds (the “Issuer”) nor the trustee, fiscal agent or paying agent appointed with respect to the Bonds (the “Agent”) take any responsibility for the information contained in this Appendix.*

*No assurances can be given that DTC, DTC Participants or Indirect Participants will distribute to the Beneficial Owners (a) payments of interest, principal or premium, if any, with respect to the Bonds, (b) certificates representing ownership interest in or other confirmation or ownership interest in the Bonds, or (c) redemption or other notices sent to DTC or Cede & Co., its nominee, as the registered owner of the Bonds, or that they will so do on a timely basis, or that DTC, DTC Participants or DTC Indirect Participants will act in the manner described in this Appendix. The current “Rules” applicable to DTC are on file with the Securities and Exchange Commission and the current “Procedures” of DTC to be followed in dealing with DTC Participants are on file with DTC.*

1. DTC will act as securities depository for the Bonds (the “Securities”). The Securities will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Security certificate will be issued for each maturity of the Securities in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any issue exceeds \$500 million, one certificate will be issued with respect to each \$500 million of principal amount, and an additional certificate will be issued with respect to any remaining principal amount of such issue.

2. DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned

subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC is rated “AA+” by Standard & Poor’s. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com) and [www.dtc.org](http://www.dtc.org).

3. Purchases of Securities under the DTC system must be made by or through Direct Participants, which will receive a credit for the Securities on DTC’s records. The ownership interest of each actual purchaser of each Security (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Securities are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Securities, except in the event that use of the book-entry system for the Securities is discontinued.

4. To facilitate subsequent transfers, all Securities deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Securities with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Securities; DTC’s records reflect only the identity of the Direct Participants to whose accounts such Securities are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Securities may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Securities, such as redemptions, tenders, defaults, and proposed amendments to the Security documents. For example, Beneficial Owners of Securities may wish to ascertain that the nominee holding the Securities for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

6. Redemption notices shall be sent to DTC. If less than all of the Securities within a maturity are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

7. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Securities unless authorized by a Direct Participant in accordance with DTC’s MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.’s consenting or voting

rights to those Direct Participants to whose accounts Securities are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Principal, redemption price and interest payments on the Securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Issuer or the Agent, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Agent, or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, redemption price and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer or the Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

9. If applicable, a Beneficial Owner shall give notice to elect to have its Securities purchased or tendered, through its Participant, to tender/remarketing agent, and shall effect delivery of such Securities by causing the Direct Participant to transfer the Participant's interest in the Securities, on DTC's records, to tender/remarketing agent. The requirement for physical delivery of Securities in connection with an optional tender or a mandatory purchase will be deemed satisfied when the ownership rights in the Securities are transferred by Direct Participants on DTC's records and followed by a book-entry credit of tendered Securities to tender/remarketing agent's DTC account.

10. DTC may discontinue providing its services as depository with respect to the Securities at any time by giving reasonable notice to the Issuer or the Agent. Under such circumstances, in the event that a successor depository is not obtained, Security certificates are required to be printed and delivered.

11. The Issuer may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Security certificates will be printed and delivered to DTC.

## Appendix G



### Middle Fork Project Finance Authority Financial Feasibility Report

Prepared by: Horizons Energy  
January 16, 2020

#### *STATEMENT OF LIMITATIONS*

In preparation of this Financial Feasibility Report, Horizons Energy (HE) relied upon information provided by the Middle Fork Project Finance Authority (MFPFA). While HE has no reason to believe that the information provided, and upon which HE has relied is inaccurate or incomplete in any material respect, HE found information provided to be consistent with public information filed with EIA and MFPFA audited financial statements.

Estimates and projections (work products) prepared by HE relating to performance and operating and maintenance costs are based on experience, qualifications, and judgment as a professional consultant. Since HE has no control over weather, cost and availability of labor, material and equipment, labor productivity, economic conditions, government regulations and laws (including interpretation thereof), competitive bidding, and market conditions or other factors affecting such estimates or projections, the actual operation and results of power markets may differ from those projected herein. HE makes no warranty or guarantee regarding the accuracy of any projections, estimates, or analyses, or that such work products will be accepted by any legal, financial or regulatory body. Actual rates, costs, performance, schedules, etc., may vary from the data provided.

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## Executive Summary

The Middle Fork Project (MFP) is owned and operated by Placer County Water Agency (PCWA, or the Agency). PCWA employees manage and staff the operations of the MFP. The Placer County Water Agency Act dictates that the Agency and the County of Placer approve any new contracts for the sale of electric energy generated from the MFP and the spending of revenues therefrom. To expedite the fulfillment of these joint responsibilities a Joint Exercise of Powers Agreement (JPA) for the Middle Fork Project Finance Authority (MFPFA) was executed on January 10, 2006. The JPA established “an Authority to serve the mutual interests of the County and the Agency, exclusively, to provide for the financing of studies, programs, procedures, projects, services, improvements, modifications, and other costs that may be required to obtain a new FERC license or which may be completed under the current or subsequent FERC license of the MFP by the Agency, to approve Future Electrical Energy Sales, and to distribute the revenues from Future Electrical Energy Sales.” All MFP revenues are collected by MFPFA.

All power from the MFP was sold to Pacific Gas & Electric Company (PG&E) through a Power Purchase Agreement (PPA) for a term of 50 years in exchange for funds for bond payments, an operating and capital budget, and project insurance. The PG&E PPA expired on April 30, 2013, after which a new short-term PPA was entered into with PG&E that expired on December 31, 2017. On January 1, 2018, the Agency became its own scheduling coordinator to sell the MFP’s power directly through the CAISO energy markets and energy products via bilateral contracts.

The MFP operates under a Federal Power permit with the Federal Energy Regulatory Commission (FERC) held by PCWA. Operation of the MFP was authorized in 1963 under an initial 50-year FERC license that expired on February 28, 2013. Since the expiration of the license in 2013, the Agency has continued to operate the MFP under an annual FERC license that is issued year-to-year with terms and conditions of the prior license until a new long-term license will be issued. The Agency anticipates being granted a new license with a term of at least 40 years sometime between January and April 2020.

Since May 1, 2013, MFP power has been sold into the California Independent System Operator (CAISO) energy markets and via bilateral contracts for capacity products. The Agency has in-house front office energy marketing and fundamental market expertise, supported by back office credit and energy risk management capabilities. Additionally, PCWA has received certification as a CAISO scheduling coordinator (SC), and schedules its power into the CAISO day ahead and real time markets.

Horizons Energy (HE) was retained by MFPFA to prepare a financial feasibility report in connection with the potential issuance of bonds to refund the Authority’s currently outstanding Middle Fork Project Finance Authority Revenue Bond, Series 2006 (2006 Revenue Bond). HE modeled the future cash flow and Obligations of the MFP assuming nine different price scenarios and a range of hydrologic conditions.

The degree to which the MFP can meet Obligations under alternative future conditions, including conditions which impose financial stress determines the financial feasibility of the future bond related Obligations. From this study, the MFP through the combination of annual Free Cash Flow and, when needed, Financial Risk Mitigation measures, has sufficient funds available to meet annual Obligations, including the new bond debt service (principle and interest) and therefore passes the tests of financial feasibility.

In this report HE details the results of its evaluation and confirms that the MFP can internally generate funds necessary to meet its annual Obligations range of possible future operating conditions for the years 2020 to 2036. There was adequate debt service coverage of 1.2 times under the nine different price scenarios and expected hydrology stochastics modeled, with the exception of one year in the Low Natural Gas scenario. In this scenario, in 2035 there are insufficient cash flows without any financial risk mitigation measures. However, this stress may be mitigated by deferral of a fraction of the planned \$18 million capital expenditures (CapEx) budget.

## Introduction

Horizons Energy LLC ([www.horizons-energy.com](http://www.horizons-energy.com)) was formed in Ohio as a Limited Liability Company in September 2016 by Greg Turk. Horizons Energy has over 60 years of combined experience in the North American energy industry providing consulting services, custom scenarios and conducting studies on behalf of over 50 clients. Horizons consultants contributed to over 30 North America integrated resource plans (IRP), including the predominately hydro power systems: TVA, BC Hydro, Manitoba Hydro, FortisBC (West Kootenay Hydro). Additionally, Horizons consultants have performed billions of dollars in valuation including KeySpan due diligence, Public Service Colorado resource bidding, City of Lake Worth IRP, New York Independent Power Producer (IPP) battery valuations and the Public Service New Mexico abandonment and replacement power case. Horizons Energy semi-annually develops a North American advisory service and database containing a long-term outlook of the energy markets which includes a forecast of energy, capacity and fuel prices for 78 market areas through the year 2050.

HE applied two metrics to measure Financial Feasibility to meet Obligations of the proposed 2020 Bond issuance. These metrics are:

- Annual Free Cash Flow (FCF) is calculated as cash minus annual Obligations. FCF measures the ability to generate sufficient cash to cover annual Obligations. Cash is generated by revenues derived from the energy, capacity, ancillary services, renewable energy credit (REC) markets and investment income. MFP also derives revenue from bilateral contracts with various Community Choice Aggregators (CCA), wherein the Agency receives a small premium over CAISO energy market prices from entities who want to purchase carbon free energy for their load portfolio. Carbon free energy revenue was not included in the analysis due to the uncertainty associated with pricing and because the premium is less than one million dollars per year and less than one percent of the 2019 budget. Annual Obligations represent operations and maintenance and insurance expense, capital expenditures for on-going additions and improvements and repayment of the bond Obligation (principal and interest).
- Debt Service Coverage (DSC) is used as a proxy for liquidity measuring the capability of the MFP to generate sufficient cash less expenses (excluding capital expenditures) at a level greater than the projected debt service on the bonds. For purposes of this report, a 1.2 times DSC will be used as a financial feasibility metric, where net funds generated after expenses is 20 percent greater than the annual principal and interest Obligation of the bonds. Financial stress is deemed to occur in instances where these two metrics are not met. MFP can deploy two primary methods, if necessary, to mitigate the risk and associated financial stress of meeting the Obligations of MFP: capital expenditure (CapEx) deferral and/or drawdown of the established reserves. Additionally, the MFP has the additional ability to carry-over water from one year to the next under lower water year conditions. This factor, which may further mitigate risk by

utilizing the water reserve if required, was not incorporated into the analysis and therefore represents an additional conservative assumption.

HE conducted its financial feasibility study with a combination of scenarios and stochastics. Scenarios represent a range of plausible futures with variations in energy, capacity and ancillary service market prices. Stochastics were generated across 100 random draws to capture the impact of hydrologic variations for MFP. In this report, identical hydrologic variation was then enumerated against each of the scenarios. Combining these two uncertainty techniques results in a robust representation of market and operational risk and corresponding assessment of MFP's financial feasibility.

The scenarios are listed below and additional description is in the Scenario Assumptions section. Scenarios provide for measuring uncertainty in the energy markets for the major drivers: natural gas, demand, carbon pricing and renewable penetration.

- Base – Business as usual Henry Hub prices average \$3.12/MMBtu in nominal dollars
- High Natural Gas – Henry Hub prices average over \$4.47/MMBtu in nominal dollars
- Low Natural Gas – Henry Hub prices average \$2.50/MMBtu in nominal dollars
- High Demand – Increased demand by approximately 7 percent
- Low Demand - Decreased demand by approximately 10 percent
- Carbon Tax – Institute US-wide carbon tax of \$15 per ton increasing by 5 percent/year above inflation through 2029 and 2.5 percent above inflation thereafter
- Low Natural Gas with a Carbon Limit – Same Henry Hub pricing as low natural gas a target to decrease CO<sub>2</sub> electric sector emissions by 80 percent
- High Natural Gas with a Carbon Limit - Same Henry Hub pricing as high natural gas a target to decrease CO<sub>2</sub> electric sector emissions by 80 percent
- 100% Renewable – US-wide implementation of 100 percent renewable generation by 2050

Variations of all-hour energy prices for the nine scenarios are shown in Figure 15.

MFP staff provided information on the size and historical generation of the MFP. HE used this information to develop the stochastic hydrology assumptions within the EnCompass<sup>1</sup> model HE performed hourly production simulations of MFP for the years 2020 through 2036. Variations in year-to-year hydrology determine the energy available and therefore strongly impact annual energy revenues. Consistent with the operation of the MFP, HE represented the five powerhouses (Middle Fork and Ralston operate as a combined resource), taking into account the maximum operational capacity, minimum operational capacity and the ability to contribute to capacity and ancillary markets.

## Results and Conclusion

Energy and capacity revenue represent the largest components of the Authority's revenue stream contributing over 90 percent of the projected revenue available. Table 1<sup>2</sup> represents the revenue stream

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<sup>1</sup> EnCompass is a state-of-the-art power simulation engine developed by Anchor Power Solutions to address a range of power planning problems. This tool was used in the development of the market assessment, portfolio and stochastic analysis for this report. A description of EnCompass is provided in the Addenda.

<sup>2</sup> The \$1,000,000 interest earnings assumption in the table is based on the Authority's total cash and investment balance (working capital, monies in capital projects and reserves, which totaled an average \$103 million January 1, 2019 – November 30, 2019) which are projected to earn a 1% interest rate.

for the base case. It should be noted that REC and Investment Income do not vary by scenario. MFP is considered a renewable resource which is eligible to sell the value of its renewably produced energy as a Renewable Energy Credit (REC). As small hydro facilities, French Meadows, Hell Hole and Oxbow powerhouses are the resources eligible for these REC's. HE acknowledges that REC revenue for the small hydro on annual generation levels of 70,000 MWh will vary based on generation but found the \$1.225 million to be conservative compared to expected generation levels at \$17.50/MWh REC price. HE develops capacity prices for the CAISO-NP15 market area utilizing the marginal unit's residual revenue deficit to determine the capacity price within the EnCompass model. Fluctuations occur annually based on the revenue deficit requirement.

Table 1  
Base Case Expected Revenue

	Expected Revenue (\$000s)					Total
	Energy	Capacity	Ancillary	REC	Investment Income	
2020	37,436	6,025	117	1,225	1,000	45,803
2021	37,803	14,813	114	1,225	1,000	54,955
2022	38,023	14,813	86	1,225	1,000	55,147
2023	39,002	16,606	94	1,225	1,000	57,927
2024	39,403	18,085	143	1,225	1,000	59,856
2025	40,868	16,688	159	1,225	1,000	59,940
2026	43,512	16,627	147	1,225	1,000	62,511
2027	44,594	5,109	186	1,225	1,000	52,114
2028	45,472	6,336	113	1,225	1,000	54,146
2029	46,518	7,678	189	1,225	1,000	56,610
2030	48,217	24,989	199	1,225	1,000	75,630
2031	49,030	11,123	232	1,225	1,000	62,610
2032	50,869	29,983	301	1,225	1,000	83,378
2033	53,386	4,225	151	1,225	1,000	59,987
2034	54,419	5,409	113	1,225	1,000	62,166
2035	54,384	4,354	249	1,225	1,000	61,212
2036	55,698	4,708	301	1,225	1,000	62,932

(Source: Horizons Energy)

Table 2 represents the annual Obligations and does not vary by scenario. As noted previously, the capital investment schedule can be accelerated or deferred by MFP based on actual revenues and available cash flows. O&M expenses are based the 2020 amount plus a 2% annual escalation. Capital expenditures are based on maintaining the facilities to provide reliable power generation for at least another 40 years.

Table 2  
Annual Obligations

	Annual Obligations (\$000s)				
	O&M	Insurance	Principal & Interest	Capital Expenditures	Total
2020	27,208	161	5,344	10,081	42,794
2021	27,985	219	5,353	11,990	45,547
2022	28,427	227	5,353	12,358	46,365
2023	28,082	240	5,352	11,222	44,896
2024	28,551	254	5,353	9,428	43,586
2025	29,122	260	5,353	8,692	43,427
2026	29,704	258	5,349	9,713	45,024
2027	30,298	257	5,353	8,755	44,663
2028	30,904	256	5,353	6,658	43,171
2029	31,522	255	5,353	6,954	44,084
2030	32,153	254	5,350	14,527	52,284
2031	32,796	256	5,352	7,586	45,990
2032	33,452	257	5,353	7,924	46,986
2033	34,121	255	5,353	8,276	48,005
2034	34,803	253	5,351	8,644	49,051
2035	35,499	251	5,353	18,058	59,161
2036	36,209	252	2,675	9,431	48,567

(Source: Horizons Energy)

Table 3 shows the expected value (average of 100 random draws) across the nine scenarios. The Low Natural Gas scenario provides the highest level of stress due to low energy market prices. In this case in 2035 there are insufficient cash flows without any financial risk mitigation measures. However, this stress may be mitigated by deferral of a fraction of the planned \$18 million CapEx budget. As shown, the expected NPV sum of all revenues, income less expenses gives rise to \$170 million of FCF. The Base Case expected hydrologic conditions yield no financial stress.

Table 3  
Expected Free Cash Flow Summary

	Expected Free Cash Flow Summary								
	Base	Low NG	High NG	High Demand	Low Demand	US CO2 Tax	CO2 Low NG	CO2 High NG	100% Renewable
2020	3,008	3,083	6,560	3,364	3,139	13,153	3,445	6,552	3,037
2021	9,408	9,848	14,314	10,067	9,461	19,622	9,562	14,162	8,966
2022	8,781	8,732	14,063	9,533	8,821	19,026	14,676	23,536	8,331
2023	13,031	12,183	7,305	12,107	546	27,178	2,784	13,312	14,654
2024	16,270	14,763	24,887	15,061	15,049	32,100	5,959	18,661	19,143
2025	16,515	14,246	25,413	15,471	3,166	32,192	22,689	38,849	19,610
2026	17,487	14,798	13,496	6,046	4,514	34,834	24,540	44,524	21,175
2027	7,452	4,400	17,484	7,981	20,909	39,927	26,621	51,636	25,215
2028	10,976	7,149	40,129	23,967	10,652	45,485	32,158	59,430	28,228

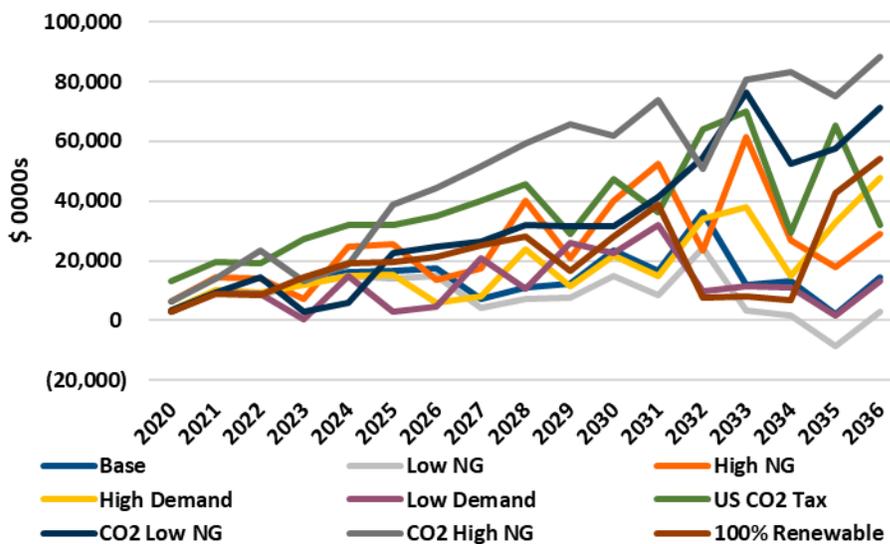
Expected Free Cash Flow Summary

	Base	Low NG	High NG	High Demand	Low Demand	US CO2 Tax	CO2 Low NG	CO2 High NG	100% Renewable
2029	12,525	7,639	20,764	11,343	26,045	28,851	31,623	65,613	16,630
2030	23,346	14,712	40,221	21,917	22,440	47,163	31,712	61,705	28,245
2031	16,620	8,718	52,285	15,069	32,134	36,221	41,388	73,765	38,934
2032	36,393	24,318	23,591	34,195	9,789	64,106	54,793	50,790	7,555
2033	11,982	3,256	61,525	37,831	11,451	70,018	76,189	80,657	7,964
2034	13,113	1,623	27,010	15,056	11,258	29,638	52,560	83,060	6,930
2035	2,050	(8,436)	18,081	32,760	1,852	65,177	57,479	75,286	42,569
2036	14,365	2,816	29,043	47,857	13,055	31,881	71,437	88,420	54,099
<b>Net Present Value</b>	<b>170,009</b>	<b>111,868</b>	<b>308,197</b>	<b>219,644</b>	<b>147,091</b>	<b>452,751</b>	<b>374,981</b>	<b>583,364</b>	<b>247,096</b>

(Source: Horizons Energy)

The Figure 1 summarizes Annual FCF under expected annual hydrologic conditions across the nine scenarios.

Figure 1  
Annual Expected FCF across Scenarios



(Source: Horizons Energy)

The range of Annual FCF corresponds to the variability of market prices embedded in each scenario. All scenarios across all years, with the exception of Low Natural Gas case in 2035, display no financial stress on an expected annual basis. The Low Natural Gas case in 2035 would require the application of additional risk mitigation measures – such as CapEx deferral.

Viewing the second financial metric, DSC, produces the following expected value results:

Table 4  
Expected Debt Service Coverage (Times)

	Expected Debt Service Coverage (Times)								
	Base	Low NG	High NG	High Demand	Low Demand	US CO2 Tax	CO2 Low NG	CO2 High NG	100% Renewable
2020	3.45	3.46	4.11	3.52	3.47	5.35	3.53	4.11	3.45
2021	5.00	5.08	5.91	5.12	5.01	6.91	5.03	5.89	4.92
2022	4.95	4.94	5.94	5.09	4.96	6.86	6.05	7.71	4.86
2023	5.53	5.37	4.46	5.36	3.20	8.18	3.62	5.58	5.84
2024	5.80	5.52	7.41	5.57	5.57	8.76	3.87	6.25	6.34
2025	5.71	5.29	7.37	5.51	3.22	8.64	6.86	9.88	6.29
2026	6.08	5.58	5.34	3.95	3.66	9.33	7.40	11.14	6.77
2027	4.03	3.46	5.90	4.13	6.54	10.09	7.61	12.28	7.35
2028	4.29	3.58	9.74	6.72	4.23	10.74	8.25	13.35	7.52
2029	4.64	3.73	6.18	4.42	7.16	7.69	8.21	14.56	5.41
2030	8.08	6.47	11.23	7.81	7.91	12.53	9.64	15.25	8.99
2031	5.52	4.05	12.19	5.23	8.42	9.19	10.15	16.20	9.69
2032	9.28	7.02	6.89	8.87	4.31	14.46	12.72	11.97	3.89
2033	4.78	3.15	14.04	9.61	4.69	15.63	16.78	17.61	4.03
2034	5.07	2.92	7.66	5.43	4.72	8.15	12.44	18.14	3.91
2035	4.76	2.80	7.75	10.49	4.72	16.55	15.11	18.44	12.33
2036	9.89	5.58	15.38	22.41	9.41	16.44	31.23	37.58	24.75

(Source: Horizons Energy)

This table illustrates that the DSC is well above 1.2 times in all years and scenarios on an expected basis. Results strongly pass the financial feasibility tests on an expected basis across scenarios. Even though the Low Natural Gas results in a negative FCF in 2035 the expected DSC is positive because the calculation excludes annual CapEx.

There are a number of factors that HE did not incorporate in the feasibility study. If these factors were included, they would generally have provided either greater coverage or greater risk mitigation. Excluding them implicitly may understate the financial feasibility of Bond coverage:

1. Deferral of CapEx was not reflected in the study and could be used to mitigate FCF stress.
2. The FCF does not reflect any drawdown or usage of reserve fund.
3. MFP has the additional ability to carry-over water from one year to the next under lower water year conditions. This capability, is not represented in the HE study and provides for additional ability to mitigate risk. Additionally, storage optimization to capture incremental revenue was not included in the modeling as this is difficult to forecast
4. MFP currently has a budget of \$1.225 million in REC revenue for small hydro based on annual generation levels of 70,000 MWh at a REC price of \$17.50/MWh. Generation levels on an expected basis are greater than 70,000 MWh for the study and therefore HE assumed these budget levels would be constant across scenarios due to the uncertainty of REC prices.
5. MFP currently has a budget of \$640 thousand in CFC revenue. HE conservatively excluded this revenue stream from the study due to the lack of transparency in this untraded market.
6. MFP scheduled maintenance for the entire month of October in each year (per information provided by MFP staff).

7. One percent return on investment income on a constant balance of \$103 million; where the one percent and balance could fluctuate.

Evaluating annual and inter-year hydrologic uncertainty against the alternative scenarios introduces additional financial stress. In particular, the highest stress conditions occur in the Low Natural Gas scenario under the assumption of multiple consecutive low water years. However, across all scenarios and hydrologic uncertainty, the mitigation methods outlined above are capable of meeting total annual Obligations of the MFP.

**Assessment:** From the HE study, the MFP, through the combination of annual Free Cash Flow and, when needed, Financial Risk Mitigation measures, has sufficient funds available to meet Annual Obligations, including the Bond P&I and therefore passes the tests of Financial Feasibility.

## MFP Assessment

The Middle Fork American River Hydroelectric Project or Middle Fork Project (MFP) is located in Placer County within the Middle Fork American River Watershed at elevations ranging from approximately 1,100 feet to 5,300 feet.

The MFP is a multi-purpose project designed to conserve and control waters of the Middle Fork American River, the Rubicon River and certain tributaries for water supply and hydroelectric generation. The principal project features are two storage reservoirs and five diversion dams, five power plants, diversion and water transmission facilities, five tunnels and related facilities. The MFP has a total storage capacity of approximately 345,000 acre-feet (ac-ft.), a reliable generation capacity of 232.4 megawatts (MW) and produces an average of about 1 million megawatt-hours (MWh) per year. The MFP is operated pursuant to a license from the Federal Energy Regulatory Commission (FERC), in addition to various water rights, dam safety and other permit terms.

The MFP operates as a merchant power generator competing in California energy markets, offering zero carbon-emitting energy products, and operationally flexible energy and capacity products. The MFP optimizes energy and ancillary services into the CAISO Day-Ahead (DA) and Real-Time (RT) markets and participates in California's bilateral markets for resource adequacy, renewable energy credits and carbon-free energy.

MFP operations for water supply and generation are constrained by regulatory and contract requirements, the physical capacities of the MFP facilities and water availability. Regulatory and contract requirements include conditions imposed by the FERC license, water right permits, and water delivery contracts.

Typical annual operation of the MFP results in the capture of runoff which is diverted to increase storage in French Meadows and Hell Hole reservoirs in the winter and spring (filling period), and drawdown of the reservoirs during the summer, fall and early winter (release period).

During the filling period, flows through the MFP powerhouses are highly dependent on projected and actual runoff conditions. In drier years, power releases are minimized during the filling period to increase the volume of water in storage to meet upcoming summer consumptive use and peak power demands. In wetter years, power releases during the filling period are increased as necessary to

minimize spills. In “normal” years, when minimum storage levels to meet consumptive demands are reasonably assured and the chance of spilling is low, power releases are adjusted through the filling season based on the volume of water in storage, projected runoff, and current and projected power values.

Daily and hourly releases for generation are flexible. During the release period, flows are managed to: (1) meet storage and flow license requirements; (2) meet consumptive water supply requirements; (3) optimize power generation to meet peak electrical demand; and (4) achieve end of year carryover target storage levels.

The MFP hydro operating characteristics are flexible, allowing storage of fuel (water in the reservoirs) for generation during the most valuable seasons, and highly flexible release capabilities to respond to energy market signals on an hourly or sub-hourly time step. MFP powerhouses can ramp up from zero to full load within eight minutes, and back down to zero in another eight minutes. The fast ramping capability allows maximum dispatch flexibility by the CAISO to manage increasing amounts of intermittent resources such as wind and solar.

The MFP is a highly reliable source of electricity averaging over 89 percent of performance availability from 2008 to 2018, in addition to maintaining a low forced outage rate of three percent, which measures the portion of downtime due to unplanned factors. Continual efforts are made to maintain the reliability of the MFP system. The development of predictive maintenance and condition monitoring has proven to increase the health of the MFP and predict outages.

The MFP is a financially robust project with substantial financial strength that is evidenced in the recent results. Upon the conclusion of the 50-year PPA with PG&E in April 2013, the MFP revenue began flowing to the MFPFA. From May 2013 through December 2018 the MFPFA recognized \$250 million in power sales revenue. The years 2013 through 2015 were drought conditions with 2015 having the least precipitation since 1977, the all-time drought record. Over the same 4 years and 8 months, the MFPFA earned \$3 million in interest for a total of \$253 million.

## Approach

This report is divided into five Sections:

1. MFP Assessment: Explains the operational, legal and regulatory overview of the MFP;
2. Market Assessment: Assesses MFP’s energy, capacity and ancillary revenue and describes the CAISO, WECC and related renewable and emissions markets;
3. Feasibility Study Risk Analysis: Reviews the Scenario and Stochastic Analyses used as the basis to evaluate the Financial Feasibility of the Bond;
4. Results: Summarizes the expected outcomes of the project with an emphasis on evaluating levels of Financial Stress and the Project’s ability to mitigate that stress under different conditions; and
5. Consultant’s Assessment: Provides HE’s opinion as to the Financial Feasibility of the Bond.

In addition to the principal and interest (P&I) Obligations of the Bonds<sup>3</sup>, other annual Obligations include total operating expenses, insurance plus annual on-going capital project expenses<sup>4</sup> (CapEx). Internally generated funds are the sum of annual revenue and investment income. If needed, MFP may also either defer a portion of annual CapEx or drawdown a portion of the established Reserve Fund to meet Obligations in a given year.

MFP operates and derives revenue from the following resources:

*Table 5  
MFP Hydro Facilities*

Facility	Dependable Generating Capacity (MW)
French Meadows Powerhouse	16.0
Hell Hole Powerhouse	0.6
Middle Fork & Ralston Powerhouse	210.0
Oxbow Powerhouse	5.8
<b>Total</b>	<b>232.4</b>

Current sources of revenue and income include:

- Energy Revenue: MFP produces hydroelectric generation; it receives its source of energy from reservoirs which in-turn receive water from snow and rain run-off. Annual energy revenues obtained through PCWA’s participation in the CAISO Day-Ahead (DA) and Real-Time (RT) markets. They are the sum of the hourly price of electricity times the hourly energy generated. MFP sales into the RT markets were not included in the modeling undertaken for this study; however, the Agency’s Energy Marketing actively manages the sales of energy into the market when profitable opportunities arise.
- Capacity Revenue: MFP hydroelectric generation provides power at times of maximum need, often during the peak demand for electricity or during times of low CAISO system operating reserves. In the CAISO, Load Serving Entities must obtain capacity as well as energy services to meet the peak demands of its customers. This demand results in an on-going value of firm generating capacity. MFP obtains revenue for its firm capacity through bilateral transactions.
- REC Revenue: MFP is considered a renewable resource which is eligible to sell the value of its renewably produced energy as a Renewable Energy Credit (REC). As small hydro facilities, French Meadows, Hell Hole and Oxbow powerhouses are the resources eligible for these REC’s.
- Ancillary Service Revenue: MFP participates in ancillary service markets which provide revenue for making contributions to services for spinning reserves.
- Carbon Free Energy Revenue: MFP also derives revenue from bilateral contracts with various Community Choice Aggregators (CCA), wherein the Agency receives a small premium over CAISO energy market prices from entities who want to purchase carbon free energy for their load

<sup>3</sup> The Bond P&I reflects an All-in True Interest Cost of 2.65%.

<sup>4</sup> The MFPFA plans to finance all future capital expenditures with current cash flows or capital reserve use (Paygo) without additional borrowing.

portfolio. Carbon free energy revenue was not included in the analysis due to the uncertainty associated with pricing and because the premium is less than one million dollars per year and less than one percent of the 2019 budget. Although a current source of revenue for the Middle Fork and Ralston Baghouses, this revenue source was conservatively excluded from this study.

- Investment Income: Expected income from MFPPA investments.

Table 6  
Base Case Expected Results

	Energy (GWh)	Expected Revenue (\$000s)						Annual Obligations (\$000s)					Total Revenue - Total Obligations
		Energy	Capacity	Ancillary	REC	Investment		O&M	Insurance	Principal & Capital		Total	Free Cash Flow
						Income	Total			Interest	Expenditures		
2020	1,018	37,436	6,025	117	1,225	1,000	45,803	27,208	161	5,344	10,081	42,794	3,009
2021	1,019	37,803	14,813	114	1,225	1,000	54,955	27,985	219	5,353	11,990	45,547	9,408
2022	1,008	38,023	14,813	86	1,225	1,000	55,147	28,427	227	5,353	12,358	46,365	8,782
2023	1,011	39,002	16,606	94	1,225	1,000	57,927	28,082	240	5,352	11,222	44,896	13,031
2024	995	39,403	18,085	143	1,225	1,000	59,856	28,551	254	5,353	9,428	43,586	16,270
2025	969	40,868	16,688	159	1,225	1,000	59,940	29,122	260	5,353	8,692	43,427	16,513
2026	1,004	43,512	16,627	147	1,225	1,000	62,511	29,704	258	5,349	9,713	45,024	17,487
2027	1,005	44,594	5,109	186	1,225	1,000	52,114	30,298	257	5,353	8,755	44,663	7,451
2028	1,001	45,472	6,336	113	1,225	1,000	54,146	30,904	256	5,353	6,658	43,171	10,975
2029	992	46,518	7,678	189	1,225	1,000	56,610	31,522	255	5,353	6,954	44,084	12,526
2030	988	48,217	24,989	199	1,225	1,000	75,630	32,153	254	5,350	14,527	52,284	23,346
2031	988	49,030	11,123	232	1,225	1,000	62,610	32,796	256	5,352	7,586	45,990	16,620
2032	978	50,869	29,983	301	1,225	1,000	83,378	33,452	257	5,353	7,924	46,986	36,392
2033	1,022	53,386	4,225	151	1,225	1,000	59,987	34,121	255	5,353	8,276	48,005	11,982
2034	1,017	54,419	5,409	113	1,225	1,000	62,166	34,803	253	5,351	8,644	49,051	13,115
2035	981	54,384	4,354	249	1,225	1,000	61,212	35,499	251	5,353	18,058	59,161	2,051
2036	976	55,698	4,708	301	1,225	1,000	62,932	36,209	252	2,675	9,431	48,567	14,365
Net Present Value	12,705	569,377	158,653	2,068	15,572	12,712	758,384	391,219	3,083	66,525	127,548	588,374	170,009

(Source: Horizons Energy)

HE evaluated the operations of the facilities against nine scenarios of energy and capacity price forecast through 2036, which provided the 1,700 possible outcomes, given the operational parameters provided by MFP staff. These nine scenarios contain variations of natural gas and carbon pricing as well as demand and renewable penetration. For each scenario, energy and capacity market prices reflect normal water year conditions. Hydrologic variability of the MFP is captured in the stochastic analysis. HE further investigated and reflected the impact of inter-year hydrologic variability.

HE uses a fundamentals-based methodology to forecast energy, capacity, environmental and ancillary service prices for 78 North America market areas. Based on Anchor Power’s EnCompass power planning model, HE simulates the operation of each region of North America. This fundamental approach utilizes the operating characteristics of over 16,000 generating assets, fuel prices, hourly demand, transmission transfer capabilities, market rules of ISO’s and other factors. This is discussed in further detail in the Fundamental Approach section of the report.

The Feasibility Study Risk Analysis portion of this report combines the market scenarios to address energy price risk and the stochastic analysis hydrology uncertainty specifically for the MFP.

Results are first presented as an evaluation of the expected outcome of a business as usual or base case plus eight additional scenarios. These nine scenarios are evaluated using stochastics to evaluate the impact of uncertain annual hydrology conditions.

HE evaluated Financial Stress with two metrics: any year where the Annual Free Cash Flow (FCF) is negative and any year in which the annual debt service coverage ratio is below 1.2 times. When Annual FCF is negative the MFP management may elect to either defer CapEx or drawdown the Reserve Fund. Use of either of these two measures is called Financial Risk Mitigation. Results are summarized as the net present value (NPV) of FCF for each scenario.

In each year:

Total Revenue = Energy Revenue + Capacity Revenue + REC Revenue + Ancillary Service Revenue

Annual Obligations = Operating and Maintenance (O&M) + Insurance + CapEx + Bond P&I

Annual FCF = Total Revenue + Investment Income – Annual Obligations

Financial metrics:

Debt Service Coverage Ratio (DSC) = 
$$\frac{\text{Total Revenue} + \text{Investment Income} - \text{O\&M} - \text{Insurance}}{\text{Bond Principal \& Interest}}$$

Financial Stress: Annual FCF < 0

Where:

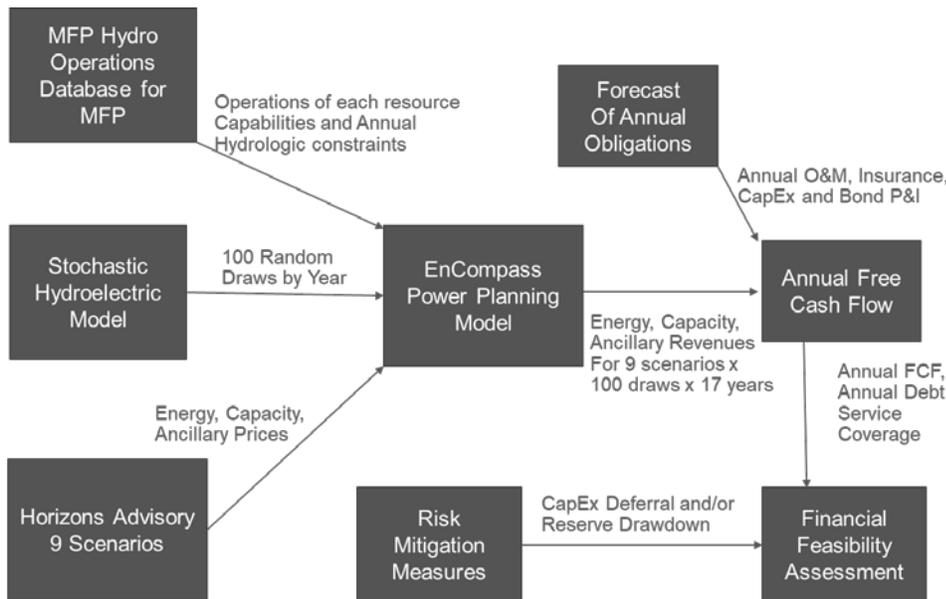
Financial Risk Mitigation: Deferral of Annual CapEx and/or Drawdown of Reserve Fund

Annual FCF + Financial Risk Mitigation > 0

To assess the Financial Feasibility of the Bond Obligation, HE performed the following steps:

- MFP staff provided a forecast of the Obligations of MFP: including O&M, Insurance, CapEx and the Bond P&I
- Market assessment for the MFP drawing from the HE North American Advisory, including the market impacts of nine alternative scenarios
- Simulated hourly MFP hydrologic operations within the CAISO using the EnCompass power planning model
- Annual and inter-year stochastic model of MFP hydrology to represent the impact of uncertainty due to varying levels of water available to the project
- Simulated within EnCompass nine scenarios across 100 random draws for the time period 2020 to 2036 and for all hours of the year
- Energy, capacity and ancillary service revenues from the EnCompass simulation combined with a forecast of REC revenue, investment income and annual Obligations to derive a forecast of FCF for MFP under the different scenarios/draws
- Determined the DSC under the different scenarios/draws

Figure 2  
Financial Feasibility Approach



### MFP Assumptions

MFP staff provided HE with the dependable capacity for the MFP for a total of 232.4 MW. MFP staff also provided historical generation and historical water in-flow from 1967 to present. This information was used to establish a water normal assumption of 994 GWh of generation per year. In addition, this information was used to development stochastic draws to further test the operations against the nine scenarios with uncertainty around hydrology variations.

Table 7  
MFP Capacity Assumptions

Name	Capacity (MW)			
	Maximum	Minimum	Firm	Spin
French Meadows Powerhouse	16.0	0.0	16.0	16.0
Hell Hole Powerhouse	0.6	0.1	0.0	0.6
Middle Fork & Ralston Powerhouse	210.0	0.0	210.0	210.0
Oxbow Powerhouse	5.8	0.1	0.0	5.8

MFP staff provided HE the information shown in Table 7. The MFP qualifies for spin revenue in the CAISO ancillary markets. HE used the ancillary price forecast from its nine market price scenarios. For capacity revenue purposes it is assumed that only French Meadows and Middle Fork & Ralston qualify for bilateral capacity revenue.

The MFP is contained within the footprint of the CAISO-NP15 market area in HE’s National Database (NDB). The MFP was simulated against energy and ancillary prices to determine energy and ancillary revenues and optimize the portfolio.

HE's NDB also produces a capacity market price which is consistent with the methodology of units that would bid into the market and the residual value for the resource to breakeven is used to determine the capacity price. This capacity price was applied to the firm capacity to determine the capacity revenue forecast.

### Operational Modeling

Utilizing the EnCompass power planning model, HE combined forecasts of throughput (energy generation) based upon historical performance of the MFP resources with hourly market prices from nine HE Advisory scenarios to assess energy and ancillary revenues. These simulations were performed for 8,760 hours per year over the years 2020 through 2036. Consistent with the operation of the MFP, HE represented the five powerhouses, taking into account the maximum operational capacity, minimum operational capacity, and the ability to contribute to capacity and ancillary markets. Drawing from discussions with MFP staff, HE represented the operating characteristics of MFP resources as capable of flexible power operation, including wide hourly swings in operation and the ability to store water for up to months at-a-time, exploiting high market price periods. HE also assumed that the MFP resources were not available for the month of October every year to allow for maintenance and capital improvements.

HE notes that the MFP has the additional ability to carry-over water from one year to the next under lower water year conditions. This capability was not represented in the HE analysis, and therefore constitutes a conservative assumption in the ability of MFP to mitigate hydrology risk. Additionally, HE does not model the RT market sales which is another conservative assumption from a revenue perspective

To simulate the storing and generation of the water resource HE utilized the advanced fuel inventory logic of the EnCompass planning model. This included the ability to store and withdraw water during the most economic times, across hours, days and months. Consistent with the average water year between 1967 and 2019, HE applied a value 994 GWh as the base amount of water available to the MFP in a given year.

### Environmental Considerations

The California Public Utilities Commission (CPUC) defines three content categories for renewable generation facilities, depending on the location and connection status of the renewable generator. Portfolio Content Category (PCC) 1, 2 and 3 have different market values, with PCC-1 having the highest value. All of the MFP renewable-eligible resources (French Meadows, Oxbow, and Hell Hole) are PCC-1.

Renewable Energy Certificates (REC's) are market instruments used to count, categorize and track renewable generation facility production in accordance with the CPUC's rules for renewable content. Typically, when REC's are transacted between the generator and purchaser, the transaction is defined as including "ALL" of the renewable characteristics of the generating facility. Thus, any facility that sells REC's typically cannot sell other or additional environmental attributes (such as carbon-free energy).

The current revenue stream for the REC and carbon free energy is approximately \$2 million per year. Contracts exist for the RECs through 2020 and carbon free energy through 2022. California PCC-1 RECs have traded historically anywhere from \$10-\$24/MWh. The current REC contract prices are for

\$17.50/MWh and result in a budgeted \$1.225 million. Current prices in the market are trading at \$18.00/MWh. Conservatively, HE assumed that the budgeted \$1.225 million in REC revenue would continue through 2036.

The premium for carbon free energy is not a transparent market and current MFP contract levels are \$1.00/MWh; therefore, conservatively HE assumes that carbon free energy revenue beyond 2022 would be zero. The revenue for the carbon free energy contract is \$640 thousand per year through 2022 and was excluded from the study results.

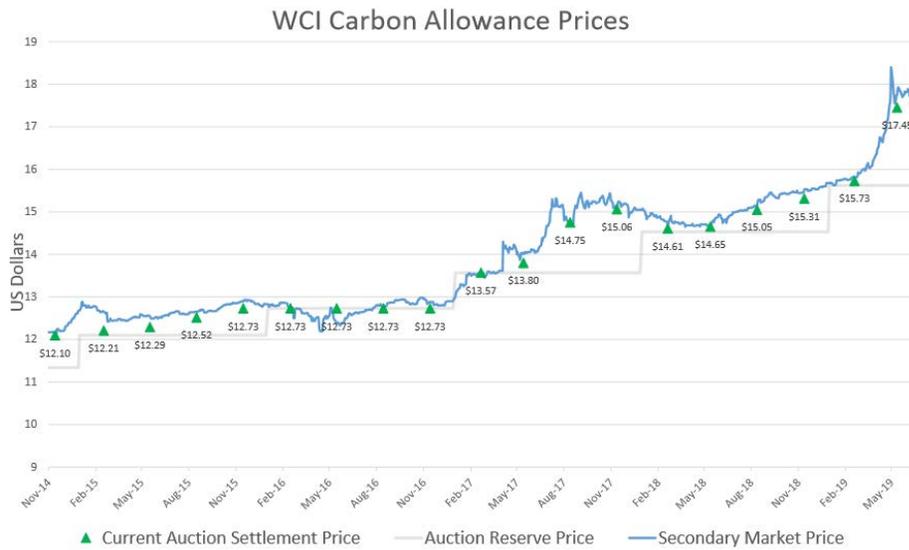
*Table 8  
Projection Qualification for RECs and Carbon Free Energy Revenue*

<b>Facility</b>	<b>Dependable Generating Capacity (MW)</b>	<b>REC Qualification</b>	<b>Carbon Free Qualification</b>
French Meadows Powerhouse	16.0	Y	N
Hell Hole Powerhouse	0.6	Y	N
Middle Fork & Ralston Powerhouse	210.0	N	Y
Oxbow Powerhouse	5.8	Y	N

Total annual revenue from projected power sales are budgeted to range between \$39 and \$49 million through 2024 based upon average hydrology conditions. HE utilized its nine scenarios to provide estimates of energy and capacity revenues which may differ from the budgeted numbers. HE scenarios also assume average hydrologic conditions.

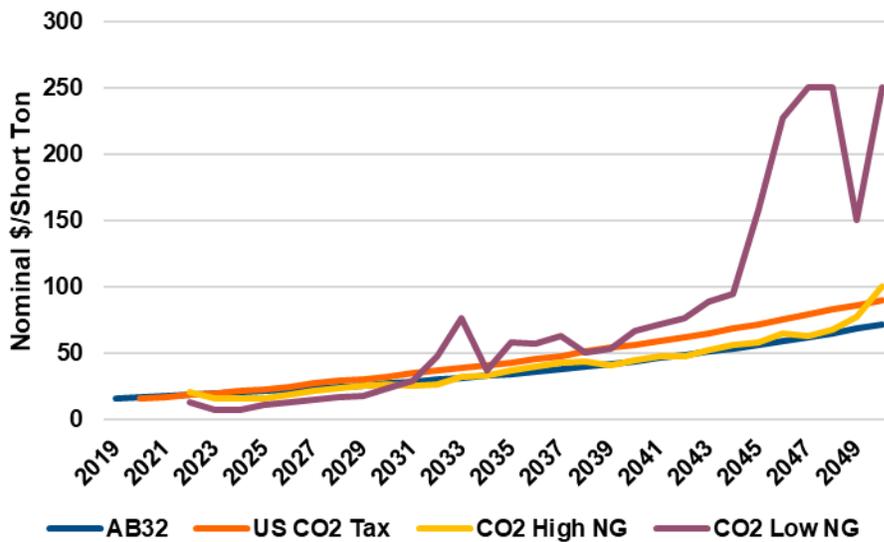
The HE forecast for energy and bilateral capacity price markets reflect the influence of California Assembly Bill 32 (AB32), which established greenhouse gas emissions reduction from all sources throughout the state and the establishment of a carbon cap and trade market. Figure 3 reflects the historical AB32 carbon auction prices and Figure 4 reflects the different carbon price trajectories in the HE scenarios which impact the energy and capacity market prices.

Figure 3  
Historic WCI Carbon Allowance Prices



(<https://ww3.arb.ca.gov/cc/capandtrade/wcicarbonallowanceprices.pdf>)

Figure 4  
HE Carbon Price Trajectories



(Source: Horizons Energy)

## Market Assessment

### Trends in the Electric Power Industry

The electric power industry is continually evolving. Current trends are toward displacement of fossil-fueled generation with clean energy. The critical factor is which clean energy technology will continue to effectively compete alongside increasing penetration of intermittent resources. Then there is the

unknown of technology improvements – what’s on the horizon for the next break through disruptive technology.

In addition to clean energy there is movement toward pricing carbon to address climate change. California addressed carbon with implementation of AB32 in 2006 with the first auction in 2012 and joined by Quebec in 2014. Since that time several states in the northeast started the Regional Greenhouse Gas Initiative (RGGI).

In October 2019, the current federal administration filed a lawsuit against California claiming that California usurped international policy by signing an international accord. The outcome is unknown as of the writing of this report.

There have been several legislative acts in Congress to address strategies to reduce carbon emissions; but as of the writing of this report none have passed. Even with the current administrations distaste for climate change there has been movement by a group of former Republican leaders that introduced a carbon tax plan, The Conservative Case for Carbon Dividends.

Natural gas price uncertainty is a major driver of trends in the power industry. California utilizes natural gas to generate power both from within the state and through system imports. When a gas resource is the last dispatched to meet demand, it sets the energy price. Increases to the price of natural gas, for instance, can impose correspondingly higher electricity prices.

Figure 5  
CAISO-NP15 Comparison to PG&E Citygate Prices

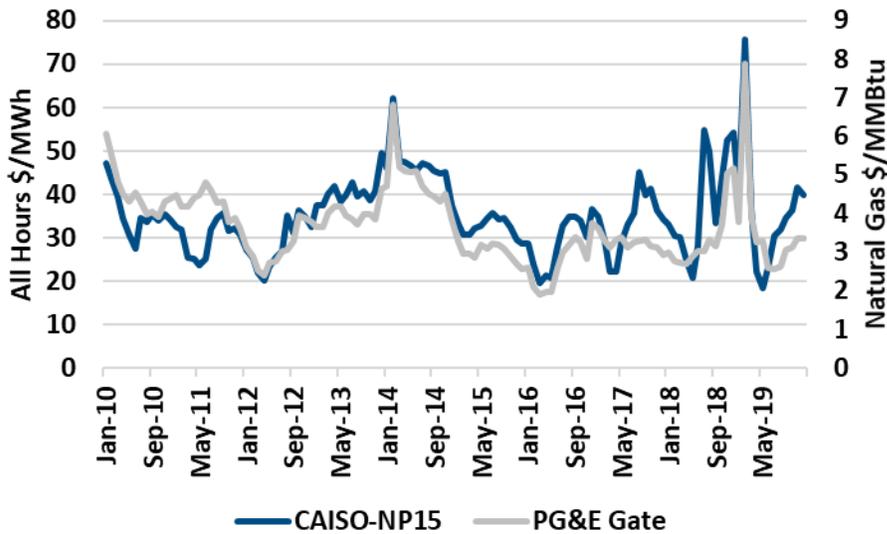
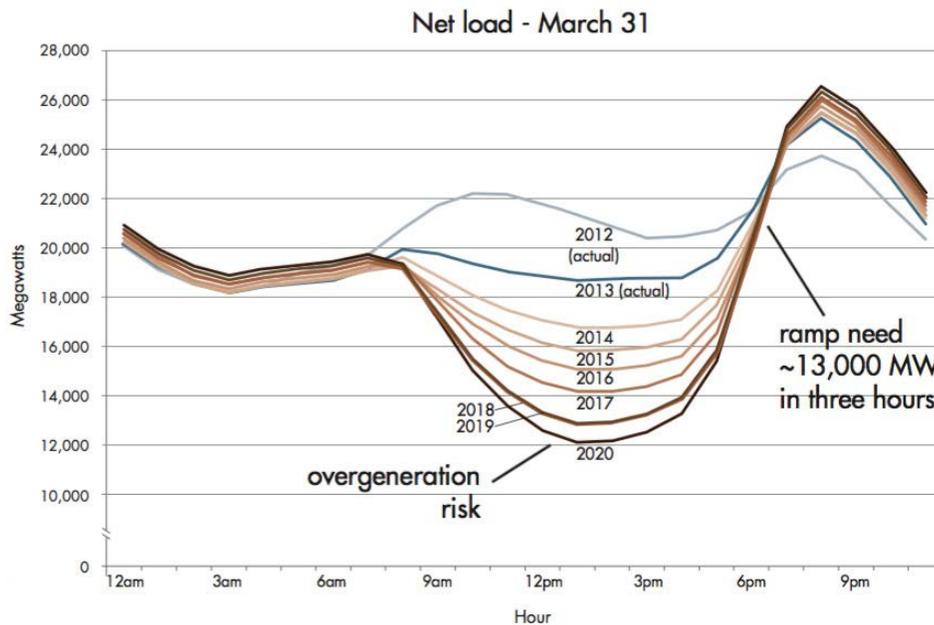


Figure 5 displays the relationship between energy prices to natural gas. As shown, they are positively correlated where increases or decreases in natural yield corresponding increases or decreases in electricity prices.

In CAISO-NP15 the continued penetration of solar is expected to reduce on-peak prices by 2033 in the base case annual off-peak energy prices exceed on-peak prices contributing to an “annual duck curve”. In California, like many energy markets the peak demand occurs after sunset, when solar energy is no

longer available. In locations like California where a substantial amount of solar capacity has been installed, the amount of power that must be generated from sources other than solar or wind displays a rapid increase around sunset and peaks in the mid-evening hours, producing a graph that resembles the silhouette of a duck. This phenomenon occurs in the low natural gas scenario as well which has the highest penetration of battery additions; but mitigates the duck curve in the shoulder months. Below is a historical representation of the “duck curve” in California and how it is perpetuating with the increased penetration of solar.

Figure 6  
CAISO Historical Duck Curve



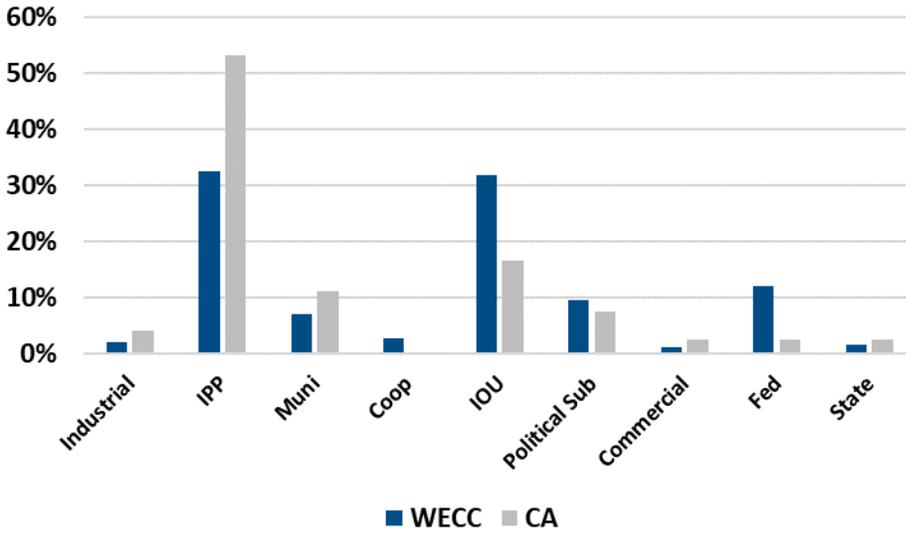
(Source: NREL)

### The WECC Market

The Western Electricity Coordinating Council (WECC) covers nearly 1.8 million square miles extending from Canada to Mexico. The WECC assessment area is divided into five subregions: Rocky Mountain Reserve Group (RMRG), Southwest Reserve Sharing Group (SRSG), California/Mexico (CA/MX), and the Northwest Power Pool (NWPP), which is further divided into the NW-Canada and NW-US areas.

WECC is being revised by the advent of RC West, Southwest Power Pool (SPP) and Grid Force. In addition, Alberta Electric System Operator (AESO) and British Columbia Hydro & Power Authority (BC Hydro) will comply with their nation’s standards. Most of the power production in WECC is an equal blend of independent power producers (IPP) and investor owned utilities (IOU); where, CA is dominated by IPPs as shown in Figure 7. Whereas utilities can recover generation costs in their customer rates, IPPs are reliant upon wholesale power markets to recover their fixed and variable costs. Hence, a concentration of IPPs poses some uncertainty on bidding behavior and possibly making the markets unpredictable over the long-term.

Figure 7  
WECC-US and California Plant Ownership

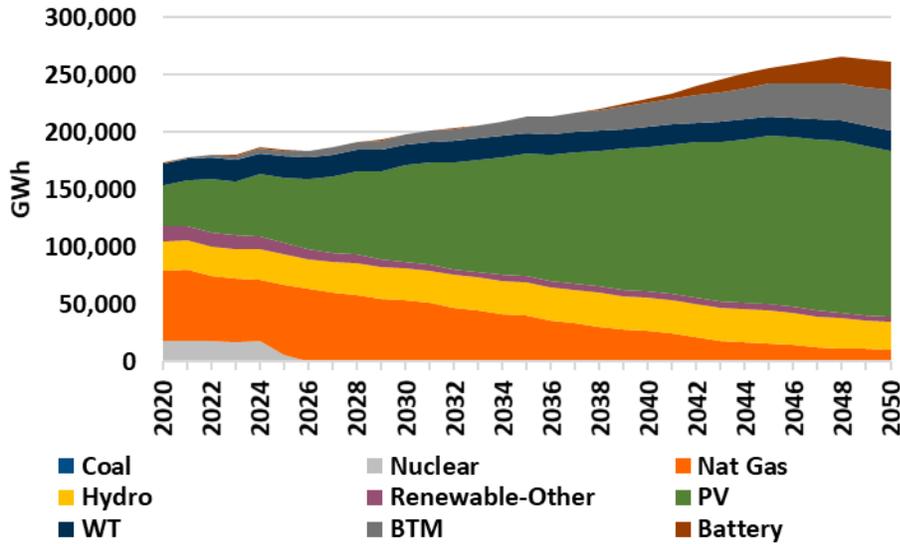


**Generation Mix**

WECC-CALIF consists of CAISO-NP15, CAISO-SP15, CAISO-ZP26 and PEAK-LADWP. On September 10, 2018, Governor Jerry Brown signed Senate Bill (SB) 100 which established a policy requiring renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045. This bill established interim targets of 50 percent renewable resources by December 31, 2026 and 60 percent by December 31, 2030. HE base case reflects only renewable capacity and battery additions may be made in California with the exception of fast-start Reciprocating Internal Combustion Engine (RICE) units to address intermittency. HE does not assume economic additions of hydro capacity; therefore, hydro remains constant unless there are announced retirements.

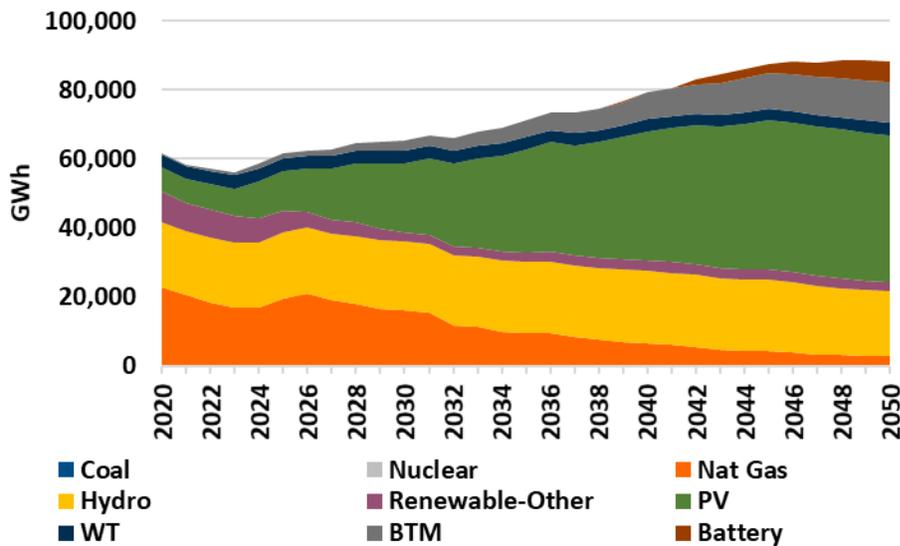
The Figure 8 and Figure 9 below show the generation mix in energy production for WECC-CALIF and CAISO-NP15. The obvious differentiator is the higher levels of hydro in CAISO-NP15 with 21 percent in 2050 compared to nine percent in WECC-CALIF.

Figure 8  
WECC-CALIF Base Case Generation



(Source: Horizons Energy)

Figure 9  
CAISO-NP15 Base Case Generation



(Source: Horizons Energy)

In both the WECC-CA and CAISO- NP15 generation resource forecasts, variable energy resources (mainly photovoltaic) are growing at a significant rate, whereas baseload resources (coal, nuclear, and natural gas) are declining. This may result in higher value for hydro resources in the future to integrate the variable energy resources.

### Western Energy Imbalance Market (EIM)

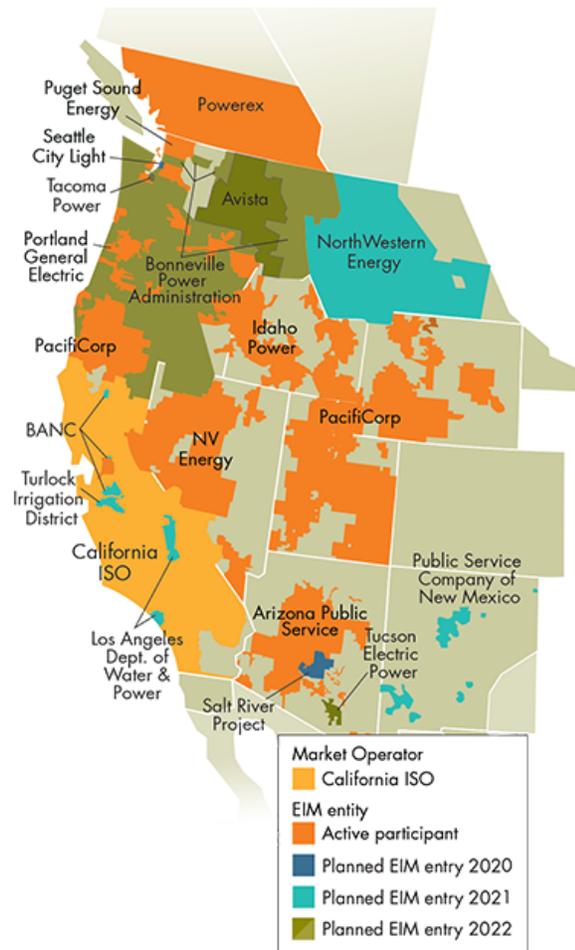
The California Independent System Operator (CAISO) was initially formed in 1997, with the state border setting the geographical boundary. About 80 percent of California's load became part of the CAISO (the investor owned utilities) with the remaining 20 percent served by municipal utilities and public utility districts that chose not to join CAISO.

In 2014, the CAISO introduced an energy imbalance market. The first balancing authority outside the geographic footprint of the CAISO, PacifiCorp, joined at that time. Since then, other external WECC balancing authorities have joined, creating a voluntary market 5-minute market that covers much of the WECC region.

The Western EIM's advanced market systems automatically find the lowest-cost energy to serve real-time customer demand across a wide geographic area. Utilities will maintain control over their assets and remain responsible for balancing requirements while sharing in the cost benefits the market produces for participants. The EIM intent is to smooth imbalances between peak generation for intermittent resources and peak demand by allowing power to be exchanged among participants within the EIM. These patterns prevail throughout CAISO and the western US. The EIM also advances renewable energy integration, leading to cleaner, greener power system.

EIM is governed by a five-member body with delegated authority over rules specific to the Western EIM. Active participants currently are Balancing Authority of Northern California, Idaho Power Company, Powerex, Portland General Electric, Puget Sound, Arizona Public Service, NV Energy, PacifiCorp and California ISO as market operator. The following participants are expected to join between 2020 and 2022: Salt River Project, Seattle City Light, Los Angeles Department of Water & Power, Public Service Company of New Mexico, NorthWestern Energy, Turlock Irrigation District, Avista, Tucson Electric Power, Tacoma Power and Bonneville Power Administration.

Figure 10  
Active & Pending Western EIM Participants Map



Since the market launched in late 2014, success has been measurable. According to the EIM benefits assessment report, benefits have totaled over \$800 million since inception with 2019 seeing cost benefits through the 3<sup>rd</sup> quarter of \$236 million. The Western EIM benefit calculation includes the economic benefits that can be attributed to avoided renewable curtailment within the ISO footprint. If not for energy transfers facilitated by the EIM, some renewable generation located within the ISO would have been curtailed via either economic or exceptional dispatch. Since inception, 976,896 MWh of curtailment was avoided that resulted in CO<sub>2</sub> emission displacement of 418,031 metric tons.

### Other CAISO Developments Impacting Hydro Generation

On September 30, 2019, the Federal Energy and Regulatory Commission (FERC) accepted two proposed changes to CAISO open access transmission tariff designed to facilitate the participation of fast-ramping hydroelectric resources in the western EIM. CAISO proposed to eliminate the current rules for balance-of-the-hour mitigation to limit the instances where CAISO dispatches resources at mitigated bid prices when local market power mitigation is not actually triggered. FERC found that the Mitigation Timing proposal will improve the accuracy of CAISO’s market power mitigation and was a just and reasonable improvement to CAISO’s existing market rules.

CAISO also proposed a change to its hydro default energy bid (DEB) to implement a new DEB option that would apply to all hydroelectric resources with storage capability that participate in the CAISO day-ahead and real-time markets or the EIM. This proposal was intended to address the concern that CAISO's existing DEB calculation methodology does not accurately reflect actual opportunity costs of such resources. FERC approved CAISO's Hydro DEB proposal, finding that it represents a transparent alternative to the existing negotiated DEB option that will allow hydroelectric resources with storage to reflect their opportunity costs in their DEBs, and ensure hydroelectric resources are dispatched when they are most needed.

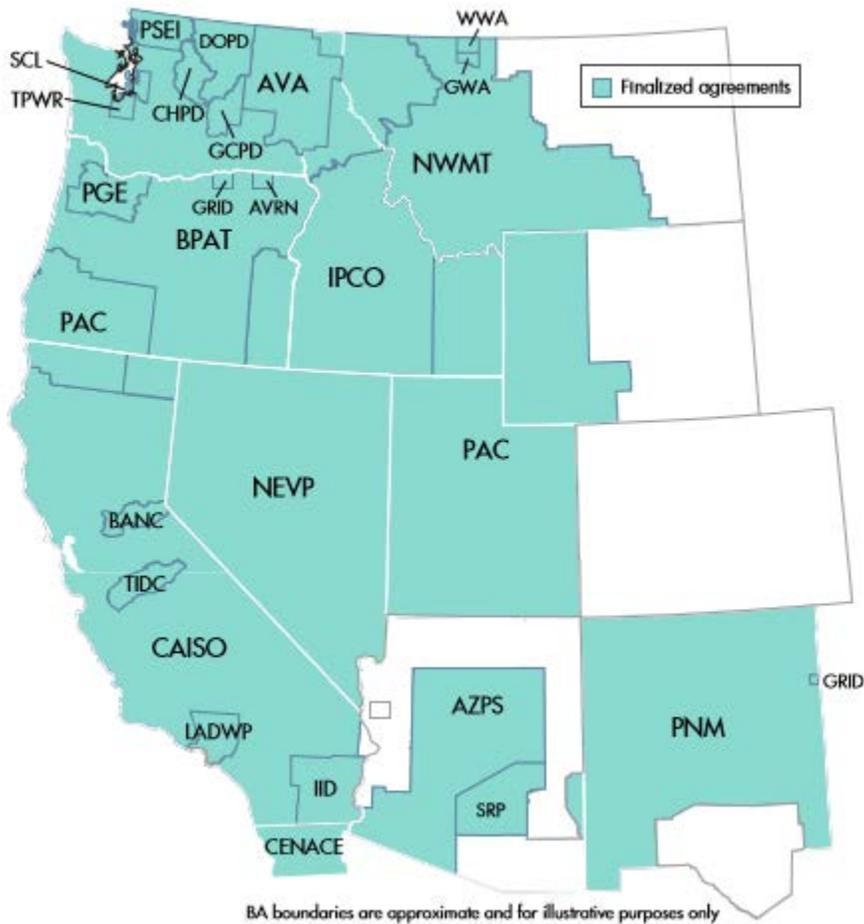
Additionally, CAISO proposed a Net Export proposal to limit incremental net exports from an EIM entity BAA in market intervals when its participating resources' bids are mitigated, while recognizing the amount of energy the exporting BAA was required to offer to the EIM. CAISO explained that the Net Export Limit proposal was intended to address situations where the CAISO market dispatches an EIM entity BAA to export energy only because the market mitigated its participating resources' bids. FERC rejected the Net Export proposal, finding that that CAISO had not demonstrated that it was just and reasonable. Specifically, FERC found that the Net Export Limit proposal was inconsistent with the market power mitigation framework in the EIM, was not an "appropriately calibrated solution" to address CAISO's concerns and could weaken CAISO's market power mitigation process. On the latter point, FERC found that the proposal could undermine CAISO's independent operation of the EIM by allowing EIM entities discretion over which constraints are applied to them.

### Reliability Coordinator West

The California ISO (CAISO) is certified for western Reliability Coordination (RC) services and National Energy Reliability Council (NERC) will certify Southwest Power Pool (SPP) and Grid Force as well. The Canada-based Alberta Electric System Operator (AESO) and BC Hydro will go through effectively the same review as the other RCs, in compliance with their own nation's standards.

November 1, 2019 CAISO launched its expanded RC services, called RC West, making it the RC of record for 41 entities across 14 western states and northern Mexico. RC West now has oversight of power grid reliability for balancing authorities and transmission operators in the Western Interconnection, monitoring compliance for 87 percent of the load in the western US.

Figure 11  
RC West Footprint



RC West has the authority and responsibility for the reliable operation of power grids, and has wide visibility of bulk electric systems. RC West monitors the interconnected power grids in the West for compliance with federal and regional standards; determines measures to prevent or mitigate system emergencies in day-ahead or real-time operations; and leads system restoration following major incidents.

**SPP Western Energy Imbalance Market**

SPP’s Western Energy Imbalance Service market (WEIS) will balance generation and load regionally and in real time for participants in the Western Interconnection. The market will centrally dispatch energy from these participants throughout the region every five minutes, enhancing both the reliability and affordability of electricity delivery from utilities to their customers.

SPP will administer the WEIS on a contract basis beginning February 2021. Utilities do not have to be a member of the SPP regional transmission organization (RTO) to participate. The market will centrally dispatch energy from participating resources throughout the region every five minutes, enhancing both the reliability and affordability of electricity delivery from utilities to their customers.

SPP's previous energy imbalance market went live in 2007 and provided participants with \$103 million in benefits in its first year of operation.

The WEIS is one of several components of SPP's Western Energy Services family of contract-based products. SPP also administers the Western Interconnection Unscheduled Flow Mitigation Plan and is on track to launch reliability coordination services for a number of western utilities in December 2019. It is also in the early stages of developing planning coordination services, by which it would help utilities study and plan upgrades to the region's transmission system. The western utilities that have committed to participate in the reliability coordination services are:

- Arizona Electric Power Cooperative, Inc.
- Black Hills Energy's three electric utilities: Black Hills Power, Inc., Cheyenne Light, Fuel and Power Company, and Black Hills Colorado Electric, Inc.
- City of Farmington, NM
- Colorado Springs Utilities
- El Paso Electric Company
- Intermountain Rural Electric Association
- Platte River Power Authority
- Public Service Company of Colorado (Xcel Energy)
- Tri-State Generation and Transmission Association
- Tucson Electric Power
- Western Area Power Administration (WAPA) Desert Southwest Region, WAPA Rocky Mountain Region, and WAPA Upper Great Plains – West

Basin Electric Power Cooperative, Tri-State Generation and Transmission Association, and the Western Area Power Administration (WAPA) announced September 9<sup>th</sup> 2019 their decision to join the WEIS market. WAPA's agreement includes the firm electric service loads and resources of Pick-Sloan Missouri Basin Program—Eastern Division, Loveland Area Projects and Salt Lake City Area Integrated Projects, in the Upper Great Plains Western Area Balancing Authority (WAUW) and Western Area Colorado Missouri Balancing Authority (WACM) footprints.

As the market's administrator, SPP will maintain reliability of the region's transmission system and meet demand with the most cost-effective generation available, reducing wholesale electricity costs for participants. Like SPP's previous markets, the WEIS will provide price transparency of wholesale energy, allow parties to trade bilaterally and hedge against costly transmission congestion.

In designing the WEIS, SPP leveraged existing constructs in the west and its experience successfully building and operating its own energy imbalance market from 2007-2014, after which the RTO introduced day-ahead unit commitment and other services in the transition to its current Integrated Marketplace.

Figure 12  
SPP Reliability Coordination Markets



(Source: RTO Insider)

There is speculation that SPP WEIS is seeking to address the concerns in the RMPA region over the CAISO EIM. The SPP WEIS should have minimal impact on MFP’s participation in the CAISO EIM.

### Energy & Capacity Markets Development Methodology

HE produces an NDB semi-annually. The NDB is used to develop a long-term outlook of the energy markets in North America which includes a forecast of energy, capacity and fuel prices for 78 market areas through 2050. HE utilized the results for energy, ancillary and capacity prices for CAISO-NP15 for the feasibility study.

The database contains:

1. Operational characteristics of over 16,000 generating plants in North America developed from:
  - EIA 860 annual and monthly data. EIA collects generator-level specific information about existing and planned generators and associated environmental equipment at electric power plants with 1 megawatt or greater of combined nameplate capacity.
  - EIA 923 annual data. EIA collects detailed electric power data -- monthly and annually -- on electricity generation, fuel consumption, fossil fuel stocks, and receipts at the power plant and prime mover level.
  - HE internet search of relevant RTO and ISO websites
2. Long-term energy and demand outlook
  - Annually NERC publishes a Long-Term Reliability Assessment (LTRA). North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability and security of the bulk power system (BPS) in North America. NERC’s jurisdiction includes users, owners, and

operators of the BPS, which serves more than 334 million people. The North American BPS is divided into eight Regional Entity (RE) boundaries as shown in Figure 13.

Figure 13  
NERC Regions



(Source: NERC)

- The LTRA is developed based on data and narrative information collected by NERC from the eight REs on an assessment area basis to independently assess the long-term reliability of the North American BPS while identifying trends, emerging issues and potential risks during a 10-year assessment period. HE trends from the 10-year period to extend through the 2050 timeframe.
3. Fuel forecast is developed utilizing the EIA forecast for the following fuels as well as research conducted by HE:
    - Henry Hub
    - Liquid market center
    - Local delivery adder
    - Coal forecast by basin
    - Oil forecast for distillate, residual and kerosene
    - Uranium
  4. Resource Expansion Options which are economically selectable resource expansion options for EnCompass to utilize to meet a minimum reserve margin requirement for a given market. In addition, renewable resources are selected based on economics to meet individual state

renewable portfolio standards (RPS). The options include the construction cost and operational characteristics. These options include:

- Combustion turbines
- Internal combustion turbines
- Combined cycles
- Nuclear
- Coal-fired
- On- and off-shore wind
- Utility scale solar
- Utility scale battery storage
- Pumped storage

In addition to the data, the NDB also contains HE assumptions regarding penetration levels of demand response, behind-the-meter generation, economic retirement of generating units and RPS requirements.

Each release of the NDB contains nine scenarios which vary depending upon relevancy of current trends in the energy industry.

### Fundamental Approach

HE uses a fundamentals-based methodology to forecast energy, capacity, environmental and ancillary service prices for 78 North America market areas. Based on Anchor Power's EnCompass power planning model, HE simulates the operation of each region of North America. EnCompass is recognized in the industry for its flexibility and breadth of technical capability, incorporating extensive details in generating unit operating characteristics and constraints, transmission constraints, generation analysis, unit commitment/operating conditions, and market system operations. This fundamental approach utilizes the operating characteristics of over 16,000 generating assets, fuel prices, hourly demand, transmission transfer capabilities, market rules of ISO's and other factors.

The EnCompass power planning model utilizes this database of market information and simulates both annual capital decisions as well as the operational commitment and dispatch of resources. The model simultaneously determines energy, capacity, environmental and ancillary service prices with hourly resolution and across scenarios. HE forecasts market prices throughout North America over the 2019 to 2050 forecast horizon.

A key benefit of this approach is that it provides a very flexible and consistent ability to vary input drivers in order to observe the impact on market prices. As an example, changing fuel prices will influence the cost of commitment and dispatch which in-turn changes market prices. Altering demand may also change the marginal resources needed to meet demand. Imposing a cost of carbon or carbon limit will impose a dispatching cost on those resources emitting CO<sub>2</sub>.

### Feasibility Study Risk Analysis

To assess the risk associated with changes in the energy markets HE evaluated the revenues received from nine scenarios to capture the volatility associated with the changing energy and capacity market prices which give rise to variation in revenue streams.

To further investigate revenue variability, HE conducted an analysis of hydrology uncertainty utilizing stochastic random draws which yield variation in annual energy production of the MFP. The hydrology uncertainty was then applied to the nine scenarios to capture the financial feasibility of the project to generate cash flows sufficient to cover principal and interest associated with the bond re-financing.

### Scenario Assumptions

HE evaluated eight scenarios in addition to the base case scenarios. The base case is a “business as usual” scenario reflecting assumptions consistent with the EIA’s reference case scenario and NERC’s LTRA load forecast. Energy and capacity market prices from the scenarios reflect a normal water year. Separately, hydrologic variability of the MFP is captured in the stochastic analysis discussed below.

- High Demand - Reflects increased energy demand consistent with the change in demand from the EIA 2019 AEO Outlook. The high demand case reflects EIA’s High Economic Growth case assumes higher average growth rates for population (0.7 percent per year) and productivity (1.9 percent per year), resulting in higher nonfarm employment (0.8 percent per year). With higher productivity gains and employment growth, inflation and interest rates are lower than in the Reference case for most years, and as a result, economic output, as measured by real GDP, grows at a higher rate.
- Low Demand - Reflects EIA’s Low Economic Growth case assumes lower average annual growth rates for population (0.4 percent per year) and nonfarm labor productivity (1.1 percent per year), resulting in lower growth in nonfarm employment (0.4 percent per year), higher prices and interest rates, and lower growth in industrial output.
- High Natural Gas - Reflects use of a multiplier from EIA’s Low Oil and Gas Resource and Technology case, the estimated ultimate recovery per well for tight oil, tight gas, or shale gas in the United States and undiscovered resources in Alaska and the offshore Lower 48 states is assumed to be 50 percent lower than in the Reference case. Rates of technological improvement that reduce costs and increase productivity in the United States are also 50 percent lower than in the Reference case. These assumptions increase the per-unit cost of crude oil and natural gas development in the United States.
- Low Natural Gas - Reflects continued depressed pricing based on the forward outlook in the markets. It assumes a flat constant nominal \$/MMBtu of \$2.50.
- High Natural Gas with Carbon Limit - Same natural gas price as the high natural gas scenario. However, HE imposes a limit on carbon emissions to reflect an 80 percent reduction in carbon emission levels from 2005 by 2050. The EnCompass model solves for the carbon price based on the cost of compliance.
- Low Natural Gas with Carbon Limit - Same natural gas price as the low natural gas scenario. However, HE imposes a limit on carbon emissions to reflect an 80 percent reduction in carbon emission levels from 2005 by 2050. The EnCompass model solves for the carbon price based on the cost of compliance.
- Carbon Tax - Reflects an input price of carbon based on the EIA 2018 AEO Outlook which imposed a \$15 carbon tax through 2030 and dropping to 2.5 percent increase/year above inflation thereafter. Due to the introduction of carbon and its impact on natural gas generation a lower Henry Hub price is also introduced.
- 100% Renewable - Scenario HE developed to reflect the trend across the US in cities and states exploring reducing emissions through all renewable generation. HE assumed that fossil-fired

resources cannot be built to meet demand (except for RICE units) for intermittency. In addition, increased levels of demand response and energy efficiency were reflected to reduce demand requirements. This is also consistent with the newly introduced 100% Clean Economy Act of 2019. House members introduced legislation that would set a nationwide goal of achieving a 100 percent clean energy economy by 2050.

**California Energy, Ancillary & Capacity Market Assumptions**

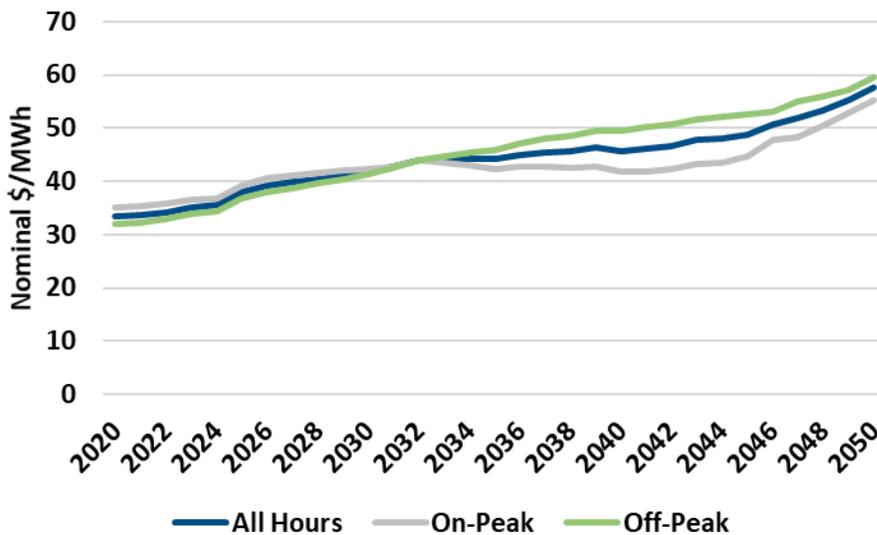
The major drivers of an energy and capacity market forecast are demand, fuel and emission cost as well as resource expansion or mix which would represent the price-setting technology.

**Energy Prices**

CAISO-NP15 energy prices reflect the cost of the marginal unit plus a bid adder reflecting the “tightness” of supply and demand. HE utilized the 8,760 hourly prices to assess the energy revenue stream for the MFP. The EnCompass model optimizes which hours the project will operate to reflect the highest level of revenues assuming perfect knowledge. HE conducted an analysis of the historical operations from 2016-2018 utilizing the EnCompass optimization and determined that the revenue stream from the EnCompass optimization was approximately 15 percent higher than the actual revenues. This was deemed to be within a reasonable tolerance given the “perfect economic dispatch” optimization of EnCompass.

Because the MFP’s higher level of flexibility to ramp up and down HE utilized hourly prices to determine revenues. The more traditional portrayal of energy prices is annual all hour and on- and off-peak prices as shown in Figure 14. Post-2030 the impact of solar and the duck curve becomes pronounced enough that off-peak prices are higher than on-peak prices. However, the price volatility increases providing more advantages for the MFP energy revenues.

Figure 14  
CAISO-NP15 Base Annual Energy Prices



(Source: Horizons Energy)

The nine scenarios result in different trajectories with up- and down-side potential. All nine scenarios were used to evaluate the projected revenue that the MFP could attain.

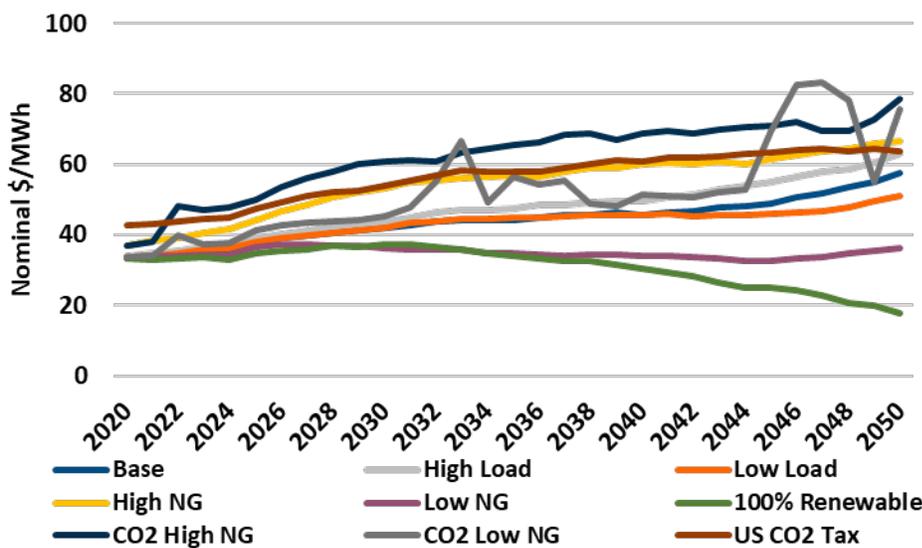
The resulting all hour energy prices for CAISO-NP15 are shown in Figure 15. The 100% Renewable scenario generates the lowest prices by the end of the forecast horizon due to the penetration of wind and solar as well as increased energy efficiency. The fluctuation in the CO<sub>2</sub> low natural gas scenario is driven by the carbon price (see Figure 4) to comply with 80 percent reduction limit and by the end of the forecast all coal generation is retired and compliance with natural gas resources emitting carbon applies upward pressure on the carbon price due to an inability to comply. As discussed, natural gas is a major driver of energy prices and as shown, high natural gas accompanied with carbon limits generates the highest energy prices through 2044 when carbon prices jump in the CO<sub>2</sub> low NG.

Ancillary Service Prices

Consistent with the CAISO Integrated Forward Market (IFM), the HE uses the EnCompass model to co-optimize hourly energy and ancillary service markets in each of the nine scenarios. As part of development of the scenarios, the CAISO requirements for ancillary services are input in the model and resources able to meet the ancillary service bid in ancillary as well as energy. The simulation then simultaneously determines the energy and ancillary service prices in the same process as the CAISO.

For this study, MFP staff provided HE with guidance as to which resources and ancillary services the MFP will bid into the CAISO. HE incorporated this information into the simulation where the MFP hydro resources would bid energy and ancillary services in a manner which maximizes profit to the MFP.

Figure 15  
CAISO-NP15 All Hour Scenario Energy Prices



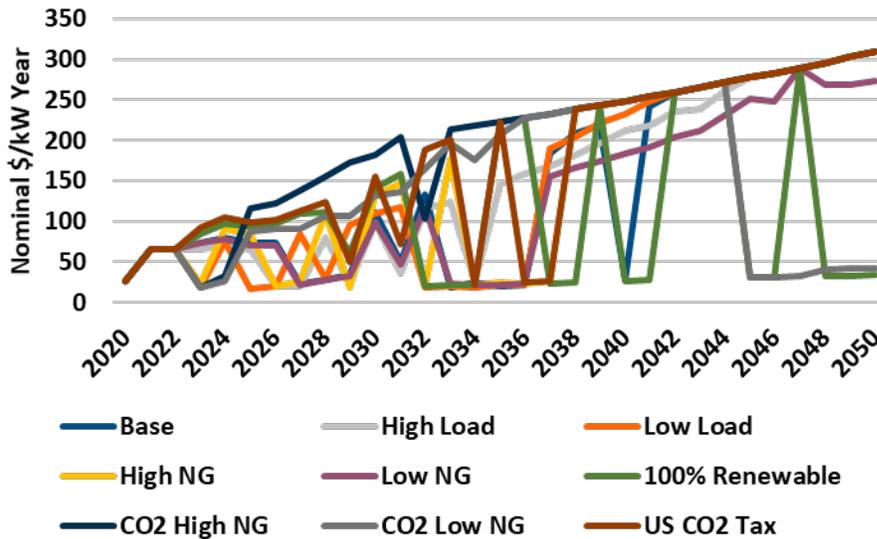
(Source: Horizons Energy)

Capacity Prices

The capacity prices that the MFP would receive are based on contractual prices for 2020-2022. HE develops capacity prices for the CAISO-NP15 market area utilizing the marginal unit’s residual revenue deficit to determine the capacity price within the EnCompass model. These capacity prices were applied

to the MFP (excluding Hell Hole and Oxbow). The 2022 contractual price is equivalent to \$65.54/kW year. The average capacity price for 2023-2036 for the base case is approximately \$54/kW year; however, fluctuations occur annually based on the revenue deficit requirement. This is consistent with what has been seen in bilateral contracts within California historically.

Figure 16  
CAISO-NP15 Capacity Prices



(Source: Horizons Energy)

HE made the following assumptions in developing the forecast which resulted in energy prices as shown in Figure 15 and capacity prices in Figure 16.

### Inflation

Inflation is assumed to be 2.2 percent per year through 2050. This is consistent with the AEO 2019 Outlook where inflation was 2.4 percent and other sources where the expectation was slightly lower. All results presented are in nominal dollars.

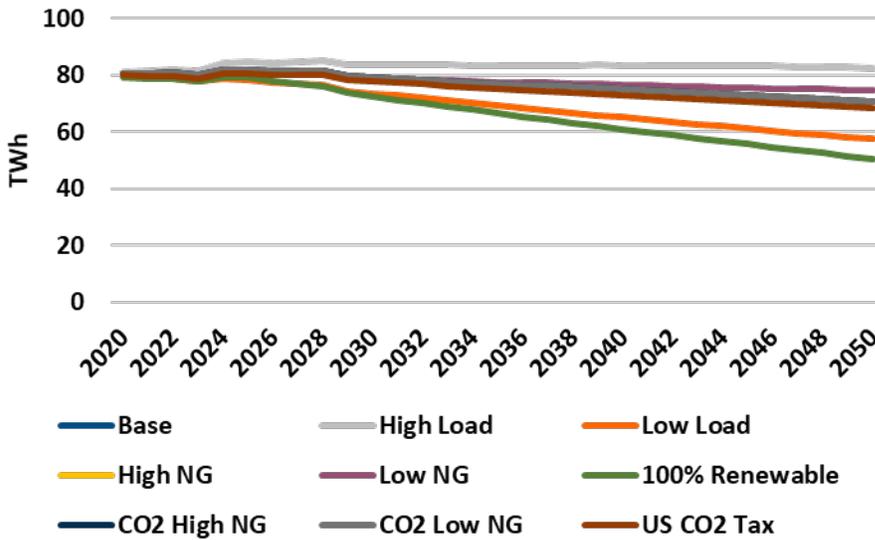
### Demand

The HE forecast for California demand was developed using the NERC LTRA and the California Energy Commission (CEC) forecast. Beyond the forecast period of 2028 HE applied the Excel Trend function to extend the forecast to 2050. The Trend function computes the linear trend line based on a given linear set of data. Figure 17 portrays the demand forecast across scenarios for CAISO-NP15. The EIA 2019 AEO Outlook has three growth cases: Reference, High Economic Growth, and Low Economic Growth illustrate three possible paths for U.S. economic growth. In the High Economic Growth case, average annual growth in real gross domestic product (GDP) is 2.4 percent from 2018 to 2050, compared with 1.9 percent in the Reference case. The Low Economic Growth case assumes a lower rate of annual growth in real GDP of 1.4 percent. Differences among the cases reflect different assumptions for growth in the labor force, capital stock, and productivity. These changes affect capital investment decisions, household formation, industrial activity, and amounts of travel.

The Compound Annual Growth Rate (CAGR) for the scenarios range from a low of -1.49 percent in the 100% renewable scenario to a slight increase in demand of 0.03 percent in the high load scenario. The 100% renewable scenario reflects increased penetration of energy efficiency to reduce demand and attain higher penetration levels.

Higher demand typically results in upward pressure on energy prices and conversely lower demand applies downward pressure on energy prices. This is a result of changes in the dispatch and the next available resource that serves that incremental/decremental demand.

Figure 17  
CAISO-NP15 Demand Forecast



(Source: Horizons Energy)

### Natural Gas

To develop its Henry Hub forecast, HE utilizes a variety of sources, including the NYMEX futures markets, the EIA Annual Energy Outlook and other published sources. In the Base scenario HE assumes NYMEX future market prices through 2030 and then applies a trend thereafter based on internal research and other published sources. For CAISO-NP15 there is a delivery adder included to reflect the transportation cost and basis differential of the geographic region as compared to Henry Hub. Regional markets differentials are located at liquid market centers (LMC) disbursed at significant points throughout the pipeline system. The market price differential represents the difference in market price between Henry Hub and the liquid market center. The CAISO-NP15 liquid market center is assumed to be PG&E Citygate. PG&E Citygate on an annual basis reflects an approximate \$0.50/MMBtu adder to Henry Hub prices as shown in Figure 19.

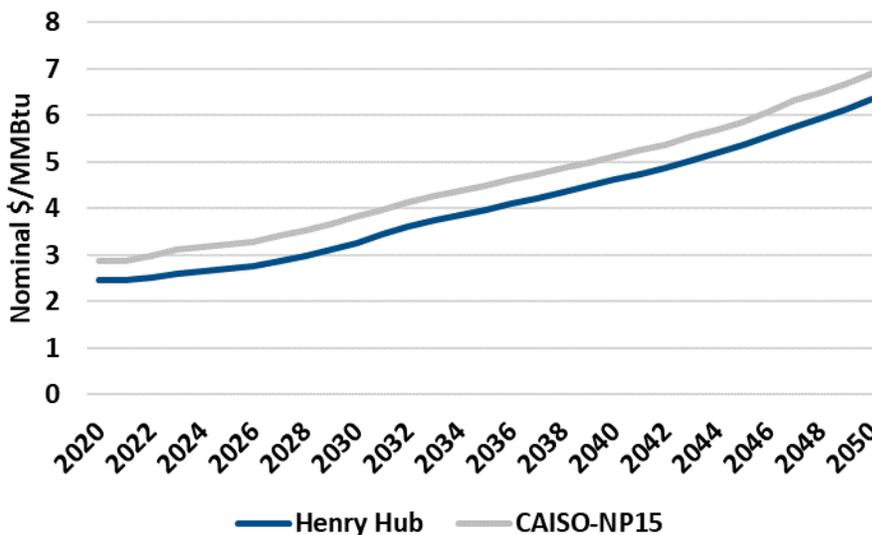
Figure 18  
Natural Gas Liquid Market Centers



(Source: Horizons Energy)

Natural gas prices within the forecast vary by day and month to reflect volatility. Figure 19 reflects the annual price differential between Henry Hub and CAISO-NP15 delivered price. The PG&E Citygate basis does not change across scenarios.

Figure 19  
CAISO-NP15 Natural Gas Price

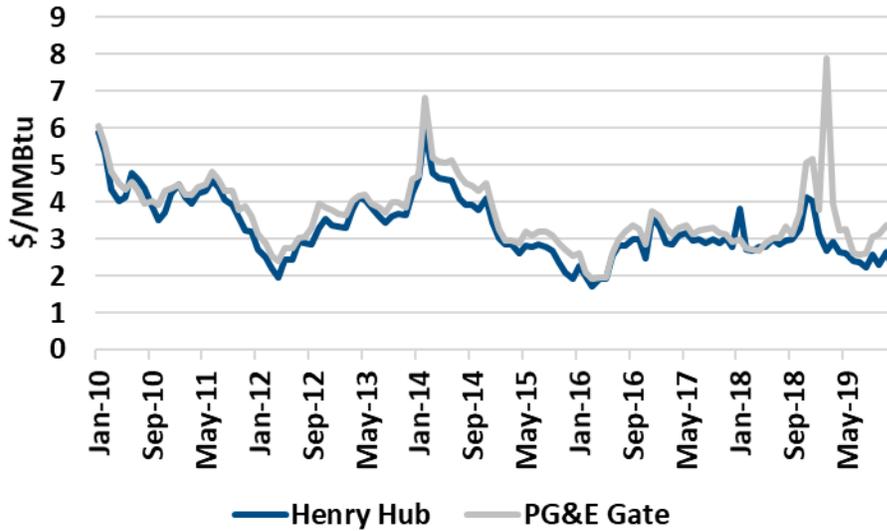


(Source: Horizons Energy)

Natural gas prices have played a role in the energy markets as a driver of the incremental cost of generating electricity and therefore a major driver of the energy prices. Henry Hub prices have

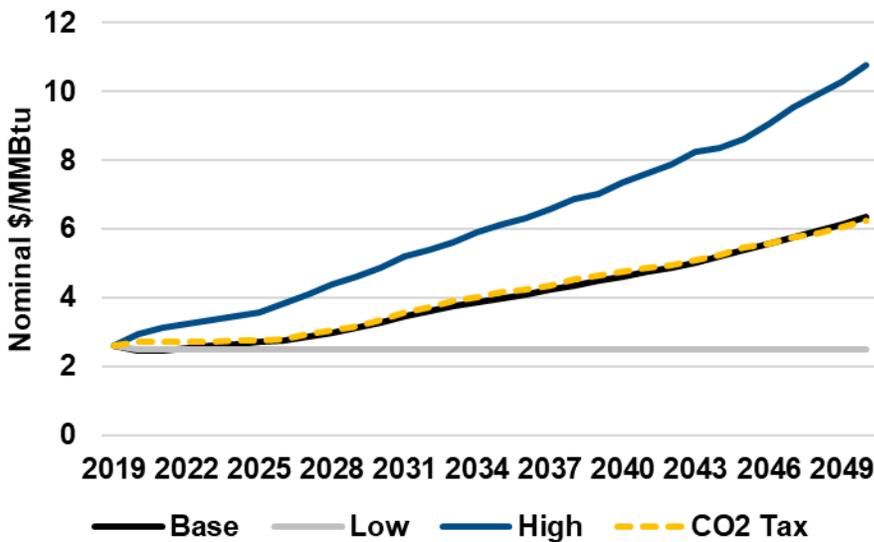
historically been volatile reaching high prices in the mid- to late-2000s to all-time lows currently seen in the market.

Figure 20  
Historical Henry Hub and PG&E Citygate Prices



As discussed, HE develops Henry Hub prices for the scenarios as shown in Figure 21.

Figure 21  
Henry Hub Scenario Prices



(Source: Horizons Energy)

Coal and oil are not a factor in the CAISO-NP15 market so there will be no reference to the fuel price assumptions.

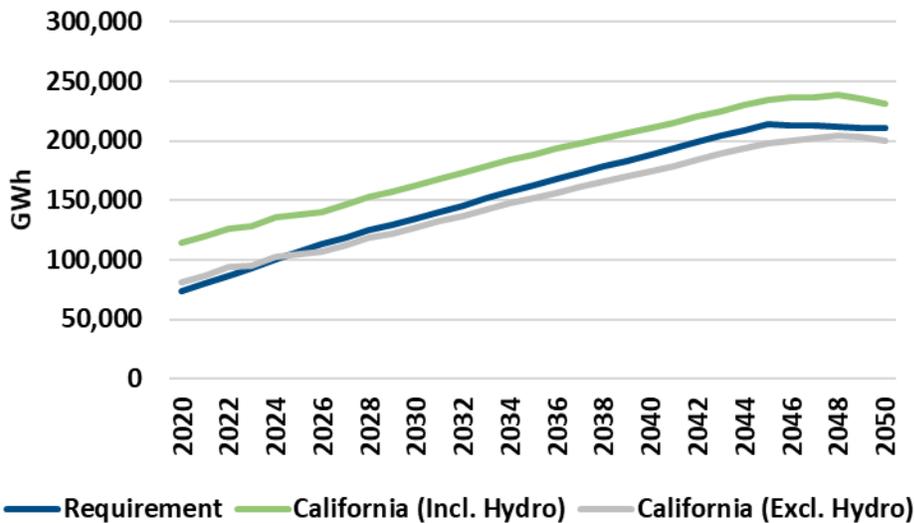
**Renewable Portfolio Standard (RPS) Requirements**

Battery target of 1.325 GW by 2020 and increasing to 1.825 GW by 2030.

HE assumes California has an RPS mandate of 100 percent renewable by 2045 progressing linearly from 2020 at 33 percent. To meet the mandate, HE does not allow the addition of fossil-fueled resources with the exception of RICE units. Existing fossil-fueled resources are eligible for economic retirement. Figure 22 displays the RPS requirement and the generation levels for the base case scenario. Figure 22 does not include the behind-the-meter generation by rooftop solar or batteries. As shown in Figure 23 natural gas continues to be in the mix through 2050 with the exception of the 100% Renewable scenario; where there is a national 100 percent by 2050 policy.

Rooftop solar and battery penetration vary by scenario reflecting consumer reactions to changes in energy prices as well as a desire to control demand. For example, the 100% Renewable scenario reflects 16 GW by 2050 compared to 8 GW in the base.

Figure 22  
RPS Requirement

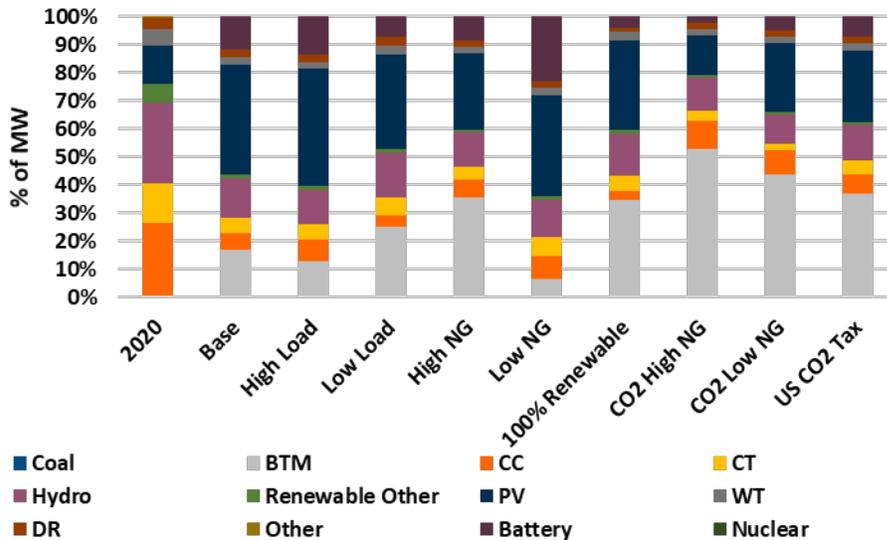


(Source: Horizons Energy)

HE has not identified all of the hydro facilities that are eligible to meet the RPS requirement. Therefore, HE wanted to reflect with and without hydro to show the uncertainty around qualifying facilities and how inclusion of hydro facilities over complies with the requirement.

**Resource Mix**

Figure 23  
CAISO-NP15 2050 Resource Mix



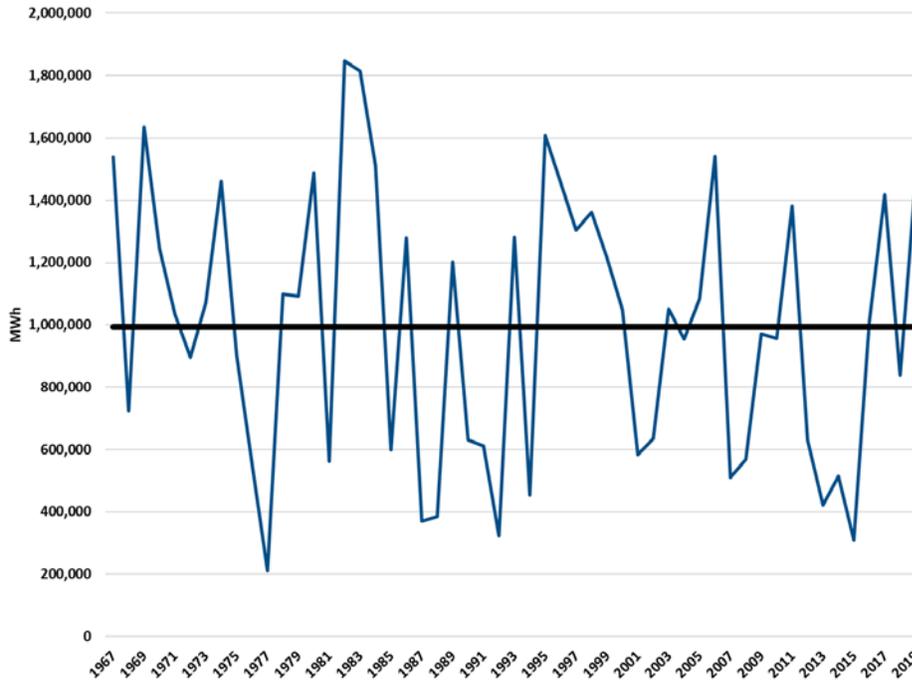
(Source: Horizons Energy)

**Stochastic Hydrologic Assumptions**

**Historical Hydrology of the MFP**

Total water delivered to, and the subsequent power generated from, MFP varies by year. Over the 53-year life of the MFP from 1967 to 2019, the average energy generated by the MFP is about 994 GWh per year. Maximum generation occurred in 1982 of 1,848 GWh and minimum generation occurred in 1977 of 211 GWh of generation. The yearly variation, as measured by standard deviation is 0.43 percent or about 434 GWh. The median energy generated is 1,001 GWh giving rise to a slight but not significant skewness in the sample distribution. The lowest 10 year moving average occurred from 1985 to 1994. For this study we assume that the annual water delivered to the MFP is normally distributed with these statistical parameters.

Figure 24  
Middle Fork Project Annual Generation: 1967-2019



Year-to-year hydro variation is significant, where the lowest annual generation level was 211 GWh and the maximum annual generation was 1,848 GWh. In addition, there were 26 times over 53 years that the annual generation crossed the mean, either from-above-to-below or from-below-to-above over two consecutive years. This implies a strongly mean-reverting process. There does not seem to be a significant time-series trend of either the mean or standard deviation over time.

Greatest number of consecutive low-water years (below the mean) was 4, which occurred twice, averaging 752 GWh for 2007-2010 and 469 GWh for 2012-2015. Greatest number of consecutive high-water years (above the mean) was 6 which occurred between 1995-2000 and averaged 1,332 GWh.

### MFP Hydro Variation

Stochastic analysis approach was used to capture the impact of hydrologic variation. In this stochastic analysis, alternative futures or draws are randomly generated which conform to the underlying statistical properties of the annual hydrology outlined above. In this case, each random draw contains 1,700 values, each representing one year between 2020 and 2036, the term of the Bond. Each value of the random draw corresponds to the level of hydrologic output for each year. The random draws were developed from a uniform distribution with a range of (0,1) and a mean of 0.5. For this reason, each input random draw is assumed to have an equal probability of occurring.

### Parameterization of Hydrology for MFP

From the above history to capture the annual magnitude as well as year-to-year variation in MFP hydrology included the following annual statistics from observed history:

- Annual Mean of 994 GWh
- Annual Standard Deviation of 434 GWh

In addition, maximum and minimum generation boundaries were observed in MFP history:

- Maximum Value of 1,848 GWh
- Minimum Value of 211 GWh

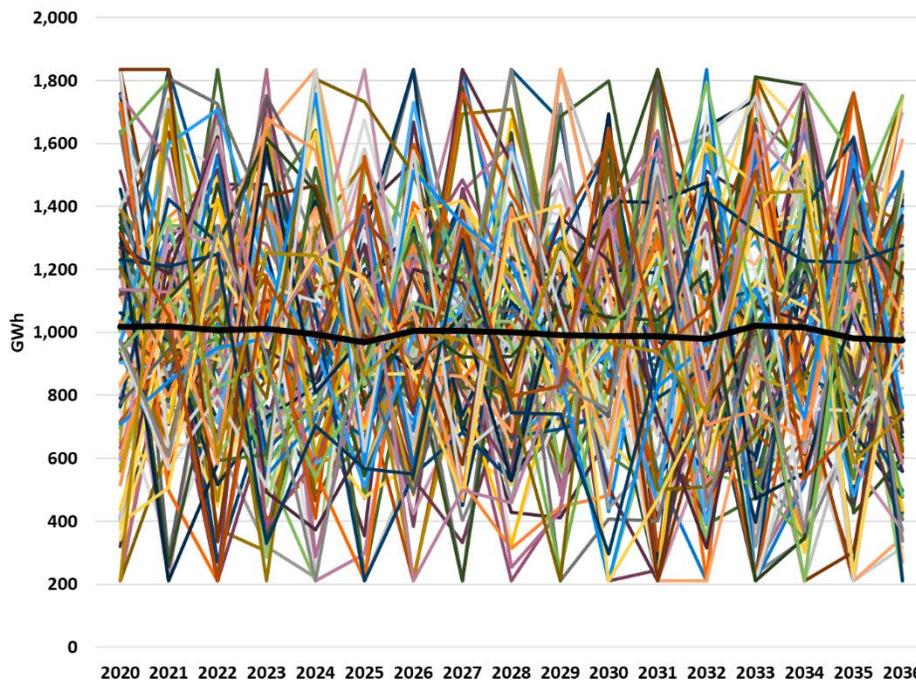
The generation was observed to be strongly mean reverting, where the speed to mean reversion is one year. The number of consecutive high- and low-water years was limited to 4 or less.

Combining these parameters provides a reasonable representation of annual and inter-year hydrologic variation.

After creating representative parameters for random draws, HE generated the stochastic distribution within the EnCompass planning model. From this analysis HE evaluated different sample sizes and settled on 100 random draws which was deemed to be a sufficient sample size based upon the rate of convergence of average energy market revenues.

The 100 stochastic draws of annual MFP generation for the period 2020 to 2036 is shown below. Each of the draws will vary in a random ‘walk’ with a tendency to revert back to the annual mean level of generation.

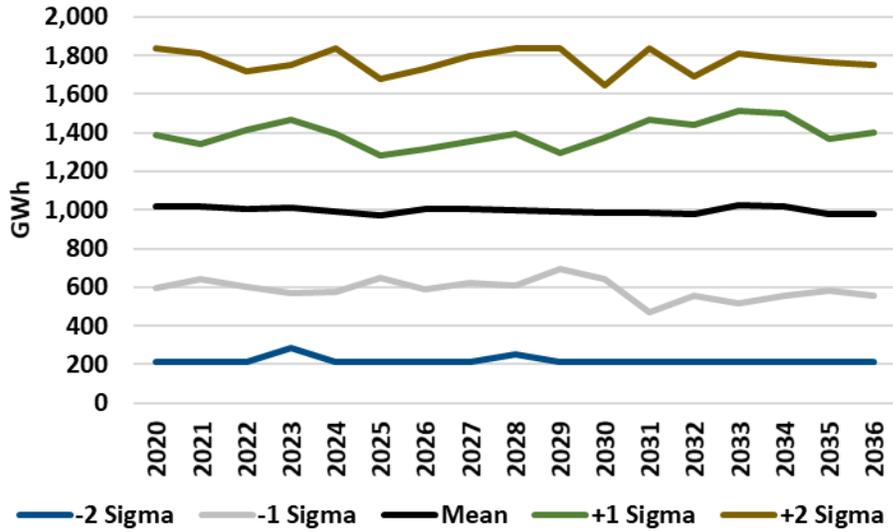
Figure 25  
Stochastic Generation



(Source: Horizons Energy)

For each year the 100 draws form a normal distribution with a mean of 994 GWh and a standard deviation of 443 GWh. Figure 26 reflects the mean, and plus or minus one and two sigma for each year of the forecast. Plus or minus one sigma will encompass 68 percent of the hydrologic cases; while plus or minus two sigma will include 98 percent of hydrologic variation. There is greater density around the mean and less density around extreme events consistent with the normal distribution.

Figure 26  
Stochastic Ranges



(Source: Horizons Energy)

### Risk Assessment Methodology

HE conducted its financial feasibility study with a combination of scenarios and stochastics. Scenarios represent different plausible futures in the energy market and stochastics were generated for 100 random draws to capture the impact of hydrologic variations. The combination of these two elements results in a robust risk assessment of MFP’s financial feasibility. The scenarios are enumerated in Figure 27 with details provided in the Scenario Assumptions section. This provides for measuring uncertainty in the energy markets for the major drivers: natural gas, demand, carbon pricing and renewable penetration.

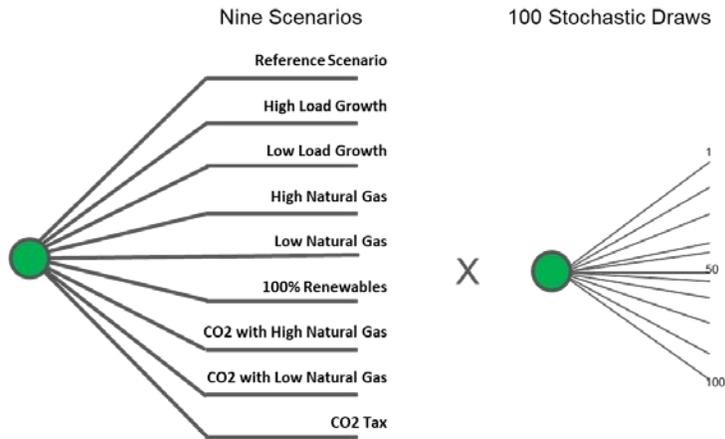
### Combining Scenario and Stochastic Analysis

This report combines the scenario and stochastic analysis to capture the impact of alternative market and water conditions. The stochastic hydrology was applied to each of the nine scenarios to yield:

1,700 simulation years per scenario = 100 draws x 17 years

15,300 simulation years = 1,700 simulation years per scenario x 9 scenarios

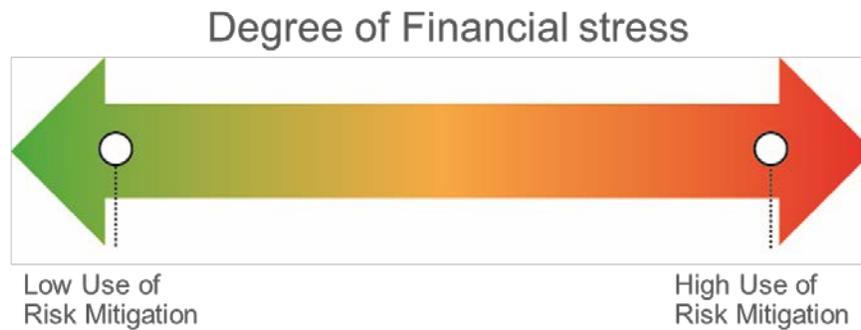
Figure 27  
Scenario Tree



Combining scenarios and stochastics provides an understanding of conditions which may give rise to financial stress.

**Financial Stress**

Financial stress, as defined within this report, occurs in those years in which the FCF < 0 for MFP and identifies years where risk mitigation measures may need to be deployed. The degree of financial stress is a continuum, at the one end where there is minimal use of risk mitigation measures. At the other end, the maximum Financial Stress may be called a Financial Emergency. This would occur if the FCF plus CapEx Deferral plus Drawdown of the Reserve Fund are exhausted. An important part of the Financial Feasibility study includes a determination of if, and under what conditions, maximum financial stress, particularly a financial emergency occurs.



Financial stress is most likely to occur under scenarios of low market prices and under low water years, and in particular, multiple years of below average water.

Table 9  
FCF Financial Stress

Annual FCF Financial Stress	Base	High Load	Low Load	High NG	Low NG	100% Renewable	CO2 High NG	CO2 Low NG	US CO2 Tax
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Probability	0.29%	0.00%	0.47%	0.12%	1.24%	0.12%	0.00%	0.06%	0.00%
No. of occurrences	5	0	8	2	21	2	0	1	0

(Source: Horizons Energy)

Table 10  
Debt Service Coverage Financial Stress

DSC Financial Stress	Base	High Load	Low Load	High NG	Low NG	100% Renewable	CO2 High NG	CO2 Low NG	US CO2 Tax
Less than 1.2 times	11%	9%	13%	7%	15%	7%	3%	5%	3%
Greater than 5 times	77%	81%	74%	86%	71%	85%	93%	89%	93%

(Source: Horizons Energy)

### Risk Mitigation Methods

MFP management can employ two primary methods, if necessary, to mitigate the risk and associated financial stress of meeting the Obligations of MFP CapEx deferral and drawdown of the Reserve.

#### CapEx Deferral

MFP management maintains an annual capital improvement program of the hydro facilities. MFP management routinely expenses the CapEx of these programs. However, if MFP experiences financial stress in a specific year, a portion of the CapEx may be deferred in that year and successive years as a means of meeting current Obligations.

#### Drawdown of the MFP Reserve Fund

A second means of mitigating financial risk is the ability to drawdown a portion of the MFP Reserve Fund (Fund). The Fund is currently at \$37.3 million and PCWA anticipates with the results of 2019 it will be fully funded to the \$47.75 million target amount. The funding target of \$47.75 million may be used to meet both the operational and capital requirements of the MFP. The mean reverting characteristic of MFP hydrology provides for a strong expectation that, in years in which the Fund is drawn down, will subsequently be replenished with years of excess FCF. Although the ability of the MFP to generate FCF on an expected basis is well in excess of the Obligations, the target level of the Fund is important because excess FCF is distributed to other accounts after a year of surplus cash.

#### Other Risk Mitigation Methods

HE notes that the MFP has the additional ability to carry-over water from one year to the next under lower water year conditions. This capability, not represented in the HE analysis, provides for additional ability to mitigate risk.

MFP management may also elect to defer a portion of the annual O&M expense. This method was also not incorporated in the feasibility study.

By not incorporating CapEx Deferral or Other Risk Mitigation Methods HE elected a conservative treatment of the MFP hydrology risk.

## Results

HE simulated the MFP hydroelectric assets for the years 2020 to 2036 across the nine market scenarios and 100 draw hydrologic stochastics as outlined in the Feasibility Study Risk Analysis section of this report. These results summarize the operations of the MFP assets, including their contribution to and revenue derived from the energy, ancillary service and capacity markets.

### Base Expected Case

Combining these revenues with the REC revenue and investment income forecasts produces the forecast of total annual funds produced for the MFP. As shown in Table 11, subtracting the Obligations of MFP composed of O&M, Insurance, Bond P&I and CapEx against the total revenue and investment income yields the annual FCF of the MFP. The Base Expected Case is the average of the 100-draw stochastic hydro cases.

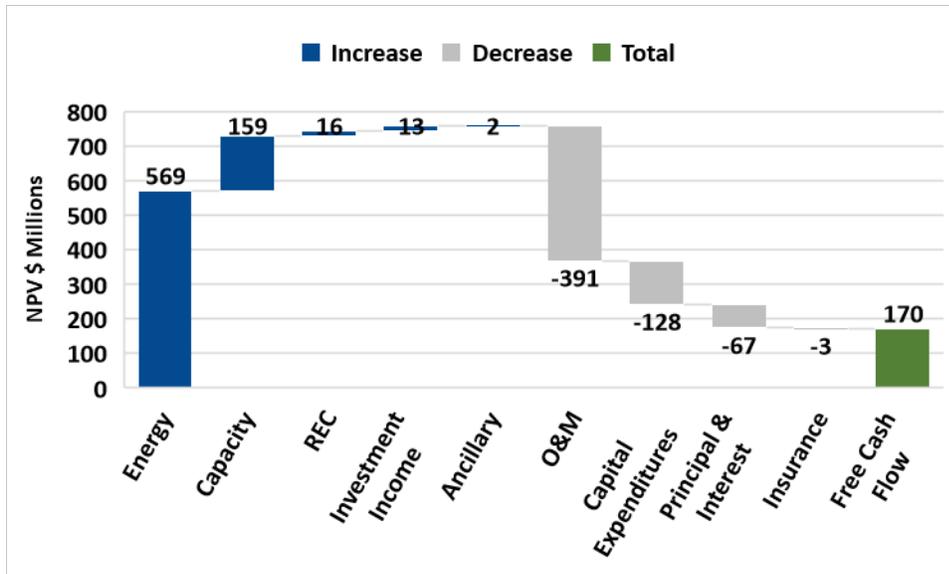
Table 11  
Base Expected Annual Results

	Energy (GWh)	Expected Revenue (\$000s)						Annual Obligations (\$000s)					Total Revenue - Total Obligations	
		Energy	Capacity	Ancillary	REC	Investment		O&M	Insurance	Interest	Capital			Free Cash Flow
						Income	Total				Expenditures	Total		
2020	1,018	37,436	6,025	117	1,225	1,000	45,803	27,208	161	5,344	10,081	42,794	3,009	
2021	1,019	37,803	14,813	114	1,225	1,000	54,955	27,985	219	5,353	11,990	45,547	9,408	
2022	1,008	38,023	14,813	86	1,225	1,000	55,147	28,427	227	5,353	12,358	46,365	8,782	
2023	1,011	39,002	16,606	94	1,225	1,000	57,927	28,082	240	5,352	11,222	44,896	13,031	
2024	995	39,403	18,085	143	1,225	1,000	59,856	28,551	254	5,353	9,428	43,586	16,270	
2025	969	40,868	16,688	159	1,225	1,000	59,940	29,122	260	5,353	8,692	43,427	16,513	
2026	1,004	43,512	16,627	147	1,225	1,000	62,511	29,704	258	5,349	9,713	45,024	17,487	
2027	1,005	44,594	5,109	186	1,225	1,000	52,114	30,298	257	5,353	8,755	44,663	7,451	
2028	1,001	45,472	6,336	113	1,225	1,000	54,146	30,904	256	5,353	6,658	43,171	10,975	
2029	992	46,518	7,678	189	1,225	1,000	56,610	31,522	255	5,353	6,954	44,084	12,526	
2030	988	48,217	24,989	199	1,225	1,000	75,630	32,153	254	5,350	14,527	52,284	23,346	
2031	988	49,030	11,123	232	1,225	1,000	62,610	32,796	256	5,352	7,586	45,990	16,620	
2032	978	50,869	29,983	301	1,225	1,000	83,378	33,452	257	5,353	7,924	46,986	36,392	
2033	1,022	53,386	4,225	151	1,225	1,000	59,987	34,121	255	5,353	8,276	48,005	11,982	
2034	1,017	54,419	5,409	113	1,225	1,000	62,166	34,803	253	5,351	8,644	49,051	13,115	
2035	981	54,384	4,354	249	1,225	1,000	61,212	35,499	251	5,353	18,058	59,161	2,051	
2036	976	55,698	4,708	301	1,225	1,000	62,932	36,209	252	2,675	9,431	48,567	14,365	
Net Present Value	12,705	569,377	158,653	2,068	15,572	12,712	758,384	391,219	3,083	66,525	127,548	588,374	170,009	

(Source: Horizons Energy)

The following waterfall graph in Figure 28 shows the relative magnitude of the Net Present Value (NPV) of Expected Base Results. The NPV is obtained by discounting future year values back to the base year of the study, 2019 at 3.44 percent or the breakeven all-in interest rate. As shown the sum of energy and capacity revenues contributes over 90 percent of all revenues for the MFP; while the Bond P&I constitutes about 12 percent of the Obligation. Also, the MFP generates a positive NPV free cash flow in the expected case. Each year, positive free cash contributes to any needed replenishment of the Reserve Fund, with any remaining free cash distributed by the MFPFA pursuant to its policy.

Figure 28  
NPV Expected Base Case Results

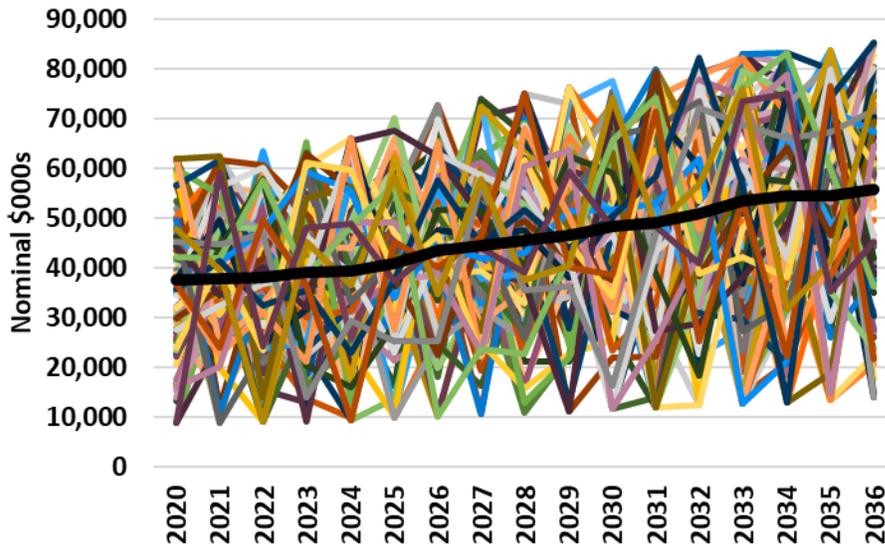


(Source: Horizons Energy)

### Base Stochastic Case

Expanding the view from the expected base results, the 100 scenario draws measure the impact of annual uncertainty in water available to and subsequent energy generation from the MFP. As discussed in the Stochastic Hydrologic Assumptions section, for a given scenario, each draw represents annual variability in generation with a strong tendency to move towards the mean level of generation. Figure 29 illustrates the variability of annual energy revenue from the 100 draws for the base case. The expected level of revenue from the project is represented by the black line, which grows steadily from \$37 million in 2020 to \$56 million in 2036. The maximum of the energy revenues represents the highest annual hydrology and ranges from \$62 million in 2020 to \$85 million in 2036; while, the lowest levels of energy revenues, corresponding to extreme drought years, range from \$9 million in 2020 to \$15 million in 2036.

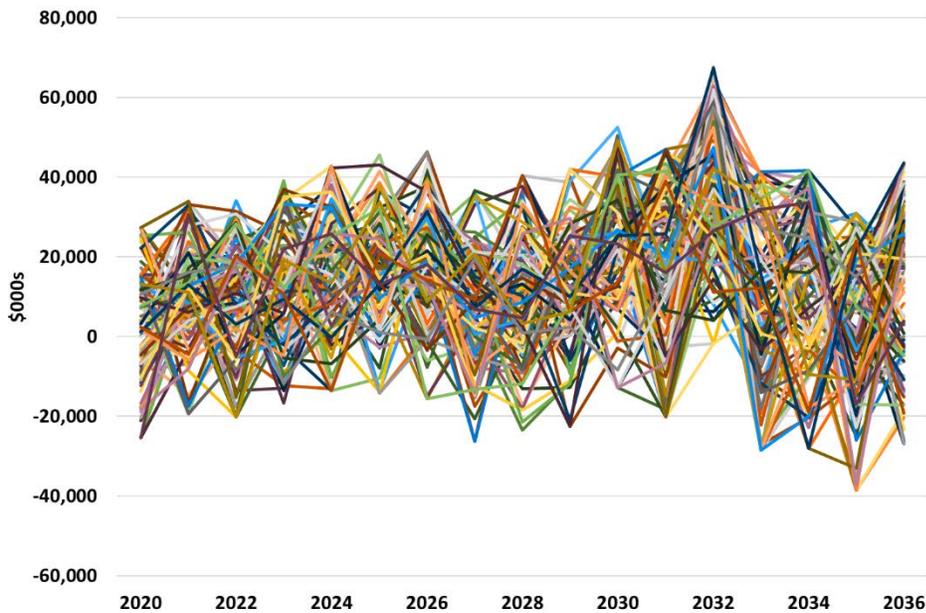
Figure 29  
Base Energy Annual Stochastic Energy Revenue



(Source: Horizons Energy)

Adding the other revenue components to the stochastic energy revenue and then subtracting annual Obligations yields the annual FCF across the scenario as shown for the base case in Figure 30. While generally a positive value, the FCF maybe negative, depending upon the scenario and stochastic draw, in any given year. Also, it displays much of the annual energy variation, but also contains the impacts of other annual changing components of the FCF, principally forecasted capacity revenues and CapEx expenditures.

Figure 30  
Base Stochastic FCF

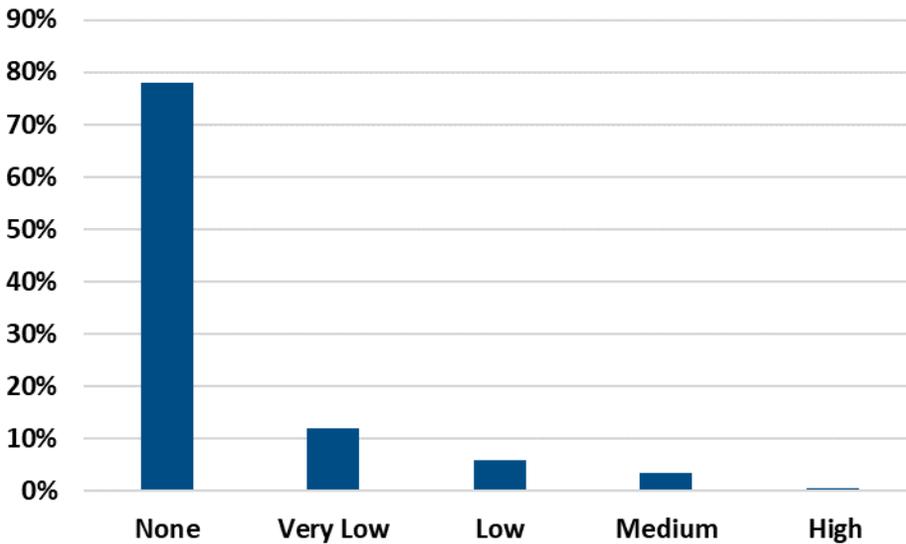


(Source: Horizons Energy)

The Figure 31 qualitatively illustrates the percent of years that MFP experiences FCF Stress in the Base Case. There is either none or very low FCF stress for 90 percent of the base stochastic results. This is based upon either positive FCF or a negative FCF below the average level of FCF for the entire scenario. Conversely, there is less than a one percent chance that FCF would be in the high category. Where the stress categories are defined as the number of occurrences out of 1,700 instances:

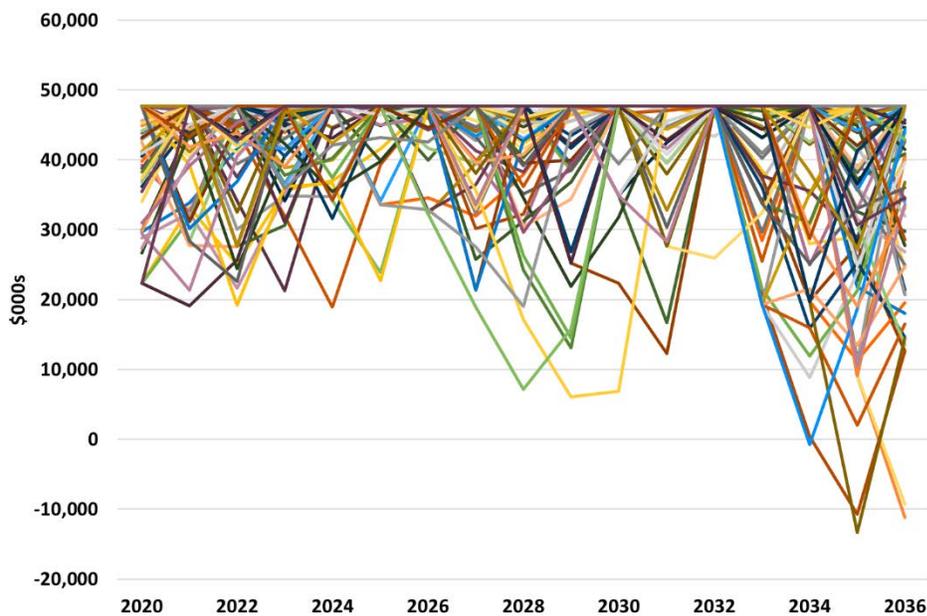
Category	Definition
None	Greater than Zero
Very Low	Between 0 and \$9,999
Low	Between \$10,000 and \$19,999
Medium	Between \$20,000 and \$29,999
High	Less than or equal to \$30,000

Figure 31  
Base Stochastic FCF Stress Magnitude



(Source: Horizons Energy)

Figure 32  
Base Stochastic Reserve Levels



(Source: Horizons Energy)

Figure 32 shows the Reserves levels across draws in the Base Case. Years in which the levels are less than the target of \$47.75 million represent instances when the Reserve may be needed to cover Obligations. Years where the Reserve levels are below zero represent instances where Reserves and

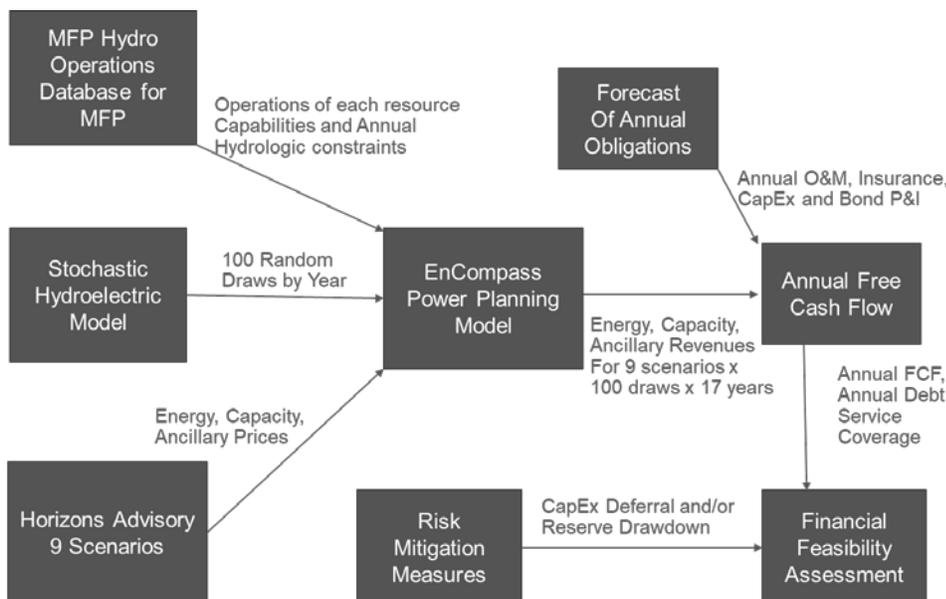
CapEx deferral may be needed to meet Obligations. The reserve levels associated with the other eight scenarios are provided as part of the Scenario Figures in the Addenda.

## Consultant’s Assessment

In this Financial Feasibility Report HE evaluates the ability of the MFP to meet its annual Obligations, including those of the proposed Bond service payments.

To test the Financial Feasibility of the Bond, HE performed the following steps:

- MFP staff provided a forecast of the Obligations of MFP: including O&M, Insurance, CapEx and the Bond P&I
- Market assessment for the MFP drawing from the HE North American Advisory, including the market impacts of nine alternative scenarios
- Simulated hourly MFP hydrologic operations within the CAISO using the EnCompass power planning model
- Annual and inter-year stochastic model of MFP hydrology to represent the impact of uncertainty due to varying levels of water available to the MFP
- Simulated within EnCompass nine scenarios across 100 random draws for the time period 2020 to 2036 and for all hours of the year
- Energy, capacity and ancillary service revenues from the EnCompass simulation combined with a forecast of REC revenue, investment income and annual Obligations to derive a forecast of FCF for MFP under the different scenarios/draws
- Determined the DSC under the different scenarios/draws



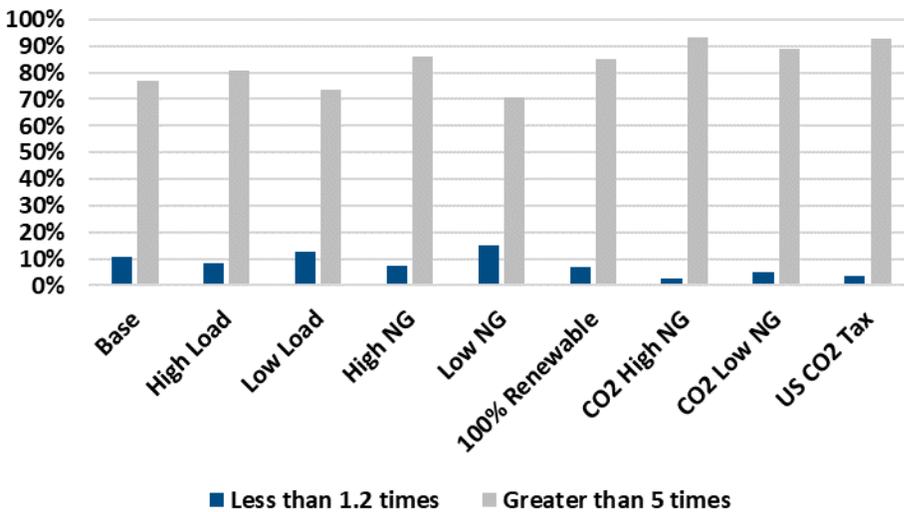
HE utilized two metrics to evaluate the Financial Feasibility of the Bond: DSC of 1.2 times or greater and Total Annual Funds from the MFP greater than Total Obligations.

### Debt Service Coverage (DSC)

HE observed that the DSC on an expected basis across all scenarios exceeded 1.2 times in all years, with one exception, the Low Natural Gas scenario for 2035. Upon investigation, the deferrable CapEx in that year appears sufficient to maintain the 1.2 times by using funds from reserves.

Introducing stochastic hydrology, the DSC under base case conditions is greater than 5.0 times more than 77 percent of 1,700 possible outcomes. Even in the high stress scenario of low natural gas it is greater than 5.0 times more than 71 percent of possible outcomes. Therefore, HE concludes that even under high stress conditions, MFP management could satisfactorily meet debt service Obligations with use of the Reserve Fund.

Figure 33  
Probability of DSC Financial Stress



(Source: Horizons Energy)

From the analysis of the DSC:

- The expected value of the DSC is greater than 1.2 times in all years and under all scenarios
- Under Base Case scenario stochastic conditions, the DSC is greater than 1.2 times 89 percent of the time and greater than 5.0 over 77 percent of the time.
- Highest stress scenario: Low Natural Gas
  - The DSC is greater than 1.2 times 85 percent of the time and is greater than 5.0 times 71 percent of the time.
  - There is a three percent probability of two consecutive years of the DSC less than 1.2 times and a 0.3 percent probability of three consecutive years of the DSC less than 1.2 times.
  - Shortfalls of DSC < 1.2 times across all scenarios and stochastic draws can be covered by Financial Risk Mitigation Measures.

### Annual Free Cash Flow (FCF)

From the analysis of the Annual FCF + Financial Risk Mitigation Measures > 0:

- Under expected conditions the Annual FCF is sufficient to meet Obligations under all scenarios with the exception of the Low Natural Gas scenario in the year 2035. Risk mitigation measures are sufficient to meet this condition, if required.
- Introducing stochastic hydrology produces Financial Stress. When this occurs, it requires the application of Risk Mitigation measures. A combination of the drawdown of the Reserve Fund and deferral of CapEx are sufficient to meet Obligations under all scenarios and all stochastic draws with the most stress occurring in the Low Natural Gas and Low Load scenario.
- The Low Natural Gas scenario required both application of the Reserve Fund and CapEx Deferral in slightly less than one percent of possible stress events.
- The earliest year where financial stress occurred was 2025 in the Low Load Growth scenario. As illustrated in the Base Reserve Levels graph above and the Reserve Levels graphs for the other eight scenarios located in the Addenda, financial stress is generally concentrated after 2033.
- In three scenarios: High Load, CO2 High Natural Gas and US CO2 Tax, drawdowns of the Reserve Fund were sufficient to meet Obligations, without application of CapEx deferral.

## Conclusions

It is the opinion of Horizons Energy that the MFP has a strong ability to create positive FCF based upon evaluating both market and hydrologic uncertainty. In over 84 percent of years evaluated across the nine scenarios, MFP generates positive free cash providing the ability to either replenish the Reserve Fund or contribute funds for other purposes. The observed mean reversion, or frequency of transitions between high and low water years, also significantly mitigates financial stress by reducing the variance of inter-year energy revenues.

In the most extreme case identified, certain draws of the Low Natural Gas scenario, there is a one percent probability that the MFP would be unable to cover the annual Obligation of repayment on the Bonds through the Reserve Fund. However, in these instances, MFP has access to additional means such deferral of CapEx to meet its Obligations.

- The MFP has greatest financial stress under consecutive low water years and under conditions of prolonged low natural gas prices and low electricity demand
- The MFP has a strong ability to achieve a high average debt service coverage ratio across all scenarios and draws
- Due to the mean reverting nature of annual water available to the MFP, the probability of three or more consecutive years of DSC below the threshold is less than 0.5 percent.
- Across all scenarios, draws and years where the DSC is less than 1.2 times the Financial Risk Mitigation measures were found to be sufficient to cover the shortfall in over 99 percent of all cases.

## Assessment

At the outset of this report, the test for Financial Feasibility was defined as the ability of the Middle Fork Project to have sufficient funds to meet Annual Obligations, including the Bond P&I. From the Scenario and Stochastic analysis presented above, Horizons Energy concludes that the Middle Fork Project passes the test of Financial Feasibility.

## Addenda

### The EnCompass Power Planning Model

Horizons Energy utilizes the state-of-the-art power simulation engine, EnCompass, developed by Anchor Power Solutions. EnCompass was first released in 2016 as a simulation engine that performs advanced Mixed Integer Linear Programming (MILP) algorithms, capable of addressing a wide range of planning problems within a single database, including market price forecasting, generation resource expansion optimization and power operations.

EnCompass is the premier software and the industry standard solution for making optimal power supply decisions from short-term scheduling and trading to long-term capital investment. By combining the full operational details of power plants and complex contracts with the ability to simplify and relax constraints for long-term simulations, that previous generations of similar software do not incorporate. EnCompass is the only model needed for all facets of power planning and forecasting and can determine not only the best way to utilize resources, but also which technologies should be added in the future or existing resources that should be converted or retired.

Traditional long-term planning models are often overly simplistic and ignore ancillary services, ramp rates, and startup costs. Most short-term models are data-intensive making it difficult to manage scenarios and uncertainties around prices, demand and availability. EnCompass overcomes these drawbacks by combining an extensible Time Series data model with performance options for managing runtime and complexity, while always maintaining chronological constraints, depicted in Figure 1 below.

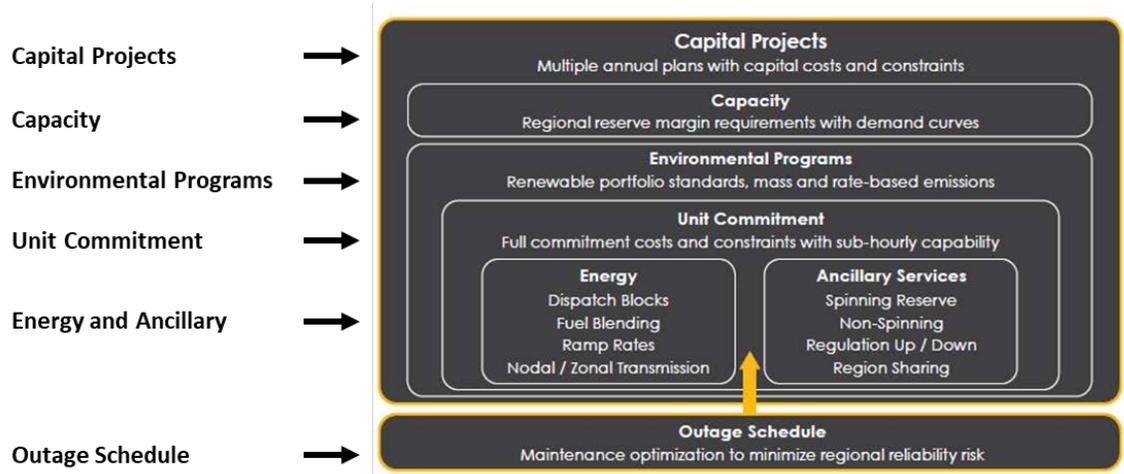
Applications include:

- Integrated Resource Planning
- Asset Valuation
- Budgeting & Rates
- Risk Analysis
- Scheduling & Trading Support
- Market Price Forecasting
- Congestion Analysis

Key features consisting of:

- Produces Ranked Capacity Plans
- Enforces Environmental Constraints
- Monte Carlo with Grid Computing
- Chronological with Sub-Hourly Detail
- DC Powerflow with Contingencies
- Income Statements, Capital Balances and Cash Flows

Figure 34  
EnCompass Software



### Clients and Testimonials

EnCompass Software Clients are listed below along with several of the client testimonials of the software:

- Arizona Electric Power Cooperative (AEP CO) – IRP
- Great River Energy – IRP
- Otter Tail Power – IRP
- Dairyland Power Cooperative – IRP and fuel budgeting
- Kentucky Municipal Energy Agency – IRP
- Utah Municipal Power Agency (UMPA) – generation planning
- Liberty Utilities - fuel budgeting
- Public Service Company of New Mexico (PNM) – IRP
- Synapse Energy Economics – regional power planning
- Applied Economics Clinic – public policy evaluation

#### AEP CO:

AEP CO used EnCompass, “which analyzes hundreds of resource combinations in order to recommend lowest-cost resource portfolios that satisfy the peak demand obligations of the Cooperative load. By varying the assumed futures AEP CO and its Members may face, this tool assists AEP CO and its Members in making decisions aimed at low-cost, low-risk, reliable power supply for Cooperative customers.”

#### The Hawaii Division of Consumer Advocacy (“CA”):

The Hawaii Division of Consumer Advocacy (“CA”) filed testimony and exhibits with the Hawaii Public Utilities Commission as a party to Hawaii Electric Light Company’s (“HELCO”) rate case under docket 2015-0170. Hawaii Electric Company’s (“HECO”) rate case under docket 2016-0328, and Maui Electric Company’s (“MECO”) rate case under docket 2017-0150. The CA’s consultants, Sawvel and Associates, used EnCompass to review test year analysis and recommend changes to those results. Sawvel considered detailed operational constraints including regulation up and down requirements, dual-train

combined cycle modeling, commitment operating constraints, minimum fuel burn requirements, and minimum local generation to prevent transmission overloading.

**UMPA:**

“We’ve been looking for a model like this for quite some time,” said Layne Burningham, General Manager of UMPA. “The tools we were previously using simply weren’t able to evaluate all of the options that were being presented to us.”

**Synapse Energy Economics:**

Synapse Energy Economics is a research and consulting firm who specialized in energy, economics and environmental topics. They have indicated on their website that EnCompass is an industry-standard market simulation model along with Strategist, Market Analytics, PROMOD, and PLEXOS to forecast electricity market prices, calculate avoided costs, analyze market power, review resource planning, and quantify fuel requirements and air emissions. These software programs can also provide operational and planning modeling analyses of electric power systems to evaluate long-term energy plans, assess the environmental and economic impacts of policy initiatives, and review utility system modeling.

According to Synapse Energy Economics report “New England’s Shrinking Need for Natural Gas” they have indicated the advantages of EnCompass over other models because “—can give more accurate estimates of the impact of these complicated resource interplays, along with transmission constraints and changing prices of coal, natural gas, and renewables. Modeling programs like EnCompass can also capture how the electric system changes monthly or hourly, rather than just reflecting annual trends.”

**Figure Tables**

Figure 4

HE Carbon Price Trajectories

	AB32	US CO2 Tax	CO2 High NG	CO2 Low NG
2020	17	16		
2021	17	17		
2022	18	19	21	13
2023	19	20	16	7
2024	20	22	16	7
2025	21	23	16	11
2026	22	25	19	13
2027	23	27	21	15
2028	25	29	23	17
2029	26	30	26	18
2030	27	32	27	24
2031	28	35	26	29
2032	30	37	27	48
2033	31	39	32	76
2034	33	41	33	37
2035	35	43	37	58
2036	36	46	40	58

	AB32	US CO2 Tax	CO2 High NG	CO2 Low NG
2037	38	48	43	63
2038	40	51	44	51
2039	42	54	41	53
2040	44	56	45	66
2041	46	59	47	72
2042	49	62	48	77
2043	51	65	53	88
2044	54	69	57	95
2045	56	72	59	158
2046	59	75	65	228
2047	62	79	63	250
2048	65	83	68	250
2049	69	86	77	150
2050	72	90	101	250

Figure 14  
CAISO-NP15 Base Annual Energy Prices

Nominal \$/MWh	CAISO-NP15		
	All Hour	On-Peak	Off-Peak
2020	33.42	35.03	31.96
2021	33.72	35.33	32.26
2022	34.27	35.73	32.95
2023	35.22	36.61	33.96
2024	35.60	36.90	34.42
2025	37.94	39.29	36.71
2026	39.27	40.63	38.03
2027	39.88	41.12	38.76
2028	40.48	41.48	39.57
2029	41.16	42.11	40.29
2030	41.85	42.34	41.40
2031	42.67	42.88	42.49
2032	43.93	43.86	44.00
2033	44.20	43.56	44.78
2034	44.21	42.95	45.34
2035	44.20	42.39	45.86
2036	45.03	42.77	47.10
2037	45.48	42.69	48.02
2038	45.71	42.62	48.53
2039	46.40	42.87	49.60
2040	45.78	41.75	49.43

CAISO-NP15			
Nominal \$/MWh	All Hour	On-Peak	Off-Peak
2041	46.23	41.79	50.27
2042	46.68	42.19	50.77
2043	47.74	43.33	51.76
2044	48.05	43.45	52.22
2045	48.87	44.75	52.60
2046	50.58	47.89	53.03
2047	51.79	48.19	55.07
2048	53.39	50.56	55.98
2049	55.16	52.91	57.20
2050	57.61	55.36	59.65

Figure 15  
CAISO-NP15 All Hour Scenario Energy Prices

Nominal \$/MWh	Base	High Load	Low Load	High NG	Low NG	100% Renewable	CO2 High NG	CO2 Low NG	US CO2 Tax
2020	33.42	33.98	33.78	36.80	33.53	33.29	36.79	33.83	42.87
2021	33.72	34.61	34.07	38.27	34.08	33.10	38.11	33.89	43.25
2022	34.27	35.43	34.73	39.24	34.18	33.37	48.22	39.87	43.94
2023	35.22	36.47	35.73	40.67	34.55	33.50	46.97	37.27	44.62
2024	35.60	37.06	36.37	41.50	34.54	33.02	47.94	37.59	45.03
2025	37.94	39.00	37.97	44.13	36.39	34.82	49.83	41.20	47.44
2026	39.27	40.24	38.94	46.85	37.37	35.51	53.63	42.64	49.37
2027	39.88	41.21	39.86	48.58	37.24	35.98	55.97	43.54	50.91
2028	40.48	42.19	40.44	50.67	37.00	36.88	58.03	43.81	52.03
2029	41.16	42.90	41.23	52.11	36.77	36.74	60.23	44.01	52.55
2030	41.85	43.78	41.84	53.10	36.26	37.13	60.80	45.26	53.82
2031	42.67	44.74	43.32	54.93	35.93	37.29	61.19	47.66	55.45
2032	43.93	46.28	43.87	55.20	35.91	36.55	60.69	54.91	56.94
2033	44.20	46.94	44.48	55.99	35.68	35.88	63.48	66.71	58.13
2034	44.21	46.89	44.66	56.51	34.77	34.59	64.31	49.07	57.91
2035	44.20	47.32	44.77	56.93	34.66	33.91	65.51	56.58	57.98
2036	45.03	48.35	45.01	56.62	34.37	33.28	66.30	54.31	57.91
2037	45.48	48.51	45.31	57.76	34.21	32.53	68.44	55.53	58.96
2038	45.71	49.08	45.66	59.02	34.32	32.46	68.70	48.84	60.08
2039	46.40	49.74	45.57	58.97	34.51	31.49	67.06	48.09	61.03
2040	45.78	49.59	45.74	60.04	33.92	30.37	68.60	51.28	60.85
2041	46.23	50.61	45.94	60.50	33.86	29.38	69.67	50.90	61.82
2042	46.68	51.48	45.31	60.09	33.51	28.15	68.76	50.55	61.78

Nominal \$/MWh	Base	High Load	Low Load	High NG	Low NG	100% Renewable	CO2 High NG	CO2 Low NG	US CO2 Tax
2043	47.74	52.83	45.48	60.87	33.13	26.37	69.84	51.99	62.15
2044	48.05	53.92	45.66	60.23	32.73	25.09	70.50	52.92	62.95
2045	48.87	55.05	46.15	61.50	32.44	24.82	70.95	69.40	63.47
2046	50.58	56.41	46.35	62.48	33.31	24.10	72.05	82.57	64.02
2047	51.79	57.96	46.52	63.87	33.77	22.64	69.62	83.17	64.25
2048	53.39	58.73	47.71	64.50	34.72	20.80	69.45	78.26	63.53
2049	55.16	60.37	49.75	65.95	35.61	19.78	72.75	55.03	64.52
2050	57.61	62.98	51.22	66.61	36.38	17.60	78.50	75.47	63.65

Figure 16  
CAISO-NP15 Capacity Prices

Nominal \$/kW Year	Base	High Load	Low Load	High NG	Low NG	100% Renewable	CO2 High NG	CO2 Low NG	US CO2 Tax
2020	26.66	26.66	26.66	26.66	26.66	26.66	26.66	26.66	26.66
2021	65.54	65.54	65.54	65.54	65.54	65.54	65.54	65.54	65.54
2022	65.54	65.54	65.54	65.54	65.54	65.54	65.54	65.54	65.54
2023	73.48	65.39	18.09	22.47	72.84	84.27	18.71	18.63	92.10
2024	80.02	70.43	74.42	91.17	78.48	97.52	32.46	26.30	104.88
2025	73.84	65.98	17.01	85.10	71.04	93.39	116.40	87.86	98.41
2026	73.57	19.70	19.28	19.97	70.52	97.43	122.65	90.20	101.15
2027	22.61	20.09	83.87	25.54	21.58	108.85	138.28	91.37	112.20
2028	28.04	79.64	28.83	108.87	27.74	111.64	154.70	107.06	124.30
2029	33.97	22.73	95.91	18.37	33.09	61.22	173.12	106.29	50.00
2030	110.57	97.82	109.27	131.42	99.16	140.54	181.70	131.87	155.79
2031	49.22	35.60	117.86	147.72	46.37	157.68	203.70	137.00	71.62
2032	132.67	115.93	18.36	19.74	117.63	20.49	102.70	163.92	188.38
2033	18.69	123.96	19.39	177.17	23.33	20.95	213.60	195.88	201.26
2034	23.93	23.91	18.71	20.96	20.71	21.20	218.30	175.59	22.12
2035	19.27	145.39	21.98	24.50	20.90	223.10	223.10	207.70	223.10
2036	20.83	157.70	21.21	22.74	22.69	228.01	228.01	228.01	24.21
2037	182.91	168.18	189.24	25.60	155.23	23.39	233.03	233.03	25.61
2038	208.23	182.51	204.67	238.15	165.92	25.05	238.15	238.15	238.15
2039	217.65	196.86	221.17	243.39	173.56	243.39	243.39	243.39	243.39
2040	27.31	211.61	232.96	248.75	183.82	26.27	248.75	248.75	248.75
2041	242.23	218.28	247.68	254.22	191.16	27.17	254.22	254.22	254.22
2042	259.06	234.96	259.81	259.81	204.17	259.81	259.81	259.81	259.81
2043	265.53	238.62	265.53	265.53	212.29	265.53	265.53	265.53	265.53
2044	271.37	259.93	271.37	271.37	231.33	271.37	271.37	271.37	271.37

Nominal \$/kW Year	Base	High Load	Low Load	High NG	Low NG	100% Renewable	CO2 High NG	CO2 Low NG	US CO2 Tax
2045	277.34	277.34	277.34	277.34	250.64	30.41	277.34	30.48	277.34
2046	283.44	283.44	283.44	283.44	247.67	31.13	283.44	31.16	283.44
2047	289.68	289.68	289.68	289.68	289.68	289.68	289.68	31.84	289.68
2048	296.05	296.05	296.05	296.05	268.16	32.50	296.05	40.29	296.05
2049	302.56	302.56	302.56	302.56	268.00	33.17	302.56	41.33	302.56
2050	309.22	309.22	309.22	309.22	273.28	33.92	309.22	42.22	309.22

Figure 19  
CAISO-NP15 Natural Gas Price

Nominal \$/MMBtu	Henry Hub	CAISO-NP15
2020	2.46	2.87
2021	2.46	2.87
2022	2.52	3.00
2023	2.59	3.11
2024	2.65	3.17
2025	2.70	3.22
2026	2.76	3.29
2027	2.87	3.42
2028	2.98	3.54
2029	3.11	3.66
2030	3.27	3.82
2031	3.44	3.98
2032	3.60	4.14
2033	3.74	4.26
2034	3.86	4.37
2035	3.98	4.50
2036	4.10	4.62
2037	4.22	4.74
2038	4.36	4.87
2039	4.48	4.98
2040	4.61	5.12
2041	4.73	5.26
2042	4.86	5.37
2043	5.03	5.55
2044	5.20	5.70
2045	5.37	5.86
2046	5.56	6.08
2047	5.75	6.32

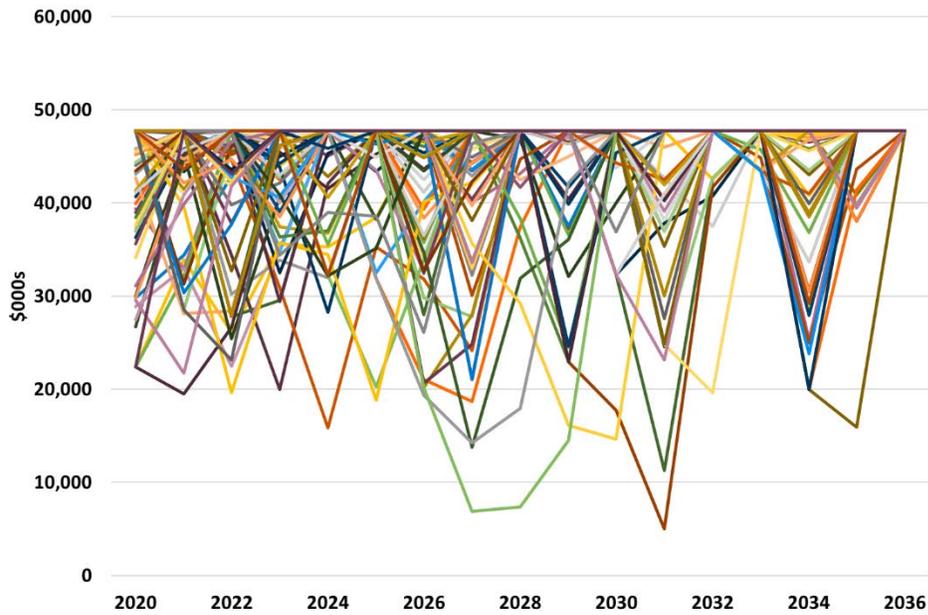
Nominal \$/MMBtu	Henry Hub	CAISO-NP15
2048	5.94	6.48
2049	6.14	6.68
2050	6.35	6.89

Figure 21  
Henry Hub Scenario Prices

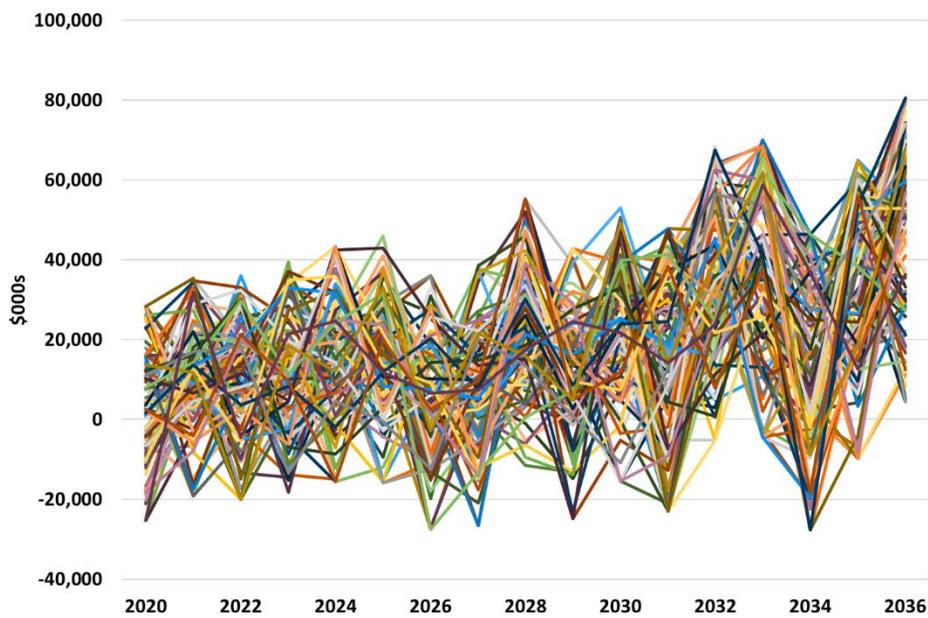
Nominal \$/MMBtu	Base	Low	High	CO2 Tax
2020	2.46	2.50	2.95	2.72
2021	2.46	2.50	3.11	2.70
2022	2.52	2.50	3.22	2.70
2023	2.59	2.50	3.35	2.70
2024	2.65	2.50	3.47	2.74
2025	2.70	2.50	3.57	2.75
2026	2.76	2.50	3.83	2.80
2027	2.87	2.50	4.09	2.92
2028	2.98	2.50	4.37	3.04
2029	3.11	2.50	4.62	3.16
2030	3.27	2.50	4.86	3.36
2031	3.44	2.50	5.19	3.56
2032	3.60	2.50	5.40	3.72
2033	3.74	2.50	5.59	3.90
2034	3.86	2.50	5.89	4.02
2035	3.98	2.50	6.12	4.15
2036	4.10	2.50	6.30	4.22
2037	4.22	2.50	6.55	4.36
2038	4.36	2.50	6.86	4.51
2039	4.48	2.50	7.01	4.62
2040	4.61	2.50	7.34	4.75
2041	4.73	2.50	7.62	4.85
2042	4.86	2.50	7.88	4.94
2043	5.03	2.50	8.25	5.08
2044	5.20	2.50	8.35	5.24
2045	5.37	2.50	8.62	5.44
2046	5.56	2.50	9.04	5.58
2047	5.75	2.50	9.54	5.74
2048	5.94	2.50	9.91	5.88
2049	6.14	2.50	10.26	6.06
2050	6.35	2.50	10.75	6.23

### Scenario Figures

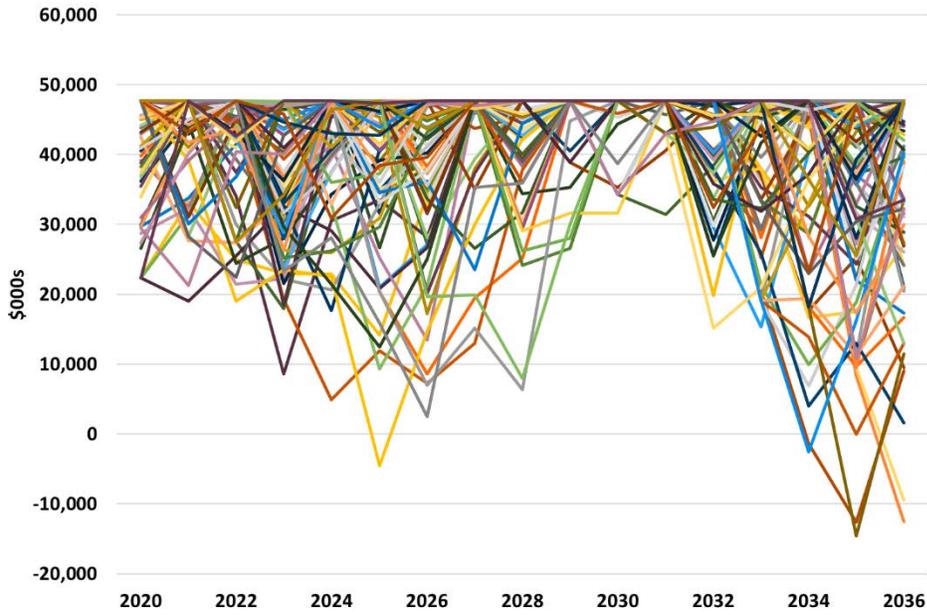
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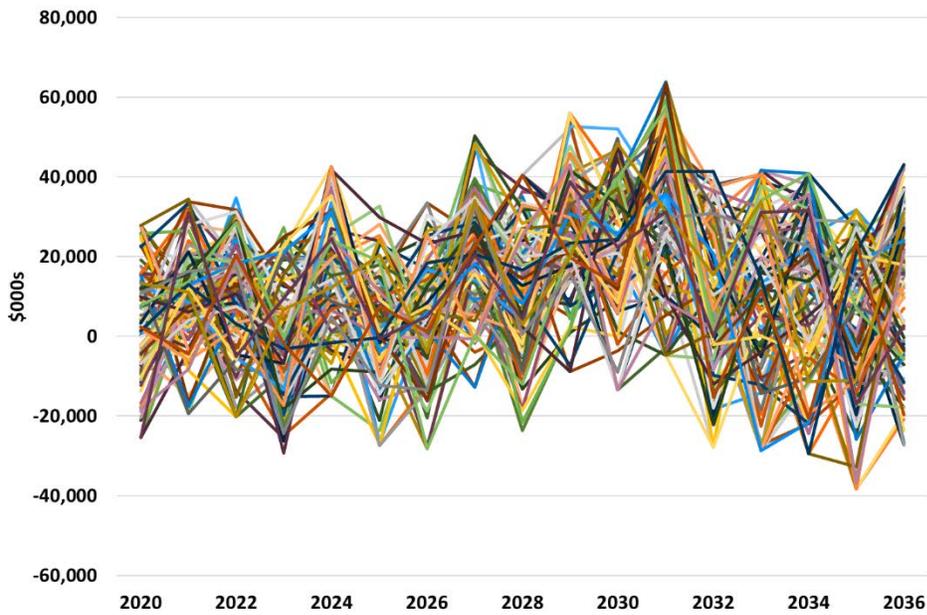
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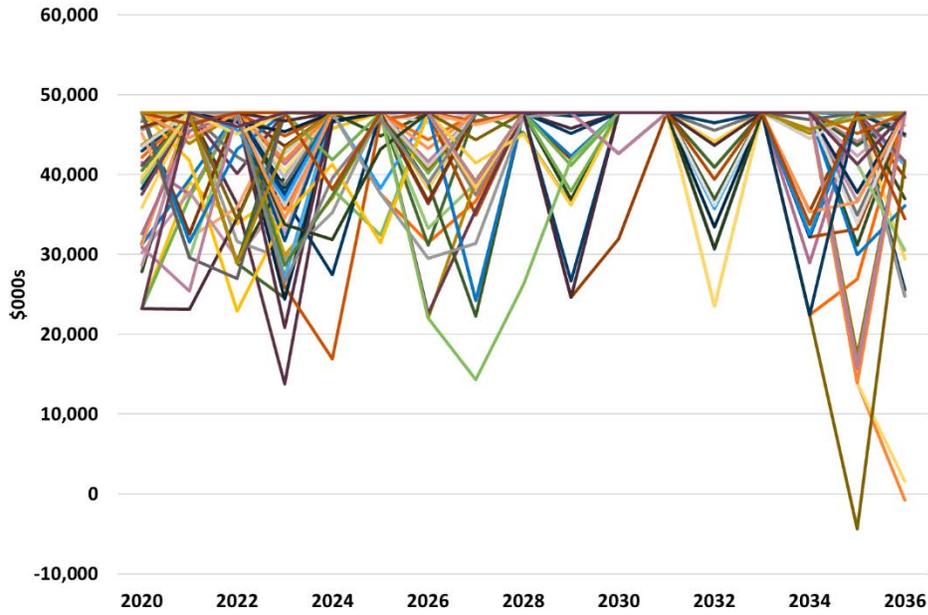
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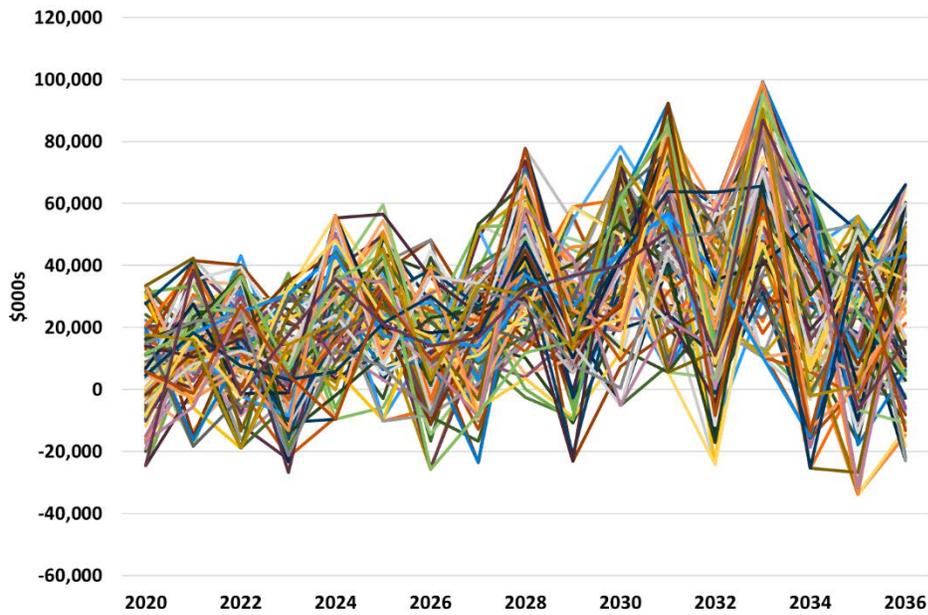
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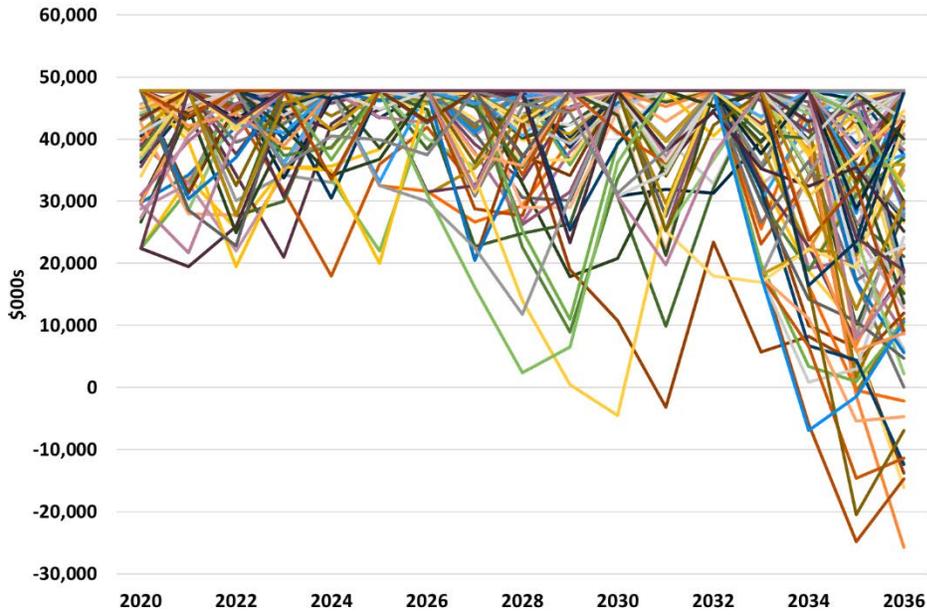
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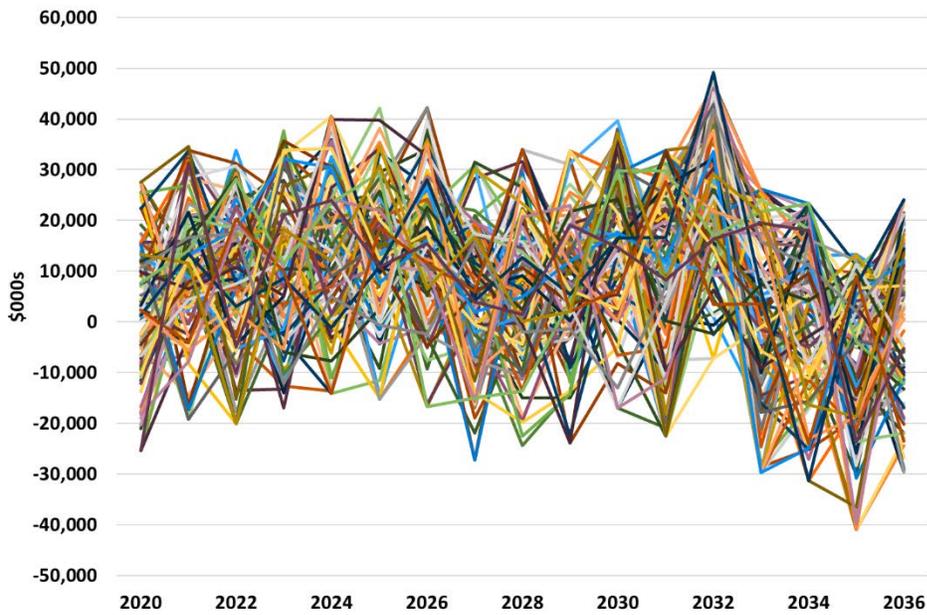
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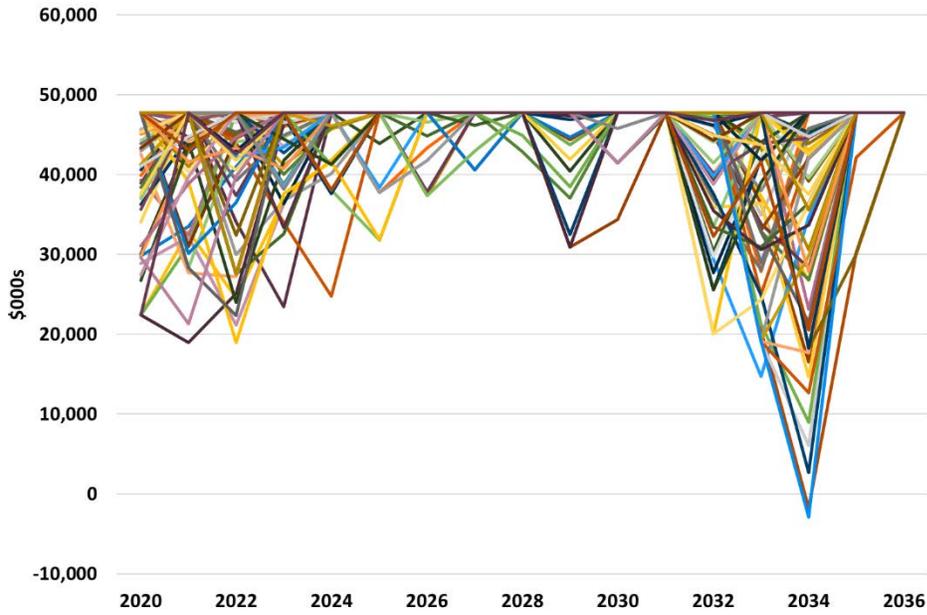
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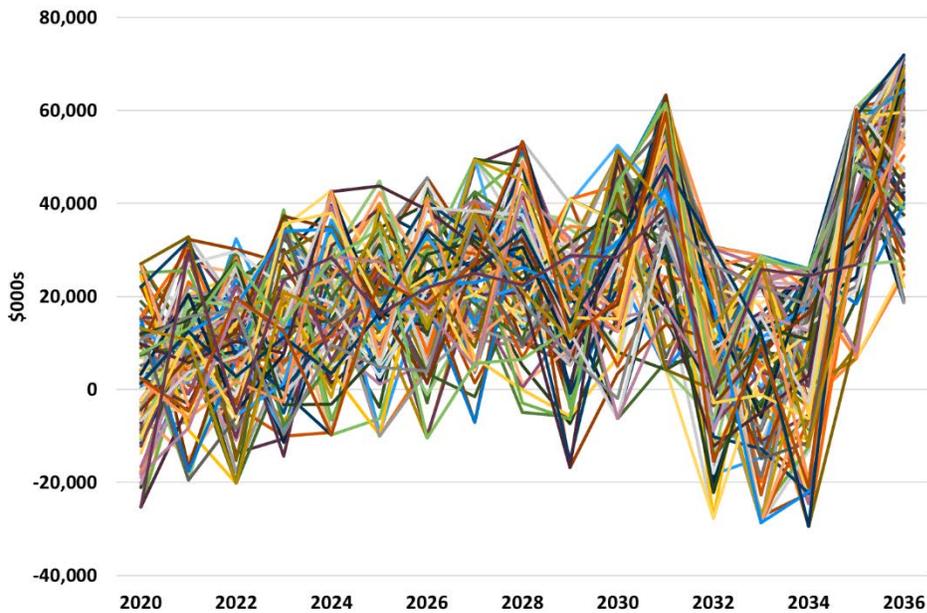
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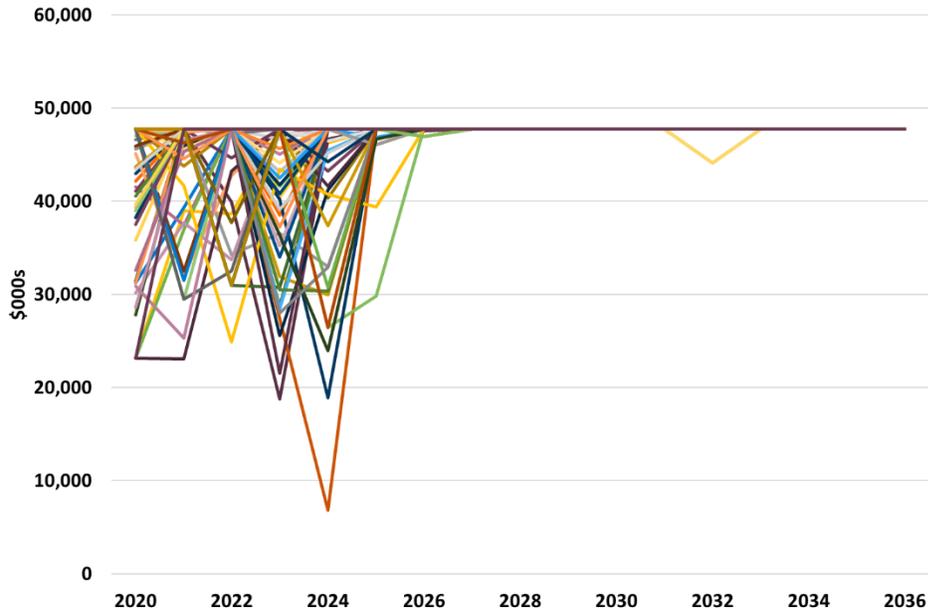
100% Renewable - Reserve



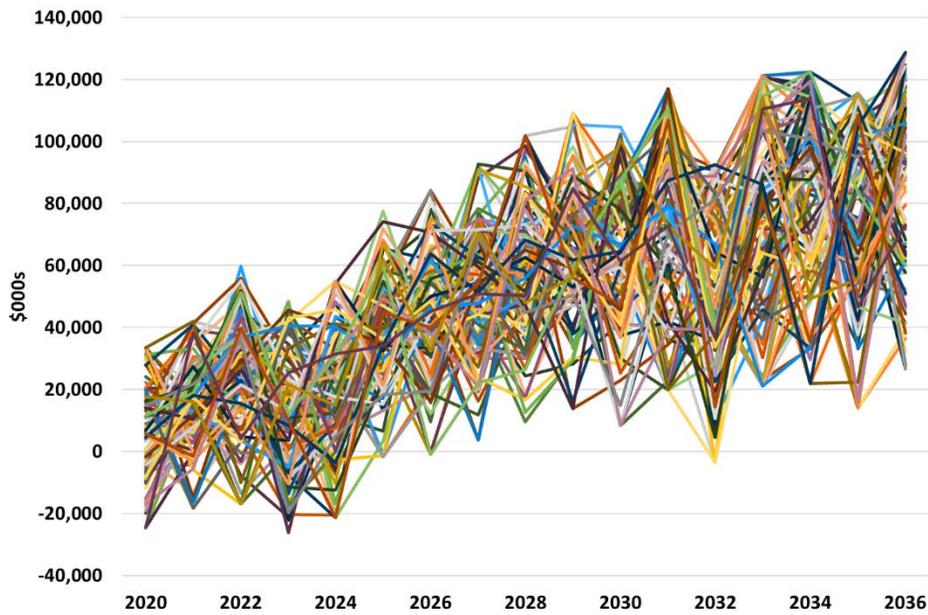
100% Renewable - FCF



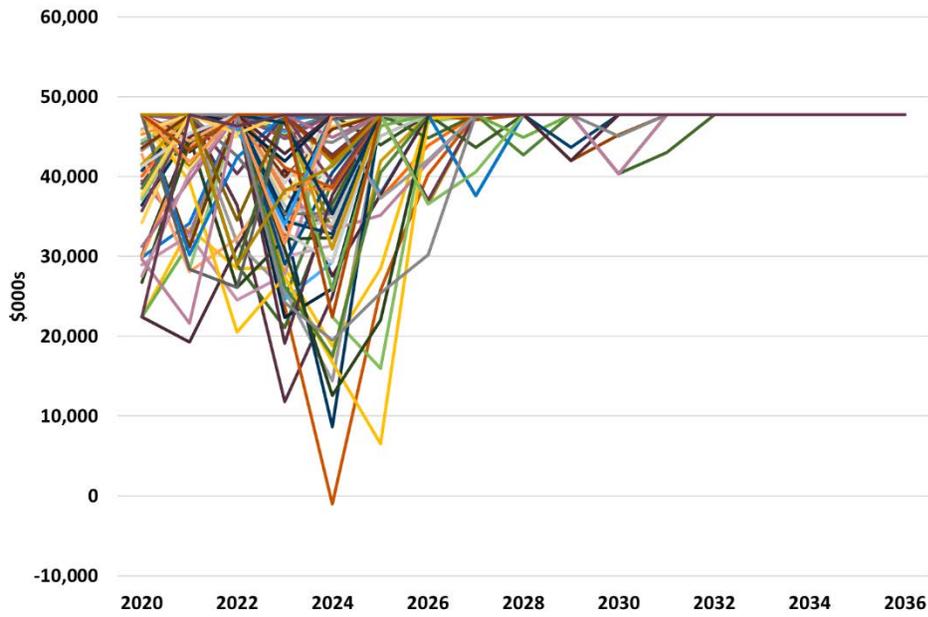
CO<sub>2</sub>-HighNG-Reserve



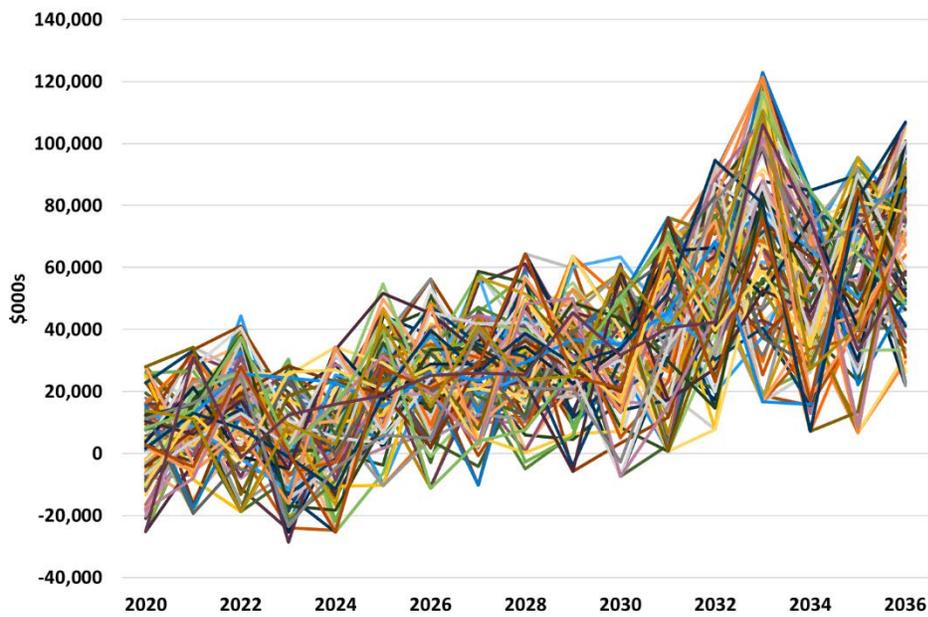
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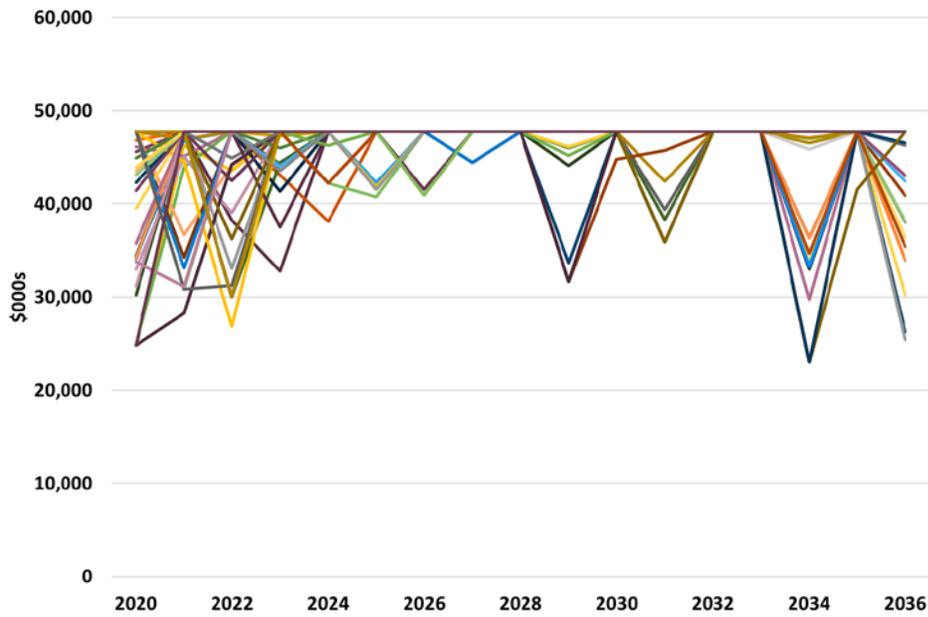
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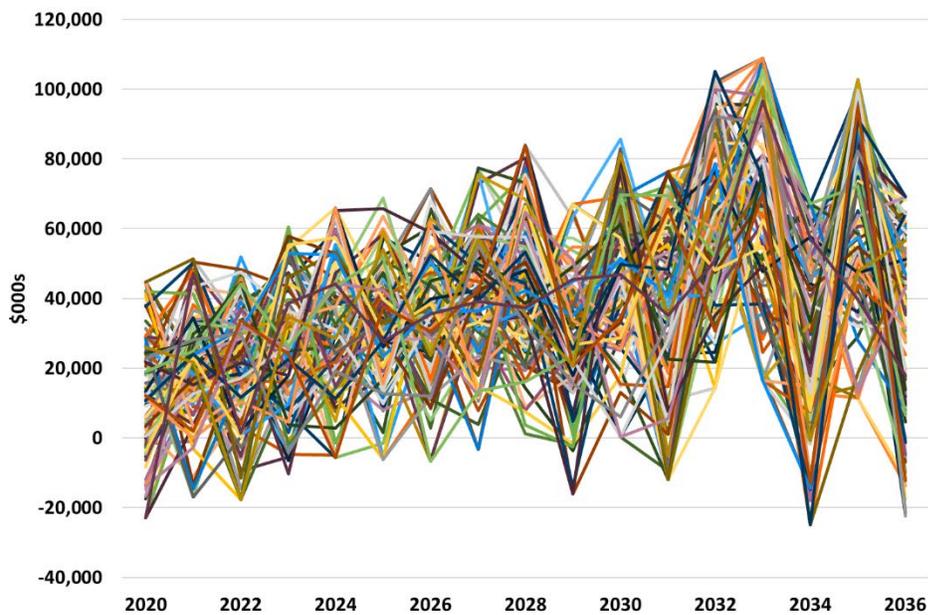
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US CO<sub>2</sub>-Reserve



US CO<sub>2</sub> - FCF



## List of Acronyms

<b>Abbreviation</b>	<b>Description</b>
A/S	Ancillary Services
AB32	Assembly Bill 32
AC	Alternating current
AEO	Annual Energy Outlook
AESO	Alberta Electric System Operator
b/d	Barrels per day
BAA	Balancing Authority Area
Bcf	Billion cubic feet
BTM	Behind the meter
CA	California
CA/MX	California/Mexico
CAD	Canadian Dollars
CAGR	Compound annual growth rate
CAISO	California Independent System Operator
CapEx	Capital expenditures
CC	Combined Cycle
CCA	Community Choice Aggregator
CFC	Carbon Free Credits
CO <sub>2</sub>	Carbon dioxide
CPI	Consumer price index
CT	Combustion Turbine
DA	Day-ahead
DC	Direct current
DEB	Default Energy Bid
DOE	Department of Energy
DSC	Debt Service Coverage (Revenue - Expenses)/Principal & Interest
DSM	Demand Side Management
EIA	Energy Information Administration
EIM	Energy Imbalance Market
EPA	Environmental Protection Agency
FCF	Free Cash Flow (Revenues - Expenses - Principal & Interest - Capital Expenditures)
FERC	Federal Energy Regulatory Commission
GDP	Gross domestic product
GHG	Greenhouse gas
GWh	Gigawatt hour
HE	Horizons Energy
IFM	Integrated Forward Market
IOU	Investor-owned utility
IPP	Independent power producer
IRP	Integrated resource plan

<b>Abbreviation</b>	<b>Description</b>
ISO	Independent system operator
ITC	Investment tax credit
JPA	Joint Exercise of Powers Agreement
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt hour
LCOE	Levelized cost of energy
LCOS	Levelized cost of storage
LMC	Liquid market center
LTRA	Long-term reliability assessment
MFP	Middle Fork Project
MFPFA	Middle Fork Project Finance Authority
MILP	Mixed Integer Linear Programming
MMbtu	One million British Thermal Units
MW	Megawatt
MWh	Megawatt hour
NDB	National database
NERC	North American Electric Reliability Corporation
NOX	Oxides of nitrogen
NPV	Net Present Value
NREL	National Renewable Energy Laboratory
NWPP	Northwest Power Pool
NYMEX	New York Mercantile Exchange
O&M	Operating and maintenance
P&I	Principal and interest
PCC	Portfolio Content Category
PCWA	Placer County Water Agency
PG&E	Pacific Gas and Electric
PPA	Purchased Power Agreement
RC	Reliability Coordination
RE	Regional Entity
REC	Renewable Energy Credit
RFI	Request for Information
RGGI	Regional Greenhouse Gas Initiative
RICE	Reciprocating Internal Combustion Engine
RMRG	Rocky Mountain Reserve Group
RPS	Renewable Portfolio Standard
RT	Real-time
RTO	Regional transmission organization
SB 100	Senate Bill 100
SC	Scheduling Coordinator
SO <sub>2</sub>	Sulfur dioxide

<b>Abbreviation</b>	<b>Description</b>
SPP	Southwest Power Pool
SRSG	Southwest Reserve Sharing Group
Tcf	Trillion cubic feet
WAPA	Western Area Power Administration
WCI	Western Climate Initiative
WECC	Western Electricity Coordinating Council
WEIS	Western Energy Imbalance Service market



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George G. Wolf  
(415) 773-5988  
ggwolfsr@orrick.com

January 8, 2020

Mr. Jim Holmes  
Chair  
Middle Fork Project Finance Authority  
144 Ferguson Road  
Auburn, CA 95603

Re: Middle Fork Project Finance Authority Series 2020 Refunding Bonds

Mr. Holmes:

This letter (the "Agreement") will set out the terms under which Orrick, Herrington & Sutcliffe LLP ("Special Tax Counsel") will serve as Special Tax Counsel in connection with your proposed issue of 2020 Refunding Bonds (the "Bonds") by the Middle Fork Project Finance Authority ("MFPFA" or "Issuer") in the principal amount of up to \$70 million to be issued during 2020, for the purpose of refunding the MFPFA's Revenue Bonds, Series 2006 (the "Project").

We are very pleased to have been selected by MFPFA to serve as Special Tax Counsel for this financing. We believe we are exactly the right firm to do so and that we can and will make a substantial contribution to a successful financing. We are also particularly excited by the prospect of working on this Project.

The following is based on our standard form of engagement letter. We apologize in advance for the boilerplate and legalese. Please let us know if there is anything you do not fully understand or if there are any changes you would like us to make in order to better tailor the terms of our engagement to the needs of MFPFA.

Special Tax Counsel shall perform the following legal services:

- (1) Analysis of eligibility of the Project for financing with tax-exempt bonds under federal tax law.
- (2) Consultation with representatives of the Issuer, Kronick, Moskovitz, Tiedemann & Girard, a Professional Corporation, both in its role as Bond Counsel and as the Issuer's general counsel, as well as the underwriters and their counsel, and others, with respect to the timing, terms and legal structure of the proposed Bonds.



Mr. Jim Holmes  
Middle Fork Project Finance Authority  
January 8, 2019  
Page 2

- (3) Preparation of federal tax-related documents to be adopted or entered into by the Issuer, including primarily the Tax Certificate and Agreement (the "Tax Documents").
- (4) Preparation of summaries of the federal tax disclosure included in the Official Statement.
- (5) Attendance at such meetings and conference calls as the Issuer may request.
- (6) Attendance at the Closing for the Bonds.
- (7) Rendering of Special Tax Counsel's customary form of federal tax opinion to the Issuer on tax-exempt status of interest on the Bonds.

Issuer also will be represented by Bond Counsel, and Bond Counsel (together with others) will be responsible for all other documents and tasks relating to the issuance of the Bonds. Issuer shall have and will rely on its own counsel as its general and day-to-day counsel. Special Tax Counsel shall circulate documents to and coordinate its services with Bond Counsel. Special Tax Counsel shall be entitled to assume that Bond Counsel and counsel to the Issuer, respectively, has reviewed all documents and matters submitted to the governing board of the Issuer for adoption or approval or to officers of Issuer for execution prior to such adoption, approval or execution.

In rendering opinions and performing legal services under the Agreement, Special Tax Counsel shall be entitled to rely on the accuracy and completeness of information provided and certifications made by, and opinions provided by counsel to, Issuer and other parties and consultants, without independent investigation or verification. Knowledge of attorneys and non-attorneys at Special Tax Counsel's firm not working directly on the Bond issue will not be imputed to Special Tax Counsel, nor shall there be any duty on the part of Special Tax Counsel to make any inquiry of such other attorneys or non-attorneys.

Special Tax Counsel services are limited to those specifically set forth above. For example, Special Tax Counsel services do not include representation of Issuer or any other party to the transaction in any litigation or other legal or administrative proceeding, audit or investigation involving any of the Bonds, the Project or any related matter. Additionally, Special Tax Counsel services do not include any responsibility for the preparation or content or dissemination of the Official Statements (other than preparation of federal tax disclosure and the opinion to be rendered by Special Tax Counsel concerning certain tax matters). Special Tax Counsel services also do not include any responsibility for compliance with federal securities or state blue sky laws, environmental, land use, real estate, insurance or similar laws or matters or federal or state tax treatment of the Issuer or the Project, or



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for title to or perfection of security interests in real or personal property. Special Tax Counsel services do not include any financial advice or analysis. Also, Special Tax Counsel services will not extend past the respective dates of issuance of the Bonds and will not, for example, include services related to rebate or other post issuance tax compliance or continuing disclosure (although Special Tax Counsel may be available for separate engagement to provide either or both such services pursuant to separate contract) or otherwise related to the Bonds, Bond proceeds or the Projects after issuance of the Bonds.

Special Tax Counsel will be paid a fixed fee for the foregoing services in the amount of \$45,000. This fee shall be payable by the Issuer upon the Closing.

This Agreement may be executed in any number of counterparts and each counterpart shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same Agreement.

If the foregoing and the accompanying Standard Terms of Engagement are acceptable to MFPFA, please so indicate by returning the enclosed copy of this letter, signed by an authorized officer, and retain an original for your files. We look forward to working with you on this matter.

ORRICK, HERRINGTON & SUTCLIFFE LLP

By George G. Wolf  
George G. Wolf

ACCEPTED AND AGREED TO:

MIDDLE FORK PROJECT FINANCE AUTHORITY

By: \_\_\_\_\_  
Jim Holmes

Title:

Date: \_\_\_\_\_



## **STANDARD TERMS OF ENGAGEMENT**

Except as modified in writing by the accompanying engagement letter or in another agreement signed by MFPFA and Orrick, the following provisions shall apply to the relationship between Orrick and MFPFA.

### **1. Middle Fork Project Finance Authority**

Our engagement is only on behalf of the person(s) or entity(s) identified in the engagement letter accompanying these Standard Terms of Engagement. Our representation of MFPFA, does not encompass any officer, director, employee, owner, principal, member or partner of or any other person affiliated with MFPFA; or any subsidiary, parent or other affiliate of MFPFA. If any of these persons or entities require the services of counsel in connection with the Project, we would be pleased to discuss whether we might be able to represent any of them, but any such representation would need its own engagement letter, and would depend on our review and disclosure to all concerned of any conflicts of interest that may arise in connection with any such concurrent representation, and on appropriate consents being obtained from MFPFA and from those seeking such additional representation.

### **2. Scope of Engagement**

The scope of Orrick's representation of MFPFA is limited to the specific Project identified in the accompanying engagement letter, and such additional matters as MFPFA and Orrick may in their mutual discretion agree to from time to time. In each case, Orrick's agreement to any expansion of the scope of its representation of MFPFA will be subject, among other things, to such additional conflict checks, waivers, retainers, approvals and other arrangements as Orrick may in its professional judgment deem necessary or appropriate in the circumstances. Except as otherwise expressly provided in any written engagement letter (or a written amendment of a prior engagement letter) between Orrick and MFPFA entered into in connection with such expansion of the scope of Orrick's representation, the agreement reflected in these Standard Terms of Engagement, and in the accompanying engagement letter, applies to Orrick's current representation of MFPFA and to any subsequent matters that Orrick agrees to undertake on MFPFA's behalf.

### **3. Waiver of Future Conflicts of Interest**

MFPFA acknowledges that Orrick regularly performs legal services for many private and public entities in connection with a wide variety of matters. For example, Orrick has represented, is representing or may in the future represent other public entities, underwriters, trustees, rating agencies, insurers, credit enhancement providers, lenders, contractors, suppliers, financial and other consultants/advisors, accountants, investment providers/brokers, providers/brokers of derivative products and others who may have a role or interest in the Bond financing or that may be involved with or adverse to MFPFA in this or some other matter, including one or more of the underwriters. Orrick agrees not to represent any such entity in connection with the Bond financing, during the term of this Agreement, without the consent of MFPFA, except possibly with respect to investment or derivative products where, because Orrick has assisted a number of the providers/brokers in designing



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and developing their products and provides general and transactional advice with respect to such products, it is not practical to seek specific consent in each case. Given the special, limited role of special tax counsel described above, MFPFA acknowledges that no conflict of interest exists or would exist, and waives any conflict of interest that might appear actually or potentially to exist, now or in the future, by virtue of this Agreement or any such other attorney-client relationship that Orrick may have had, have or enter into, and MFPFA specifically consents to any and all such relationships.

#### **4. Internal Communications**

The occasion might arise for us, at our own expense, to consult regarding our engagement for MFPFA with our own counsel (e.g., our Chief Legal Officer, other firm lawyers working with our Chief Legal Officer who do not perform work for MFPFA on the Project, or our own outside counsel). To the extent that we are addressing our own rights or responsibilities, a conflict of interest might be deemed to exist between Orrick and MFPFA as to such consultation or resulting communications, particularly if a dispute were ever to arise between Orrick and MFPFA regarding the Project. A condition of this engagement is that MFPFA hereby consents to such consultation occurring, and waives any claim of conflict of interest based on such consultation or resulting communications that could otherwise disqualify us from continuing to represent MFPFA or from acting in our own behalf, even if such consultation or communications might be deemed adverse to the interests of MFPFA. MFPFA acknowledges and agrees that any such consulting and communications are protected by our own attorney-client privilege from disclosure to MFPFA.

#### **5. Responsibilities of Attorney and MFPFA**

We will provide to MFPFA legal counsel and assistance in accordance with the accompanying engagement letter. MFPFA will not look to or rely upon Orrick for any investment, accounting, financial or other non-legal advice, including without limitation any advice regarding the character or credit of any person with whom MFPFA may be dealing. Although we will at times communicate with MFPFA by e-mail, letter, or other written form, we may provide much of our counsel and assistance in telephone conversations and meetings with MFPFA. If MFPFA ever wishes for us to confirm any oral advice in writing, please let us know.

For us to represent MFPFA effectively, we need MFPFA to provide us with complete and candid information regarding the subject matter of the Project, to keep us informed of relevant developments, to make decisions necessary for us to fulfill our responsibilities in the Project and otherwise to provide to us MFPFA's reasonable assistance and cooperation.

We have a duty of confidentiality to MFPFA and each of our other clients. We take this duty very seriously and, except to the extent permitted by the applicable rules of professional conduct, we will not disclose any confidential information of MFPFA to any other client or person. Similarly, we



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cannot disclose to MFPFA the confidences of any other client even when such information relates to matters that might affect MFPFA.

**6. Termination**

MFPFA may terminate this representation at any time, with or without cause, but in the case of litigation, court approval may be necessary. Subject to the application of the applicable rules of professional responsibility, Orrick also reserves the right to withdraw, if among other things, MFPFA fails to make timely payments of any invoice, MFPFA fails to cooperate or follow Orrick's advice on a material matter, or any fact or circumstance arises that, in Orrick's view, renders our continuing representation unlawful or unethical, or we otherwise have the right to withdraw pursuant to applicable rules of professional responsibility. Any termination of our representation of MFPFA would be subject to such approval as may be required from any court(s) in which we are appearing on MFPFA's behalf. In the event of termination by either of us, MFPFA agrees to pay us fees and costs for work performed prior to termination, to the extent permitted by law.

**7. Date of Termination**

Orrick's representation of MFPFA will be considered terminated at the earliest of (i) MFPFA's termination of the representation, (ii) Orrick's withdrawal from the representation, or (iii) the substantial completion of Orrick's substantive work for MFPFA.

**8. File Retention and Disposition**

Once our engagement in this Project ends, we will send you a written notice advising you that this engagement has concluded. You may thereafter direct us to return, retain or discard some or all of the documents pertaining to the engagement. Orrick may charge MFPFA for the reasonable costs of retrieval, assembly, copying, storage and transfer of all files or materials in any format. If Orrick determines it appropriate to dispose of materials relating to the Project, Orrick will provide you written notice of that determination. If you do not respond to the notice within sixty (60) days, you agree and understand that any materials left with us after the engagement ends may be retained or destroyed at our discretion without further notice to you and in a manner which preserves the confidential and secret nature of their contents. If you have a Records Retention Policy in place with which outside counsel will need to comply, please advise us so that we may so inform our Records Department.

Notwithstanding the foregoing, and unless you instruct us otherwise, we will return and/or preserve any original documents provided to us by MFPFA, and any documents we know or believe you will need to retain to enforce your rights or to bring or defend claims. You should understand that "materials" include paper files as well as information in other mediums of storage including voicemail, email, printer files, copier files, facsimiles, dictation recordings, video files, and other formats. We reserve the right to make, at our expense, certain copies of all documents generated or



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Page 4

received by us in the course of our representation. When you request copies of documents from us, copies that we generate will be made at your expense. We will maintain the confidentiality of all documents throughout this process.

Our own files pertaining to the Project will be retained by the firm (as opposed to being sent to you) or destroyed. These firm files include, for example, firm administrative records, time and expense reports, personnel and staffing materials, and credit and account records. For various reasons, including the minimization of unnecessary storage expenses, we reserve the right to destroy or otherwise dispose of any documents or other materials retained by us within a reasonable time after the termination of the engagement.

#### **9. Arbitration**

Although we think it is unlikely, a dispute could arise between us regarding some aspect of the engagement and Orrick's representation of MFPFA. Any such dispute, whether a claim by MFPFA against Orrick or by Orrick against MFPFA, including claims for unpaid fees and charges, negligence, quality of services, breach of contract or fiduciary duty, fraud or any other claims relating to any aspect of the engagement and our representation of MFPFA is referred to herein as a "Dispute". If we are not able to resolve a Dispute among ourselves, MFPFA and Orrick agree to resolve such dispute through confidential binding arbitration as set forth below.

The arbitration provisions of this Section 9 shall apply to all Disputes and shall survive termination of the engagement. MFPFA understands the consequences of agreeing to binding arbitration, including giving up any constitutional or statutory rights to have the Dispute determined by a court of law or by a jury; that discovery of information in arbitration may be limited; and that the arbitration award will be final and binding.

The party wishing to initiate arbitration hereunder (the "initiating party") will deliver to the other party (the "other party") a written demand for arbitration setting forth the basis of the initiating party's claim and the dollar amount of damages sought. Once an initiating party initiates an arbitration hereunder, the initiating party and the other party will engage in a good faith, one-day non-binding mediation before a sole mediator selected from the panel of mediators of the JAMS (or its successor) before proceeding with the arbitration. Each party in the mediation will pay such party's own costs and fees, and the parties will split the fees of the mediator. The mediation will take place in the location where Orrick performed the work at issue. Orrick and MFPFA may mutually agree to extend the mediation beyond one day.

To the extent that the Dispute is not resolved through the mediation process described above, an arbitration hereunder will (i) be heard and determined by an arbitrator (who will be a retired state or federal judge with at least five years judicial experience), selected by the parties from a list of neutrals provided by JAMS, and if the parties cannot agree, by JAMS itself; (ii) take place in the city in

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Page 5

the United States where Orrick spent the most time working on the engagement; and (iii) conducted in accordance with JAMS Arbitration Rules and Procedures (or any successor rules and procedures), in effect at the time the initiating party delivers to the other party the demand for arbitration required hereunder. In determining a claim, the arbitrator will apply the laws of the State of New York. The arbitration proceedings and the award of the arbitrator will be confidential. Each party in the arbitration will pay such party's own costs and fees, and the parties will split the fees of the arbitrator. The ruling of the arbitrator will be final and binding on both parties, and no appeal may be taken. The ruling of the arbitrator may be entered and enforced as a judgment by a court of competent jurisdiction. The arbitration provisions of this Agreement may be enforced by any court of competent jurisdiction, and the party seeking enforcement shall be entitled to an award of all costs, fees and expenses, including attorneys' fees, to be paid by the party against whom enforcement is ordered.

**10. Binding Agreement**

The engagement letter and these Standard Terms of Engagement represent the entire understanding and agreement between MFPFA and Orrick with respect to the subject matter referred to herein. By signing below, MFPFA acknowledges that the engagement letter and these Standard Terms of Engagement have been carefully reviewed and their content understood and that MFPFA agrees to be bound by all of the terms and conditions. Furthermore, MFPFA acknowledges that Orrick has made no representations or guarantees to MFPFA regarding the outcome of the Project or the time necessary to complete the Project. The provisions of this letter may only be amended in writing and signed by both parties.

**11. Acceptance of Engagement Terms**

By signing below, you acknowledge and represent that you have read the engagement letter and these Standard Terms of Engagement, that you understand and agree to the terms and provisions, and that you are authorized to do so on behalf of MFPFA.

ORRICK, HERRINGTON  
& SUTCLIFFE LLP

MIDDLE FORK PROJECT FINANCE  
AUTHORITY

By:   
George G. Wolf  
Partner

By: \_\_\_\_\_  
Jim Holmes

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M E M O R A N D U M

**TO:** Middle Fork Project Finance Authority Board of Directors

**FROM:** Brett Storey, Principal Management Analyst, County of Placer

**DATE:** January 16, 2020

**RE:** French Meadows Forest Restoration Project 2019 Operations

**CC:** Executive Director and Secretary of Middle Fork Project Finance Authority

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**RECOMMENDATION**

Information item only, no action required.

**BACKGROUND**

Staff has been moving forward to implement the French Meadows Forest Restoration Project (Project). Much of this 22,000-acre area is part of the Middle Fork Project. The Project has a projected four years of on-the-ground forest treatments managed by Placer County and several years of prescribed fire managed by the Tahoe National Forest (TNF).

The Project was developed by a diverse partnership, including the U.S. Forest Service, Placer County, Placer County Water Agency, The Nature Conservancy, the Sierra Nevada Conservancy, and the Sierra Nevada Research Institute at UC Merced, with American River Conservancy on 6,000 adjacent private acres and funded separately. Current funding for public lands, including partner funding, grant agreements and timber/biomass revenue agreements for the first four years of operations, has been obtained. The Middle Fork Project Finance Authority budget has an approved \$1,000,000 towards the completion of this Project.

**DISCUSSION**

Placer County staff has hired and monitored local companies to implement the Project, under the supervision of the TNF, during 2019. Over 1,000 acres of forest were treated and 18 miles of road improvements were performed to stabilize erosion conditions, making the recreational experience more appealing and to ultimately protect the region from the risk of catastrophic wildfire.



**French Meadows Forest Restoration Project**

**2019 Operations Review**

**2020 Operations Approval**

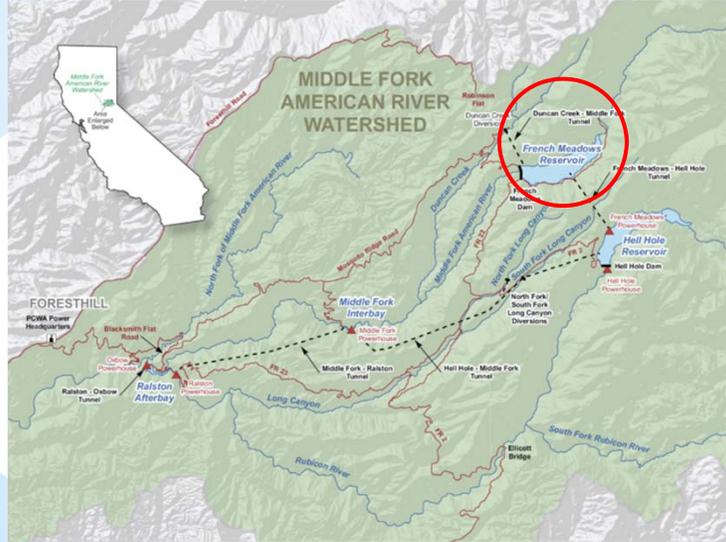
**Placer County/USFS Partnership**

**French Meadows Forest Restoration Project**

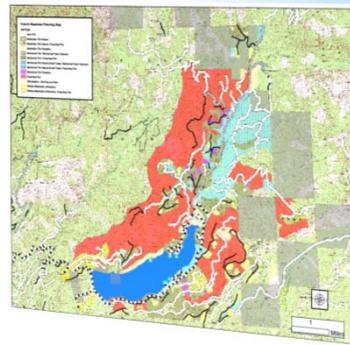
- BOS approved a Master Stewardship Agreement (MSA) with TNF in 2018
- BOS approved a Supplemental Project Agreement (SPA) with TNF in 2018 including nearly \$2,000,000 USFS in funding for the French Meadows Project
- BOS approved MSA SPA Modification #1 in 2019 to authorize Placer County to perform operations
- BOS approved multiple contracts for 2019 Operations
- Todays Update on 2019 Operations
- Todays request is to approve MSA SPA Modification #3 for 2020 operations



## French Meadows Location



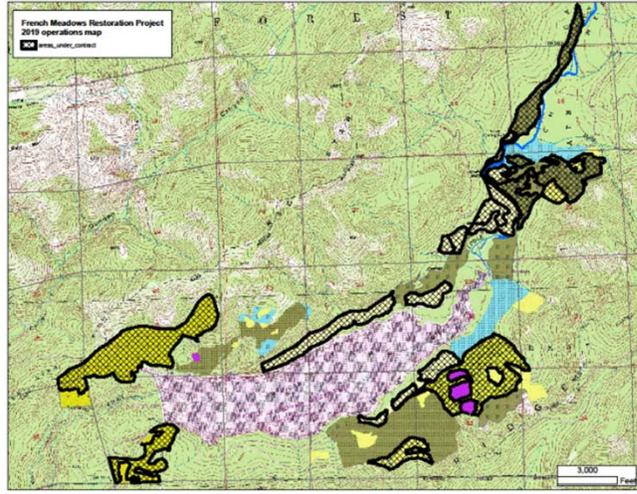
## French Meadows Project



- 22,000 acres Public land at top of watershed
- Partnership including Placer County, Placer County Water Agency (PCWA), United States Forest Service (USFS), The Nature Conservancy, the Sierra Nevada Conservancy and UC Merced.
- Four years on-the-ground mechanical/hand work via a Master Stewardship Agreement (MSA) with Tahoe National Forest another several years of prescribed fire.
- Remove and utilize Timber & Biomass
- Supports another 10,000 acres of private checkerboard land undergoing thinning operations.

## French Meadows Project 2019 Update

- 1,066 acres forest treatments
- Over 3 Million Board Feet of Timber
- Over 4,000 green tons of biomass
- 18 miles of road improvements
- Over 80 local contractors performing work
- Project layout, tree marking, and road engineering performed by another 10 local contractors



## French Meadows Project 2019 Update

- Expenditures \$3,600,000 Forest Treatments, Road Work, Support Work
- Funding Sources \$3,600,000

\$1,715,000	CalFire Grant
\$650,500	SNC Grant
\$409,500	Timber Revenues
\$388,500	USFS Funds
\$242,500	NFWF Grant
\$142,500	Beverage Companies
\$51,500	MFP Funds

## French Meadows Project 2019 Update

Over 440 acres of Mechanical Thinning & Hazard Tree Removal: *Robinson Enterprises*

Over 3 Million Board Feet of Timber

Over \$1,000,000 Revenue from Timber



## French Meadows Project 2019 Update

Over 300 Acres of Mastication: *Volcano Creek Enterprises*



## French Meadows Project 2019 Update

Over 225 acres of Hand Thinning & Chipping: Red Mountain Resources & California Conservation Corps



## French Meadows Project 2019 Update

Over 100 acres of Recreational Campground Thinning: Tree MD



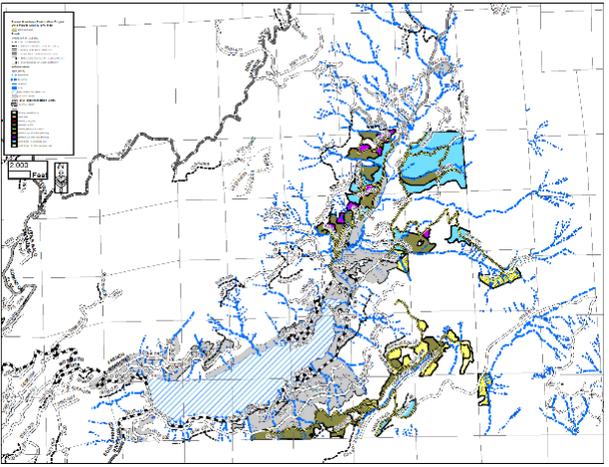
Over 4,000 acres  
Planned and Marked:  
Mason Bruce & Girard



## French Meadows Project 2020 SPA Modification #3

**SPA Overview of Operations**

- Over 3,800 acres forest treatments
- Finish 2019 acres
- Reforestation acres
- Water study control treatments
- 9 Million Board Feet of Timber
- 15,000 green tons of biomass



The map displays a complex network of waterways and land parcels. Different colors and patterns represent various project components: blue for water features, green for forest treatments, and yellow for reforestation areas. A legend in the top-left corner provides a key for the symbols and colors used on the map.

## French Meadows Project 2020

- Expenditures \$6,000,000 Forest Treatments, Road Work, Support Work
- Funding Sources \$6,000,000
 

\$3,500,000	Timber Revenues
\$1,208,000	CalFire Grant
\$375,000	MFP Funds
\$370,000	USFS Funds
\$349,500	SNC Grant
\$150,000	Biomass Revenues
\$47,500	Beverage Companies (possible to reach \$400,000)