



COUNTY OF PLACER
Community Development/Resource Agency

PLANNING

Michael J. Johnson, AICP
Agency Director

MEMORANDUM

TO: Honorable Board of Supervisors

FROM: Michael J. Johnson
CDRA Director
By Brett Storey, Senior Management Analyst

DATE: September 14, 2010

SUBJECT: Resolution regarding Placer County Water Agency reinvestment of revenues for hydroelectric facilities.

ACTION REQUESTED:

Authorize the Board Chairman to sign a Resolution to allow Placer County Water Agency to reinvest the revenues from the construction of three small hydroelectric facilities back into the western water system.

BACKGROUND:

The Board of Directors at Placer County Water Agency (PCWA), in a letter dated March 19, 2010, has requested that the Placer County Board of Supervisors adopt a resolution that would allow PCWA to reinvest the revenues from three small hydroelectric facilities sites back into the western water system. PCWA has determined, based upon preliminary engineering studies, that there may be several economically feasible sites to develop small hydro generation using water currently flowing in its existing canal and treated water systems. However, as the Board of Supervisors is aware, the use of any revenue from the sale of any PCWA electrical energy facility is controlled by Section 7.3 of the Agency Act, which provides:

Sec. 7.3. 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 board of supervisors may, in connection with any of the foregoing conduct public hearings. Such hearings shall be declared by a resolution specifying the purpose and the day, hour, and place where all interested persons may appear and be heard. Such resolution shall be published in the agency pursuant to Section 6063 of the Government Code in a newspaper of general circulation in the agency. The hearing may be adjourned from time to time at the discretion of the board of supervisors, and at its conclusion the board of supervisors shall declare its decision.

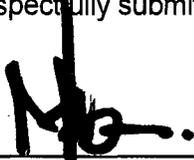
If any such small hydroelectric projects on PCWA's water system are developed, PCWA has concluded that, in fairness to its water customers who bear the costs of the water systems, revenues received from such a project should be reinvested back into the water system.

PCWA would like to move forward at this time with development of three economically feasible small hydroelectric generation sites. These sites include the Lincoln Metering/Hydroelectric Station, the Gold Run Pipeline Hydroelectric Station, and the Secret Town Pipeline Hydroelectric Station. A paper is attached containing additional information on these three sites.

FISCAL IMPACT:

There is no fiscal impact for the County in this action.

Respectfully submitted,



MICHAEL J. JOHNSON, AICP
Director of Planning

Attached to this report for the Board's information/consideration are:

ATTACHMENTS:

- Attachment 1: PCWA Directors request memorandum
- Attachment 2: PCWA Small Hydro Feasibility memorandum
- Attachment 3: Authorizing Resolution

cc: Holly Heinzen, Assistant CEO
Scott Finley, Supervising Deputy County Counsel



PLACER COUNTY WATER AGENCY
SINCE 1957
BOARD OF DIRECTORS BUSINESS CENTER
Gray Allen, District 1 144 Ferguson Road
Alex Ferreira, District 2 MAIL
Lowell Jarvis, District 3 P.O. Box 6570
Mike Lee, District 4 Auburn, CA 95604
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March 19, 2010
File No. 09017E

Board of Supervisors
County of Placer
Placer County Administrative Center
175 Fulweiler Avenue
Auburn, CA 95603

Dear Board Members:

The Agency has determined, based upon preliminary engineering studies, that there may be several economically feasible sites to develop small hydro generation using water currently flowing in its existing canal and treated water systems. However, as the Board of Supervisors is aware, the use of any revenue from the sale of any Agency electrical energy facility is controlled by Section 7.3 of the Agency Act, which provides:

Sec. 7.3. 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 board of supervisors may, in connection with any of the foregoing conduct public hearings. Such hearings shall be declared by a resolution specifying the purpose and the day, hour, and place where all interested persons may appear and be heard. Such resolution shall be published in the agency pursuant to Section 6063 of the Government Code in a newspaper of general circulation in the agency. The hearing may be adjourned from time to time at the discretion of the board of supervisors, and at its conclusion the board of supervisors shall declare its decision.

When section 7.3 was added to the Agency Act it was presumably intended to apply to the Middle Fork Project in recognition of the investment and stewardship of the County Board of Supervisors, who supported formation of the Placer County Water Agency and served as its Board

of Directors from 1957 to 1974 during the development, financing and construction of the MFP. Small hydro installations were not likely a consideration when the PCWA Act was amended in 1974.

If any such small hydro projects on the Agency's water system are developed, the Agency believes in fairness to its water customers who bear the costs of the water systems, revenues received from such a project should be reinvested back into the water system.

The Agency would like to move forward at this time with development of three economically feasible small hydro generation sites. These sites include the Lincoln Metering/Hydroelectric Station, the Gold Run Pipeline Hydroelectric Station, and the Secret Town Pipeline Hydroelectric Station. A paper is attached containing additional information on these three sites.

We would like your Board to consider adopting a resolution similar to the attached approving the Agency entering into contracts for the sale of electrical energy generated by these three small hydro installations on the Agency's water system facilities and using the revenues from such systems to reinvest back into the water system. As other small hydro generation sites are considered and determined to be feasible, the Agency will request future resolutions. This draft resolution was patterned after your Resolution No. 81-193 in which you consented to the Agency entering into a contract to sell PG&E the power produced by the Agency's planned small hydro facility at the bottom of the Hell Hole Dam. Our Board and staff and consultants are available to meet with you to discuss this matter at any convenient time.

Sincerely,

PLACER COUNTY WATER AGENCY

A handwritten signature in cursive script, appearing to read "Alex Ferreira", is written over a solid horizontal line.

Alex Ferreira, Chairman
Board of Directors

Development of Small Hydroelectric Facilities at PCWA March 2010

Placer County Water Agency (PCWA) is presently evaluating the feasibility of constructing small hydroelectric facilities within its service zones. During 2009, PCWA completed an *Energy and Greenhouse Gas Benchmark Study*. In addition to quantifying PCWA's greenhouse gas emissions for entry into the California Climate Action Registry, the study also discussed opportunities for PCWA to develop renewable energy such as small hydroelectric.

PCWA has completed a detailed investigation of three potential sites that appear economically feasible. A short description of each site is provided below.

Lincoln Metering and Hydroelectric Station

The proposed *Lincoln Metering and Hydroelectric Station* would generate power from the PCWA treated water system. The Lincoln Metering Station site is located within the City of Lincoln, north of PCWA's Sunset Water Treatment Plant. The metering station site (APN 337-012-002-000) is owned by PCWA and is approximately 0.58 acres. The metering station is contained within a building that is approximately 35-feet by 45-feet. All treated water deliveries to the City of Lincoln are presently made at this location. Water enters the metering station at high pressure and flows through pressure reducing valves to lower the pressure before being delivered to the City of Lincoln's water storage tank directly adjacent to the site.

The project would include construction of a by-pass pipeline and two in-line hydro power turbine generators. The new hydroelectric equipment is proposed to be housed within a new structure to be constructed as an expansion to the existing metering station. The new structure would measure approximately 25-feet by 30-feet.

Power from the new equipment is proposed to be sold to PG&E under the provisions of a Power Purchase Agreement. There is an existing 21 KV PG&E powerline adjacent to the site that has sufficient capacity to receive power from the new generation facilities.

Gold Run Pipeline Hydroelectric Station

The proposed *Gold Run Pipeline Hydroelectric Station* would generate power from PCWA's untreated water conveyance system. PCWA's Boardman Canal conveys water to PCWA customers and water treatment plants and begins within the Alta area and extends to the Rocklin area. Within the Gold Run area, the Boardman Canal flows within a 36-inch diameter pipeline. Significant portions of this pipeline have been replaced in recent years to improve reliability of the canal system. PCWA plans to replace additional portions of this pipeline in the near future as part of the Gold Run Phase IV Pipeline Replacement Project. This project would include the replacement of approximately 6,000 feet of

pipeline and relocate a Pressure Sustaining Valve (PSV) station to a new site at the downstream end of the Gold Run Pipeline.

The proposed Gold Run Pipeline Hydroelectric Station would be located at the downstream end of the Gold Run Pipeline at the PSV site. The project would include construction of a by-pass pipeline and in-line hydro power turbine at this location. The new hydro power equipment would be housed within a new structure to be built at the site. The proposed location of the PSV and hydroelectric station is on a 0.38-acre parcel of land currently owned by Placer County. Acquisition of this land will be necessary prior to obtaining FERC approval of the proposed hydroelectric station.

After Boardman Canal water flows through the new hydro power turbine, it would be discharged back into the Boardman Canal where it would continue to flow downstream.

Power from the new equipment is proposed to be sold to PG&E under the provisions of a Power Purchase Agreement. Power would be fed into PG&E's system through a 2,000-foot powerline extension that would be installed as part of the Gold Run Phase IV Pipeline Replacement Project that is needed to provide power service to the PSV station.

Secret Town Pipeline Hydroelectric Station

The proposed Secret Town Pipeline Hydroelectric Station would generate power from PCWA's untreated water conveyance system. Within the Secret Town area, PCWA's Boardman Canal flows within 3,200-feet of recently replaced 36-inch diameter pipeline. At the downstream end of this pipeline, it is proposed to construct a hydroelectric station. After Boardman Canal water flows through the new hydro power turbine, it would be discharged back into the Boardman Canal where it would continue to flow downstream. The proposed project would also require improvements upstream of the hydropower station. The inlet of the 36-inch pipeline would need to be widened and deepened, require screening and a weir storage system to ensure clear flow and constant pressure for the hydroelectric station.

The site for the proposed Secret Town Hydroelectric Station is located adjacent to an existing unpaved access road on privately owned property (APN 063-150-008) and adjacent to the Union Pacific Railroad right of way. Acquisition of this land would be necessary prior to obtaining FERC approval of the proposed hydroelectric station.

Power from the new equipment is proposed to be sold to PG&E under the provisions of a Power Purchase Agreement. Power would be fed into PG&E's system through a 1,400-foot underground powerline extension that would be constructed as part of this project. The proposed powerline extension would be owned and maintained by PG&E.

Before the Board of Supervisors County of Placer, State of California

In the matter of:
Approval of Placer County Water
Agency's Sale of Electrical Energy
from Three Small Hydroelectric
Facilities on the Agency's Western
Water System and the Expenditure
of Revenues therefrom

Reso. No.: _____

The following Resolution was duly passed by the Board of Supervisors of the County of
Placer at a regular meeting held September 14, 2010, by the following vote on roll call:

Ayes:

Noes:

Absent:

Signed and approved by me after its passage.

Chairman, Board of Supervisors

Kirk Uhler

Attest:
Clerk of said Board.

Ann Holman

BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF THE COUNTY OF PLACER,
STATE OF CALIFORNIA, AS FOLLOWS:

WHEREAS, this Board has received a letter dated March 19, 2010, from the Placer County Water Agency setting forth PCWA's desire to investigate the feasibility of building three small hydroelectric facilities on the PCWA western water system facilities and the use of revenues received from any such power facilities to be reinvested back into the western water system; and

WHEREAS, pursuant to Section 7.3 of the Placer County Water Agency Act, contracts for the sale of electrical energy and the expenditure of revenues to be received therefrom must be approved by this Board in order to be effective; and

WHEREAS, this Board has considered PCWA's request for approval of three contracts to sell electrical energy from such small hydroelectric power projects and the use of the revenues received therefrom to first pay back funds advanced for the cost of the small hydroelectric power projects, establish reserve accounts and any additional funds will be reinvested back into the western water system; and

WHEREAS, this Board has considered this matter and now wishes to give its formal approval for the sale of electrical energy from three small hydroelectric power projects and to PCWA's proposed use of the revenues from such projects;

NOW, THEREFORE BE IT RESOLVED, the Placer County Board of Supervisors, in accordance with Section 7.3 of the Placer County Water Agency Act, hereby approves the sale of electrical energy from the following three small power projects constructed on Placer County Water Agency's western water system and the use of revenue received from such projects to be reinvested back into the western water system:

- a) Lincoln Metering/Hydroelectric Station
- b) Gold Run Pipeline Hydroelectric Station
- c) Secret Town Pipeline Hydroelectric Station