



mni BioEnergy, LLC

A BioEnergy Future

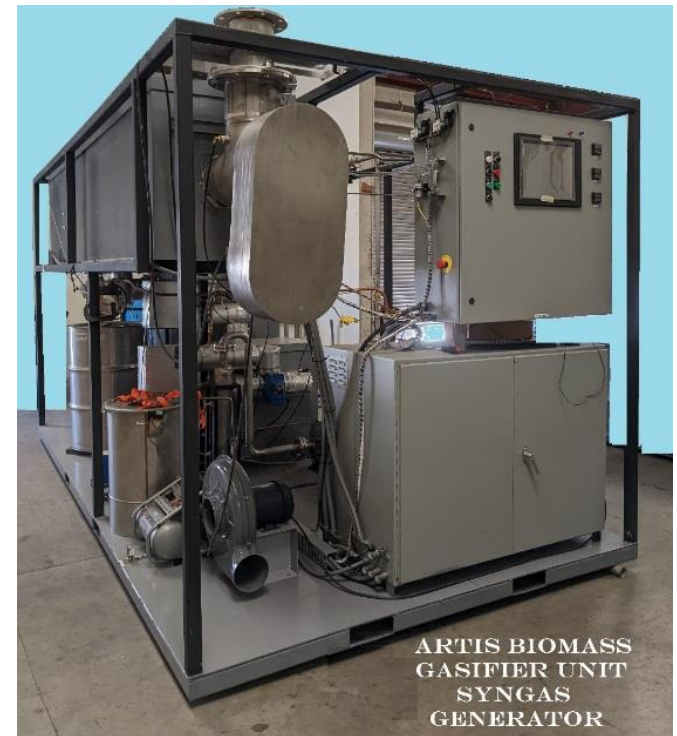
About Omni BioEnergy

- Omni is a product and services company focused on next generation waste to clean energy (Bioenergy) systems for the production of energy, alternative fuels and biochar
- Omni's Artis system is a lower cost, highly flexible, proprietary biomass gasifier with no particulate emissions
- Omni will co-develop projects and provide partner sales programs to renewable energy project developers and owner-operators
 - Design, engineering and system integration support
 - Permitting, agency approvals and construction
 - Ongoing product and operational support services
- Omni's applicable markets include biomass sourced from agriculture, forestry and municipal waste management
- The Omni Team has the science, technology and business acumen to transform the bioenergy market



Omni BioEnergy Artis Gasifier

- Scales from 200 kW net to 1000 kW net
- Non-pressurized, sealed system – no emissions
- Safety features
 - Automated Fault detection
 - Automatic Shutdown
- Fully programmable
 - Feed speed and temperature
 - Optional steam injection
 - Feedstock changes
 - Time of day operation
- Designed to operate 24/7 with minimal scheduled down time – 1 FTE
- Biochar auger discharge to separate handling system
- Modular design can be integrated with third party solutions

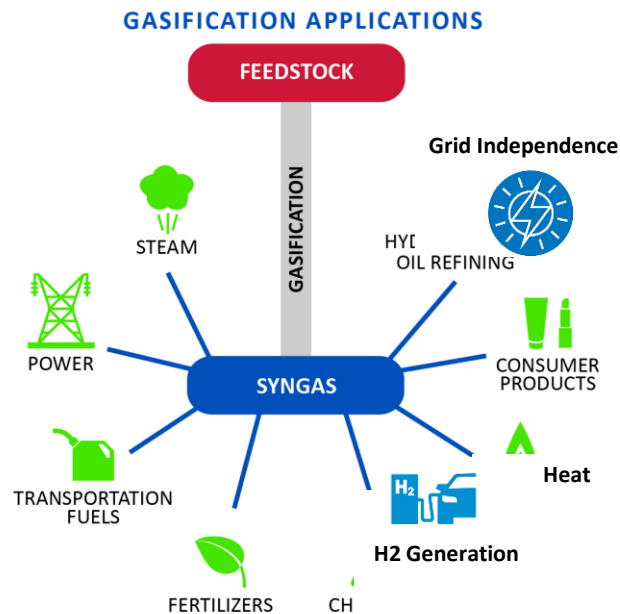


Artis Gasifier: Designed Efficiency

- Highly configurable to customer requirements for energy and Biochar output
- 90-95% Biomass agnostic
- 10-25% Biomass moisture content
- More efficient and cost effective
 - Integrated, consolidated system
 - Smaller footprint
 - Simplified operations system
 - Touchscreen graphical user interface
- Dramatically reduced tar, virtually no particulates
- Produces a clean, high-quality Syngas (40-50% Hydrogen)
- Remote monitoring and configuration
- Can be deployed grid interconnected or grid independent



Bioenergy Process / Alternatives



- Energy cost savings
- Resilience from a weak electric grid and PSPS
- Establish value proposition for low value Ag waste
 - Waste to electricity
 - Biochar
 - Clean, green fuels
- Green solution for forest fuels reduction
 - Reduce or eliminate open slash burn
 - Reduce emissions from lop and scatter
- Greenhouse gas reduction
- Greenhouse jobs
- **Carbon sequestration**
- Biochar revenue potential
- On Demand power
 - Solution for reaching 100% renewable goals



200 kW Artis Specifications

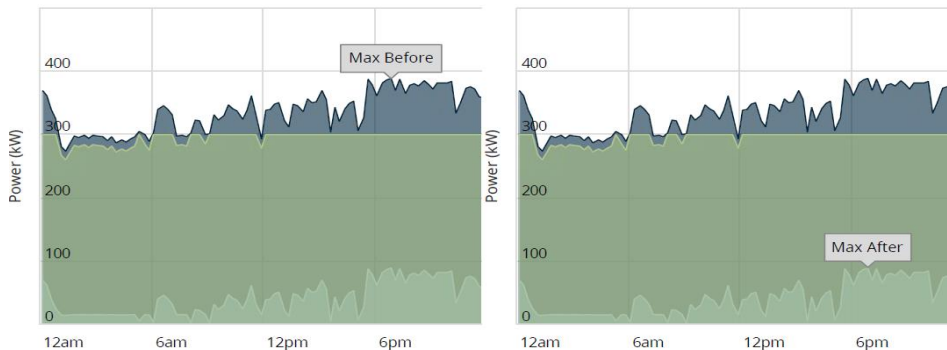
Pro Forma Assumptions

System Size	200 - Net kW AC
Annual Production	1,580,000 kilowatt hours
Availability	90%
Applicable Tariff	NEM, NEMA, BioMAT, Non-Export
Annual Feedstock Per 24 hours Biochar Ratio	1,200 Metric Tons 3.66 TPD 15-25%
Annual Biochar	140+ Tons
Jobs Created	1-3 FTE in operation

- Synthesis Gas (Average of Feedstocks)
 - ~44% Hydrogen
 - ~45% Carbon Monoxide
 - ~6% Methane
 - ~3% CO₂
 - ~2% H₂O
 - BDL: Nitrogen, Chlorine, Sulfur and C₂+
(BDL: Below Discoverable Limits)

- Carbon footprint of biomass power plants is generally neutral as determined by US EPA and DoE

- CARB states, fuels made from diverted organic waste are carbon negative due to methane capture and reduced fossil fuel use



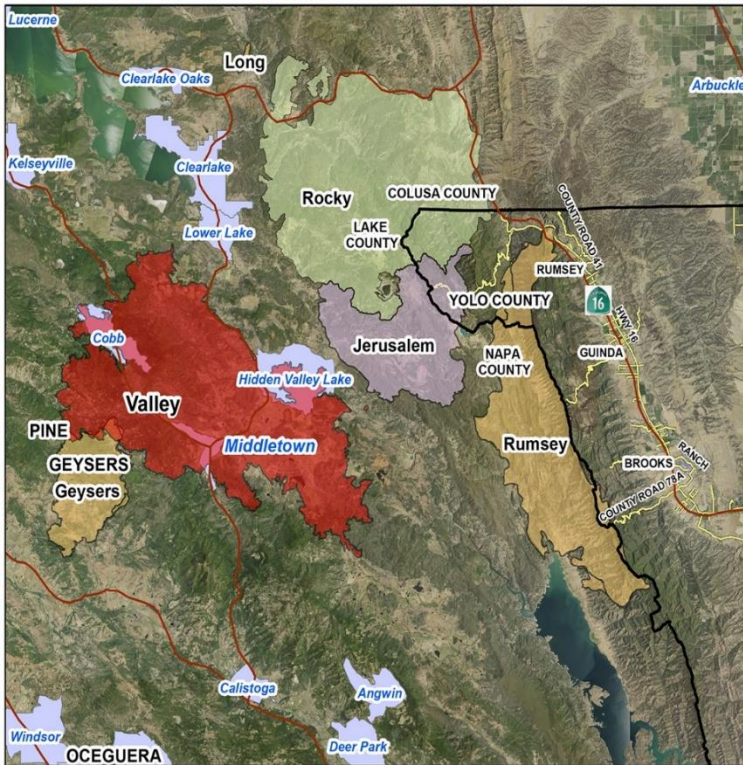
System Efficiency / Air Emissions

- 95 to 99% efficient conversion of organic waste biomass to syngas and biochar (varies by biomass type)
- Zero gasifier emissions during normal operation after startup; virtually no particulate matter in Syngas
- Prime mover efficiency and emissions vary by vendor selection, for example:
 - Microturbine estimated 29% electrical efficiency - NO_x Emissions @ 15% res. O₂ < 9 ppmvd (18 mg/m³); Exhaust Mass Flow 1.3 kg/s (2.9 lbm/s)
 - ICE Genset: 35% electrical efficiency - NO_x Emissions @ 15% res. O₂ < 91 ppm
 - Genset 2: Untreated NO_x 1.1 grams/bhp-hr Treated 0.12 grams/bhp-hr
 - CHP efficiency combined 60-80%

Operational History

- Emissions testing with ICE genset approved by Illinois EPA
- 3 successful pilot deployments in predecessor Co: *Illinois Department of Agriculture
*City of Naperville, DOE (Argonne National Labs, Capstone) *US Army, Defense Life Sciences
- Omni BioEnergy
 - Bench scale test gasifier
 - Artis 100 deployed for commercial demonstration near Lodi, CA summer 2023
 - Multiple MW in design and development in California
- Scotts Valley Energy Corporation, energy economic development entity for the Scotts Valley Band of Pomo Indians
 - 200 kW forest BioMAT plant in construction
 - 400 kW Ag private PPA in design and permitting
 - 5 MW development pipeline in California

Commercial Project - Scotts Valley Indian Energy



- Highway 29 and Red Hill Road, Kelseyville, CA
- BioMAT PPA approved and PG&E Interconnection Agreement in place
- 200 kW unit for Biomass to electricity generation and testing various fuel sources
- Letter agreements in place to source forestry management woody biomass
- In construction phase
- Additional site under contract in Sutter County and others in planning in the Upper Lake, Nice, Middletown, Lakeport and Clearlake areas of Lake County

Site Qualification Criteria for Discussion



Proximity to
Feedstock Fuel

Site Access for
Deliveries

Grid Quality /
Electric Demand

Open Space /
Water Source

- Site control / 20-year term
- 2,000 s.f. to 30,000 s.f.
- Steel structure / concrete pad
- PPA or fuel offtake
- Feedstock strategy

Thank You

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