

BIOMASS HEAT RECOVERY

GENERATE UP TO 150 KWE FROM BOILER PROCESS HEAT



ElectraTherm's Organic Rankine Cycle (ORC) units offer Combined Heat and Power (CHP) solutions - providing a combination of usable thermal and clean power. The ORC unit uses the hot water generated from a biomass boiler as an input medium to power the system. The ability to reliably generate electricity from hot water between the ranges of 160-300°F* makes the system ideal for small-scale applications or those with an inconsistent flow. Operators enjoy cheaper leveled costs of electricity, increased efficiency, and reduced dependence on the grid.

- // Provides up to 150 kWe and thermal up to 180°F.
- // Reduces fuel consumption and carbon footprint.
- // Easy installation with remote operation.
- // Global support from BITZER.
- // Simple, robust design with minimal footprint.
- // Reliable and sustainable baseload power.
- // Minimal operating costs and maximum up-time.
- // Qualifies for CHP and WHP incentives.**

FACTORS THAT MAKE A SUCCESSFUL INSTALLATION

HEAT

Our systems utilize heat sources above 170°F converting the heat energy into electricity. Higher temperatures typically have higher power output and therefore a faster return on investment.

RUN HOURS

Some units run all the time, and some are only used intermittently. The more time an application is operational, the faster the return on investment.

VALUE OF POWER

The power generated by the Active Cooler can be sold to the grid, or offset power used onsite. This gives the Active Cooler a revenue stream. The higher the value of power, the faster the return on investment.

*Higher temperature heat sources require an additional heat exchanger.

**Reach out to a team member to identify what incentive(s) your project may qualify for.

CASE STUDIES



Combined Heat and Power
Power Output: 35 kWe
Hot Water Temperature: 195°F

In collaboration with Wisewood Energy, ElectraTherm installed a biomass heat recovery system designed for CHP in California. The ORC provides heat for a nearby public health building as well as the boiler site in addition to generating electricity for profit.



Combined Heat and Power
Power Output: 60 kWe
Hot Water Temperature: 240°F
Hot Water Flow Rate: 240 GPM

The first 6500 series to be installed in the United Kingdom, the unit has ran 24/7 minus maintenance days, generating upwards of 2,000,000 kWe and saving the owner approximately \$90,000 USD annually.



Power Generation
Power Output: 130 kWe (2 units)
Hot Water Temperature: 240°F
Hot Water Flow Rate: 160 GPM

ElectraTherm's UK distributor, Novalux, installed two 1.2 MW boilers with two Power+ Generator 4400 series. The site consumes approximately 4,000 tons of biomass waste and exports \$110,000 USD worth of clean electricity per year.

ABOUT ELECTRATHERM

ElectraTherm is a global leader in Organic Rankine Cycle (ORC) heat recovery. ElectraTherm has shipped over 100 ORC units to over 13 countries, clocking over 2,000,000 hours of operation. Supported by a group of dedicated partners and backed by BITZER, the world's largest independent manufacturer of refrigeration compressors, the ElectraTherm team continues to develop industry-leading waste heat recovery systems that are good for business and the planet.

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