

# GEOHERMAL HEAT RECOVERY

## GENERATE UP TO 150 KWE FROM MICRO-GEOHERMAL



ElectraTherm's Organic Rankine Cycle (ORC) solutions convert sources of low-temperature "micro" geothermal heat into clean electricity. A simple, robust, space-effective, and cost-effective design along with the ability to reliably generate clean electricity from sources as low as 160°F (70°C) makes the system ideal for many geothermal sources previously deemed unfeasible for power generation such as near-surface hot springs, co-produced fluids, and repurposed oil / gas wells.



- // Provides up to 150 kWe.
- // Developed in cooperation with the DOE.
- // 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 various clean energy incentives.\*

## FACTORS THAT MAKE A SUCCESSFUL INSTALLATION

### HEAT

Our systems utilize heat sources above 160°F (70°C) 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.

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

# CASE STUDIES



## **Geothermal Brine**

**Power Output: 50 kWe**

**Hot Water Temperature: 221°F (105°C)**

**Hot Water Flow Rate: 156 gpm (10 l/s)**

Commissioned on a geothermal well in Romania, the ORC unit produces 50 kWe - making it an ideal small-scale geothermal "power plant". The system provides electricity for export in addition to the district heating system.



## **Geothermal Steam**

**Power Output: 60 kWe**

**Hot Water Temperature: 230°F (110°C)**

**Hot Water Flow Rate: 190 gpm (12 l/s)**

This geothermal application utilizes a community geothermal district heating system. The excess heat captured by the ElectraTherm unit has enough thermal energy to produce a continuous 60 kW of clean electricity.



## **Geothermal Brine - Mining**

**Power Output: 55 kWe**

**Hot Water Temperature: 230 °F (110°C)**

**Hot Water Flow Rate: 151 gpm (9.5 l/s)**

In collaboration with the U.S. Department of Energy, ElectraTherm installed a fully-packaged ORC system designed for unattended operation at a remote mine in Nevada.

## **ABOUT ELECTRATHERM**

ElectraTherm is a global leader in Organic Rankine Cycle (ORC) heat recovery. ElectraTherm has shipped over 100 ORC units to over 14 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.

### **ElectraTherm By BITZER Group**

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