

**PRODUCT OVERVIEW****POWER+ GENERATOR**

UP TO 125 KILOWATTS OF CLEAN ELECTRICITY FROM LOW TEMPERATURE WASTE HEAT

IDEAL FOR FLUID HEAT SOURCES UP TO 150°C | GASEOUS HEAT SOURCES ABOVE 150°C

**INCREASES REVENUE. INCREASES EFFICIENCY. DECREASES EMISSIONS.**

**100+****UNITS SOLD WORLDWIDE****1,500,000+****OPERATING HOURS****40,000+****TONS OF CARBON SAVED**

# OVERVIEW

Utilizing the Organic Rankine Cycle (ORC) and proprietary technologies, the Power+ Generator converts sources of low temperature heat and waste heat - such as jacket water and exhaust gaseses - into clean electricity. Customers benefit from increased efficiency as well as reduced electrical and cooling costs. The results amount to significant energy savings and emission reductions, allowing businesses to achieve a more circular economy and reach their sustainability goals.



## SOURCES OF LOW TEMPERATURE HEAT

MORE ABUNDANT THAN YOU THOUGHT.



## NEW GENERATION OF ORC

### SIMPLE. RELIABLE. PROFITABLE. SUSTAINABLE.

With the integration of BITZER's twin screw expander, the Power+ Generator represents a dramatic shift from previous radial and axial ORC technologies and offers several advantages for small-scale waste heat recovery applications.

A simple, scalable, and robust design makes the system more cost efficient while greatly enhancing reliability. The twin screw expander also operates at much lower speeds - leading to significantly less wear and tear as well as noise reduction. The new design also tolerates "wet" dual phase flow - enabling the system to generate power even with disruptions in both temperature and flow.

# REFERENCES

## CASE STUDY Remote Power Generation

- // 1.1 MW diesel power plant + three Power+ Generators
- // 8,500 operating hours per year
- // Net output (recognized): 1,700 MWh per year
- // 1,000+ tons of carbon saved per year

## ANNUAL SAVINGS

- \$204,000 per year at \$0.12 per kWh
- \$255,000 per year at \$0.15 per kWh



## CASE STUDY Feed-in Tariff Incentives

- // District heating system + ten Power+ Generators
- // 8,200 operating hours per year
- // Net output (optimal): 4,100 MWh per year

## ANNUAL EARNINGS

- €331,526 per year at €80.86 per MWh

"The addition of the Power+ Generator increases overall site efficiency and reduces our use of fossil fuels. ORC technology is critical to maximizing the site's operations, and ElectraTherm is the most proven, robust ORC technology available."

Summerseat & Bradley Fold  
Garden Center, UK

## CASE Study Flare Elimination

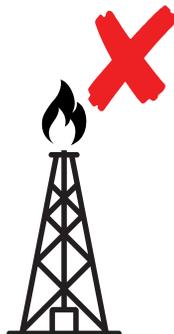
The Power+ Generator allows for the capture of natural gases - generating profitable power while reducing or even eliminating onsite flaring. In collaboration with Gulf Coast Green Energy at a North Dakote HESS oil well, natural gas was used to fuel an industrial boiler that powered the Power+ Generator.

"Our experience with the Power+ has been successful, generating power over a wide range of operating conditions. We look forward to learning more about ORC technology through our ongoing work with ElectraTherm's Power+."

University of Louisiana

## EMISSION FINDINGS

- // Carbon monoxide decreased by 98%
- // Nitrogen oxide decreased by 48%
- // VOCs decreased by 93%



"In addition to increasing plant efficiency, the power generated meets feed-in tariff requirements by the utility. The value of the Power+ provides a significant revenue stream for 20 years."

Jenbacher Biogas Plant, Austria

# TWO MODELS FOR ANY APPLICATION

The Power+ Generator currently comes in two distinct models. The 4400B and the 6500B, both with a high temperature variation. Technical specifications can be found at [www.electratherm.com](http://www.electratherm.com).



Weight: 3,290 kg / 7,245 lbs

## 4400B & 4400B+

**Generate up to 75 kW of clean electricity**

// The 4400B is ideal for lower temperature waste heat.\*  
**Up to 240°F or 116°C**

// The 4400B+ is ideal for higher temperature waste heat.\*  
**Up to 302°F or 150°C**



Weight: 4,273 kg / 9,420 lbs

## 6500B & 6500B+

**Generate up to 125 kW of clean electricity**

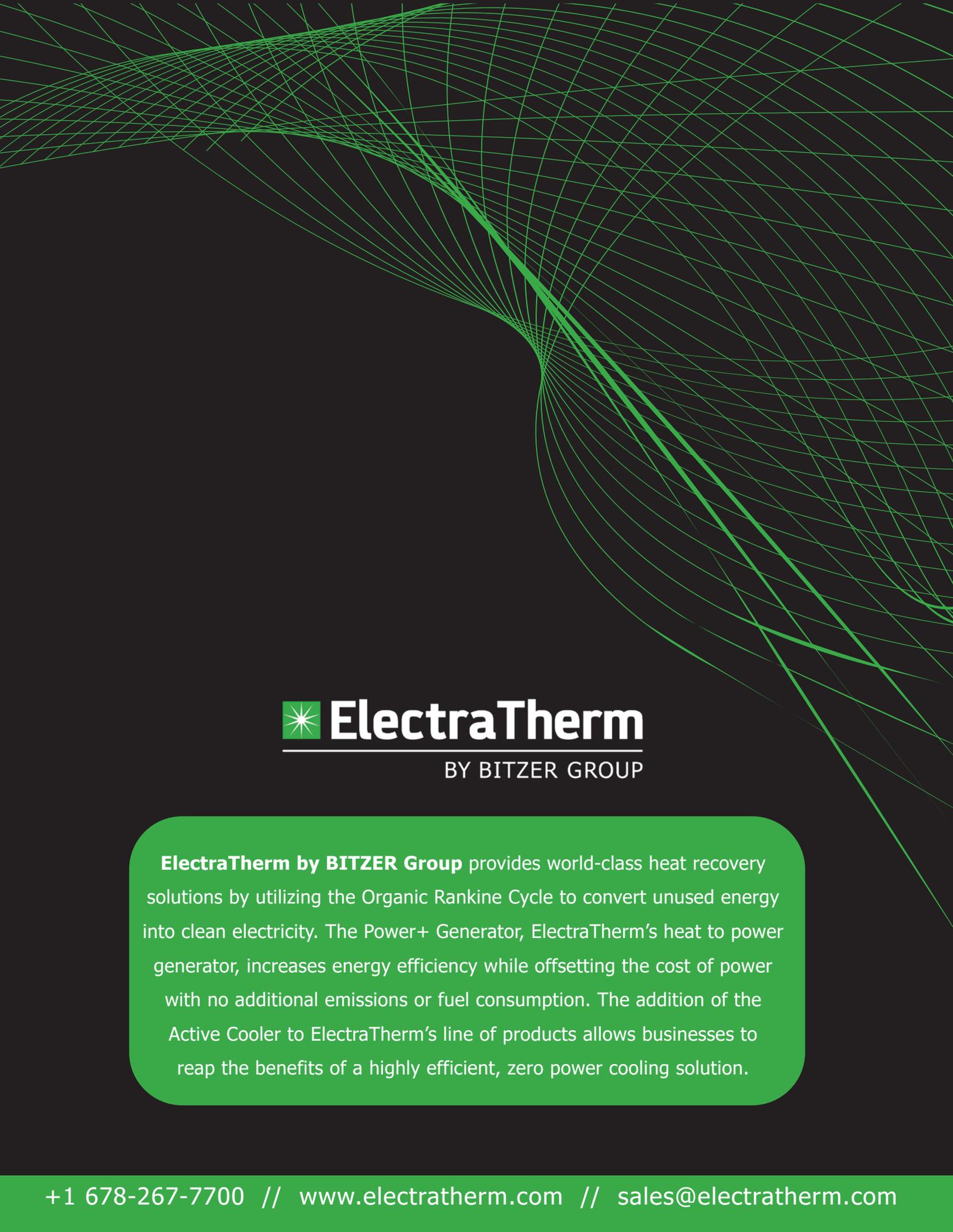
// The 6500B is ideal for lower temperature waste heat.\*  
**Up to 270°F or 132°C**

// The 6500B+ is ideal for higher temperature waste heat.\*  
**Up to 302°F or 150°C**

\*Gaseous heat sources above 150°C can be utilized with the addition of a heat exchanger.

## BENEFIT HIGHLIGHTS

- // System packages available for applications without existing infrastructure
- // Zero emissions or fossil fuel requirements
- // Increase energy efficiency while reducing footprint
- // Reduce cooling load by converting waste heat into clean electricity, possible to replace your radiator
- // CHP capable - multiple uses and income streams
- // 20-year design life amounts to attractive ROI
- // Ease of installation, operation, and maintenance
- // Automated control system with remote monitoring
- // Simple - flexible, robust, scalable design
- // Next generation ORC brings increased reliability and performance



 **ElectraTherm**  
BY BITZER GROUP

**ElectraTherm by BITZER Group** provides world-class heat recovery solutions by utilizing the Organic Rankine Cycle to convert unused energy into clean electricity. The Power+ Generator, ElectraTherm's heat to power generator, increases energy efficiency while offsetting the cost of power with no additional emissions or fuel consumption. The addition of the Active Cooler to ElectraTherm's line of products allows businesses to reap the benefits of a highly efficient, zero power cooling solution.