

Success Story 2

First market-oriented user of ENN;
Be the first daredevil user;

Zhejiang Lanxi Best

CHP (Cogeneration of Heat (Steam) + Power) (CHP))

Project Overview / 

Lanxi Best Aluminum Products Co., Ltd. is the first market user of ENN's micro gas turbine which is significant for ENN commercial demonstration. The customer is located at District B, Nvbu Industrial Park, Lanxi, Zhejiang Province, and mainly engages in manufacturing aluminum oxide electroplated products such as lighting and furniture fittings. The original energy supply system was a coal-fired boiler. Due to problems such as increasing pressure from the Environmental Protection Authority, small power capacity and low steam pressure, the customer decided to build a CHP energy supply system.

According to the customer's energy demand, ENN engineers performed many studies and proposed a set of micro gas turbines combined with a waste heat boiler electric steam cogeneration for energy solution.

After two years of operation, the system has not only provided all the steam needs and partial electricity for production, but also helped the customer to change coal to natural gas to reduce emissions. Furthermore, the ENN system has prevented transformers overload and saved the customer's funding for transformer expansion. The intelligent control system of the micro-gas turbine, such as, one-button startup, automatic operation, and remote monitoring, turbines have created more value for the customer.



Applicable Industries

- Electroplating



System Components

- one E135 micro-gas turbine + one 1t waste heat boiler



Delivery Time

- March, 2018



Location

- Lanxi, Zhejiang Prov.

▶ ORIGINAL ENERGY SOLUTION /

 1t coal-fired boiler

 Averaged steam load at 0.85 t/h

 Averaged electrical load: 400 kW

▶ CUSTOMER'S PAIN SPOTS /

- 1 Demand to use natural gas instead of coal due to increasing pressure from Environmental Protection Authority;
- 2 Designed personnel is required to operate the boiler and increased labor cost
- 3 Occasional power failures affect normal production;
- 4 Risk of electrical overload.

▶ SOLUTION /

- The CHP system with one E135 micro gas turbine and one 0.85ton waste heat boiler is used to provide clean energy with minimum emissions;
- One-button startup and remote monitoring are applied to reduce labor cost;
- Can be isolated or connected to the grid, guarantee continue power supply;
- Realize power expansion without replacing transformers and increasing capacity cost.

▶ CUSTOMER BENEFITS /

01 Tiered energy utilization



System energy efficiency: **86%**

02 Convenient and worry-free energy



Contract energy management model

Reduced labor costs: RMB **40,000**/year

Eliminate the customer's self-built boiler investment: RMB **300,000**.

03 Environmental compliance



NOX<25ppm, without environmental concerns

04 Reduced energy cost



Annual power supply: **470,000** kWh

Electricity cost reduction: RMB **47,000**/year;

Power capacity expanded : **135** kVA;

Annual steam supply :**3,366**t

Save capacity fee: RMB **68,000**/year;