

## Successful Story 1

# Pilot Project of First E390 Micro Gas Turbine

## Customer's energy cost decreased by **7.9%**

## Zhejiang Yongkang Kaifeng Group Co., Ltd.

Distributed Energy Project (Combined heat and power plants (CHP))

Project Overview / 

ENN's first E390 micro gas turbine CHP pilot project entered commercial operation on Nov. 18 2019 at Yongkang City, Zhejiang Province for Zhejiang Yongkang Kaifeng Group Co.(ZYKG). Ltd. ZYKG's main products are automobile inner tubes, electric vehicle and ATV tires. The original energy supply system is a natural gas fired steam boiler with evaporation capacity of 4 ton/hour. This system had high labor and management costs due to environmental issues and operating at low end of the capacity.

Based on the customer's energy demands, ENN engineers performed many studies and proposed a CHP solution with a micro gas turbine and waste heat boiler energy recovery devise. The original 4 ton gas boiler is still kept as a peak load unit. ENN helped the customer save energy and money.

So far, ENN system installed at the customer site has not only stably provided all the needs of the steam and electricity for production, but also helped customers solve the problem of environmental emissions. ENN power system integrated electric and steam supply at same time and combined with the original 4-ton boiler for peak load. The system improves operational efficiency, achieves more profits, and significantly reduces customers' energy consumption.



### Applicable Industries

- Weighing apparatus
- Reflective material
- Rubber tire



### System Components

- one E390 microgas turbine + one 2ton/hour waste heat boiler



### Delivery Time




- Nov. 18, 2019



### Location

- Yongkang City, Zhejiang Province

## ► ORIGINAL ENERGY SOLUTION /

-  4 ton gas steam boiler
-  Averaged steam capacity 2 ton/hour
-  Averaged electricity consumption: 400 kW

## ► CUSTOMER'S PAIN SPOTS /

- 1 High fuel consumption and poor economy due to operating at low-load
- 2 High cost of labor and management due to boiler operation & maintenance by full-time personnel.

## ► SOLUTION /

- The CHP system used one E390 micro gas turbine and one 2ton waste heat boiler, combined with one 4ton gas boiler for peak load operation Improving the equipment's operational efficiency and achieving more profits.
- One-button startup and remote monitoring controls are designed to reduce labor cost.

## ► BENEFITS FOR CUSTOMER /

### 01 Tiered energy utilization



System energy efficiency reached to **85%**

### 02 Easy to operate



EMC(Energy Management with Contract) service mode;

No need to deal with labor cost, facility maintenance, safety inspection and environmental protection issues in the boiler room;

### 03 Reduced energy bills



Annual electricity supply: **1.802** million kWh

Power cost reduced: **81,300** RMB/year;

Annual steam supply : **9,705** ton

Steam cost reduced: **264,900** RMB/year;