



ENEL GREEN  
POWER  
BAGNORE, ITALY



## 01 CLIENT BRIEF

Enel Green Power was looking to exploit the untapped potential of an existing geothermal source in Tuscany. Enel Green Power needed a compact binary plant integrated with a 20 MW single flash plant already in place.

## 02 THE SOLUTION

EXERGY's solution was a fully integrated cycle system that, thanks to its technological innovation, offers the possibility to use a geothermal source until now unsuitable due to low temperature of the primary fluid (100°C - 180°C).

## 03 THE RESULT

EXERGY has provided superior energy efficiency compared to traditional solutions and the plant now produces electricity to approximately 2,500 households thus preventing the consumption of 1,600 tons of oil equivalent per year.

**CLIENT NAME**

ENEL GREEN POWER

**PLANT NAME**

BAGNORE III BINARY

**PLANT LOCATION**

BAGNORE, TUSCANY, ITALY

**DATE OF IMPLEMENTATION**

DECEMBER 2012

**PLANT SIZE**

1 MWe

**APPLICATION**

GEOHERMAL

**MODEL USED**

GEX 110

**FLOW OF GEOTHERMAL STEAM**

12 t/h

**PRESSURE OF GEOTHERMAL STEAM**

5 BAR

**TEMPERATURE OF GEOTHERMAL STEAM**

150°C

**TYPE OF FLUID**

STEAM

**ELECTRICAL GENERATION GROSS**

1,000 kW<sub>e</sub>

**EFFICIENCY GROSS**

12.5%

**CONDENSING SYSTEM**

COOLING WATER FROM COOLING TOWERS  
(25°C)

**GENERATOR VOLTAGE**

6 kV

**INSTALLATION**

OUTDOOR