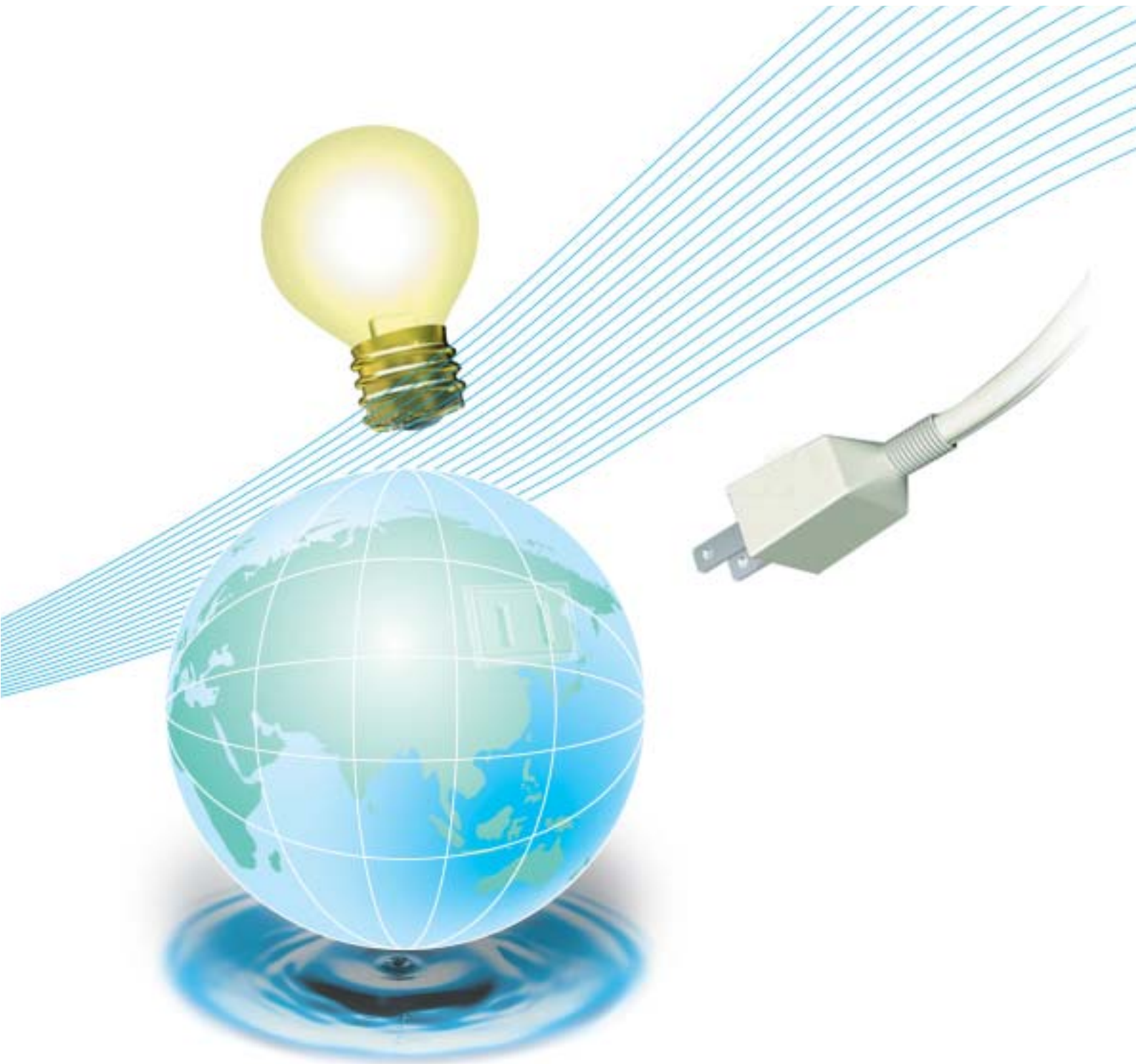


# Fuji Geothermal Binary System

## 2,000kW



# Environmentally Friendly Fuji Binary System

The binary system (Organic Rankine Cycle) utilizes a secondary working fluid with a low boiling point, and generates electricity from low temperature geothermal resources that have not been considered as suitable for power generation.

## Features of Fuji binary system

### Environmentally friendly

- Reinjection of full amount of geothermal fluid to avoid geothermal gas emission
- Use of normal pentane as a working fluid against global warming
- Application of air cooled condenser (no need of cooling water)

### High reliability

- Standardization of specification and design
- Application of experienced geothermal flash technologies
- Stable operation of the demonstration plant

## Total solution of geothermal energy

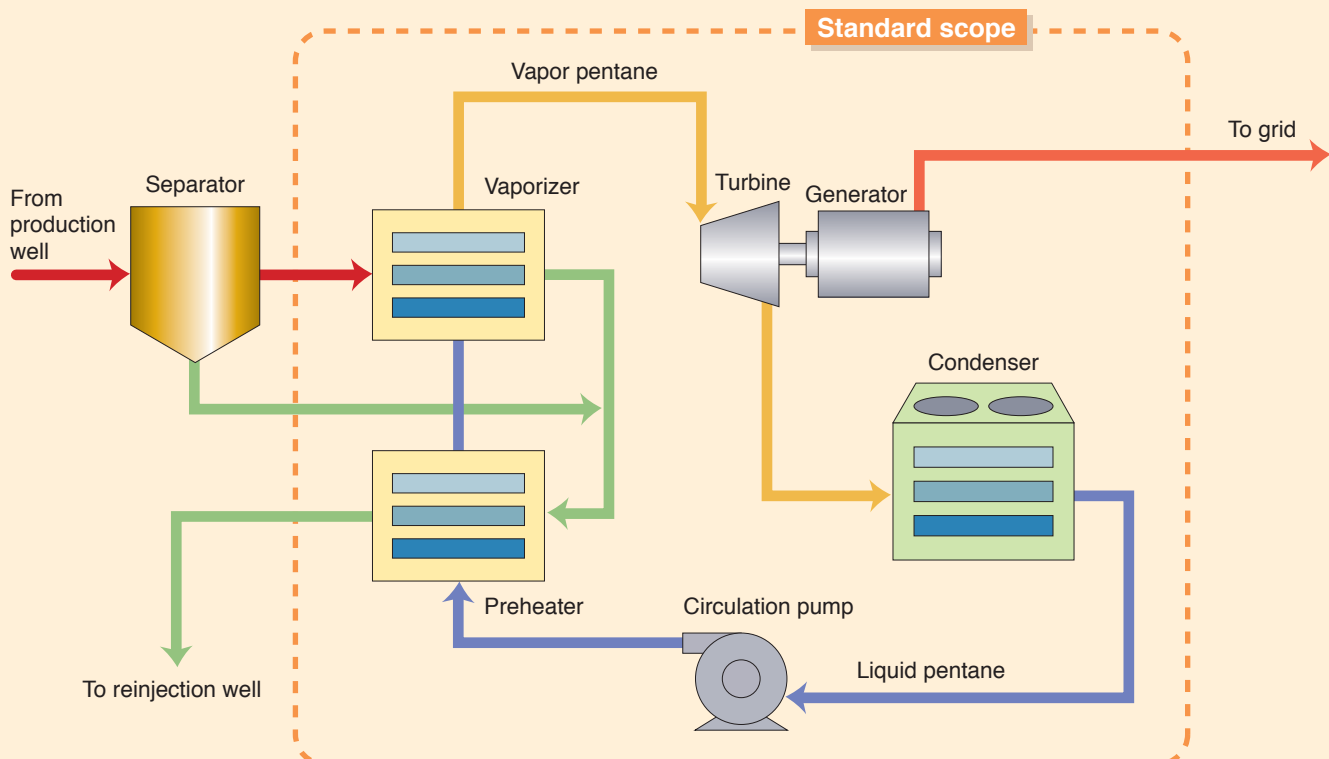
Fuji will provide total solution of geothermal energy based on abundant experiences in geothermal flash system.

Binary system

Hybrid system (combination of back pressure turbine and binary system)

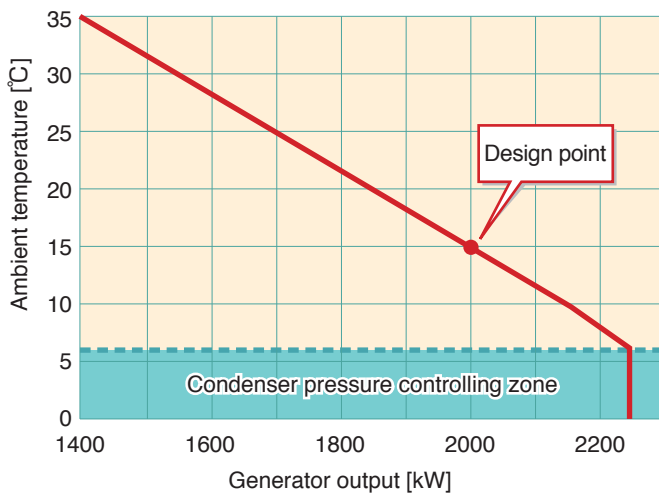
Flash system (single, multi)

## System flow



Geothermal fluid is fully led to reinjection well to avoid geothermal gas emission

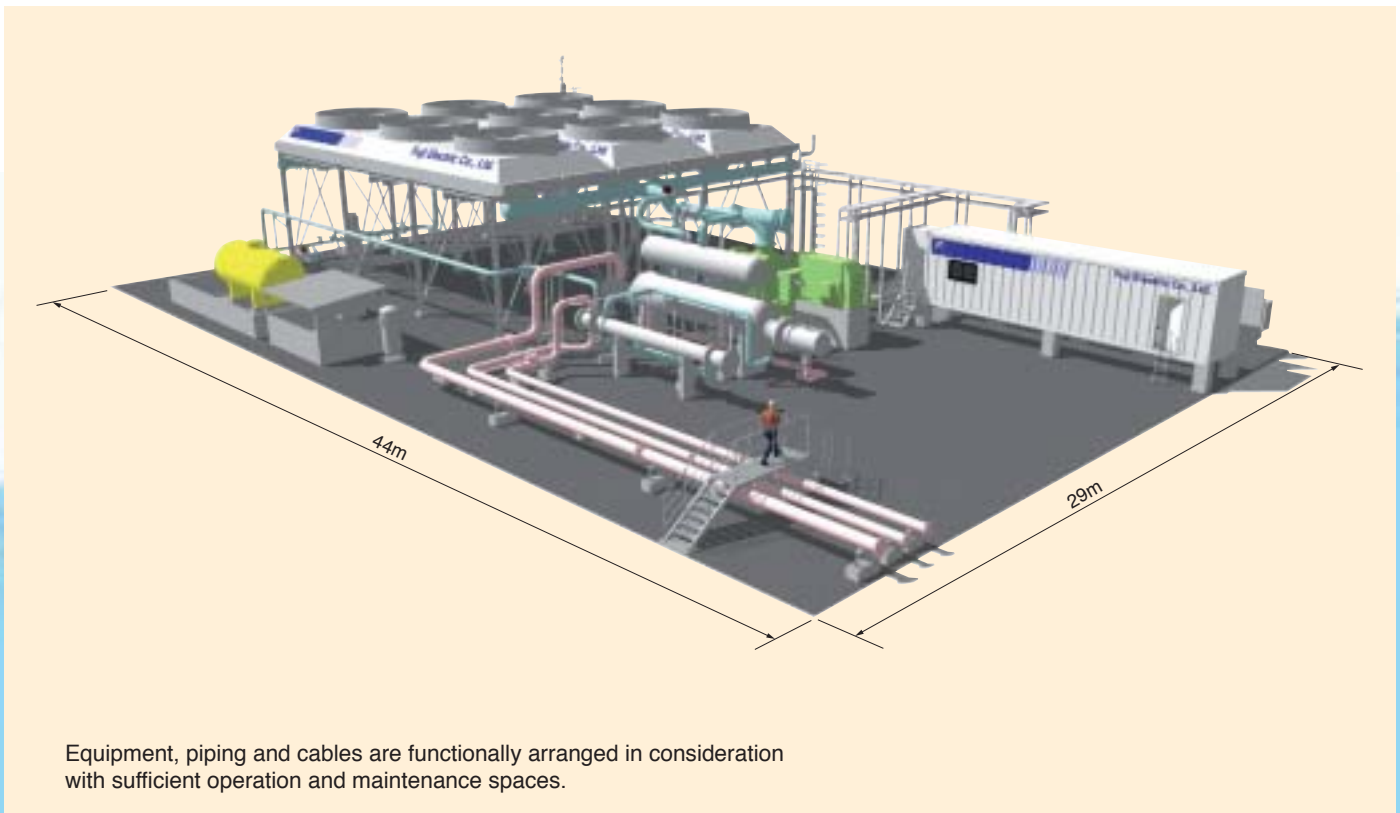
## Power generation



## Standard specification

Capacity	2000kW
Working fluid	Normal pentane
Resource inlet condition	300kPa/135°C/6kg/s
Resource outlet condition	300kPa/135°C/41kg/s
Turbine inlet condition	900kPa/120°C
Turbine type	Single flow, top exhaust
Generator type	Horizontal, synchronous

## Layout



Equipment, piping and cables are functionally arranged in consideration with sufficient operation and maintenance spaces.

## 220kW demonstration plant (operation: 2006 to 2009)



Capacity	220kW
Working fluid	Isopentane
Resource inlet condition	310kPa/135°C/1kg/s
Resource outlet condition	800kPa/105°C/6kg/s

Printed on recycled paper

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