

# GHEtool calculation report

## Hybrid system



21/01/25

Licensed report by:

Enead BV

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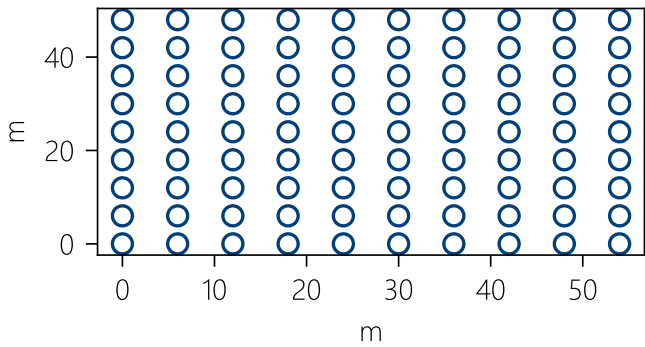
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## Description

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## Input



Number of boreholes: 90

Average minimal borehole spacing: 6,0 m

Borehole depth: 150,0 m

Buried depth: 0,7 m

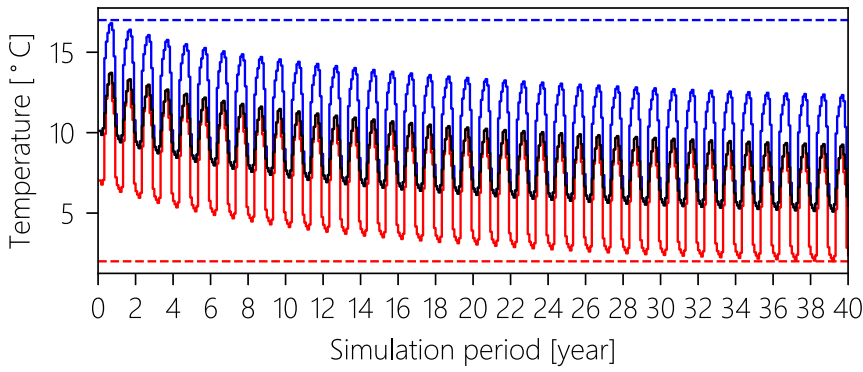
Borehole diameter: 14,0 cm

SCOP heating: 5,00; SEER cooling: 20,00

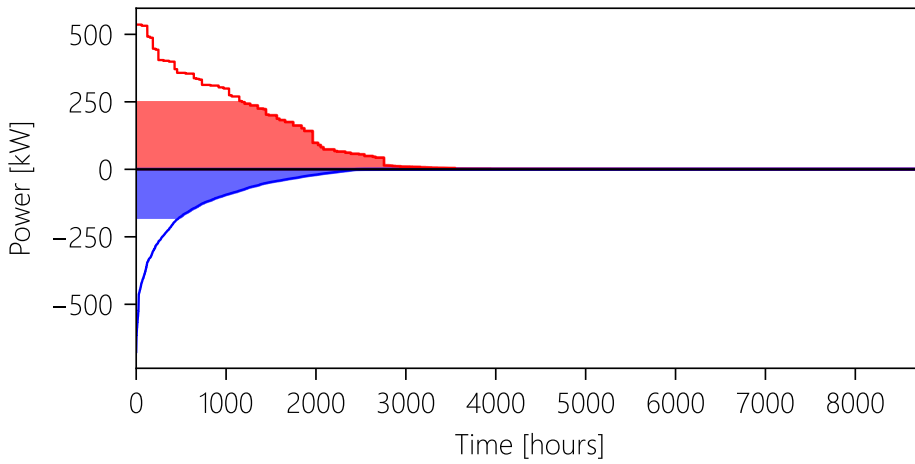
## Results

Heating		Cooling	
Geothermal load	499 086 kWh/y	Geothermal load	208 395 kWh/y
External load	143 931 kWh/y	External load	59 349 kWh/y
Geothermal percentage	77,6 %	Geothermal percentage	77,8 %
Geothermal peak	246,8 kW	Geothermal peak	177,6 kW
External peak	289,3 kW	External peak	498,9 kW
Geothermal percentage	46,0 %	Geothermal percentage	26,2 %

# Optimise power (10x9)



- Peak cooling temperature
- Peak heating temperature
- Borehole wall temperature



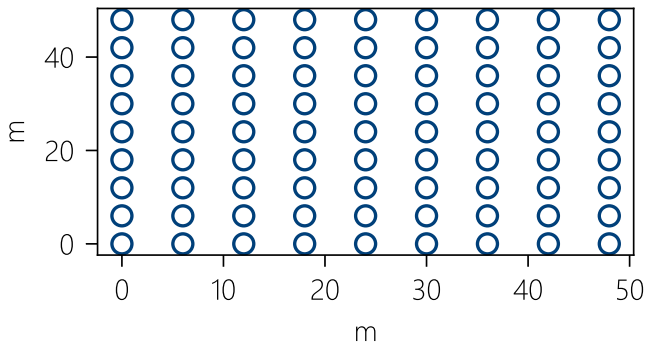
- Heating
- Cooling
- Geothermal heating
- Geothermal cooling



## Description

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## Input



Number of boreholes: 81

Average minimal borehole spacing: 6,0 m

Borehole depth: 150,0 m

Buried depth: 0,7 m

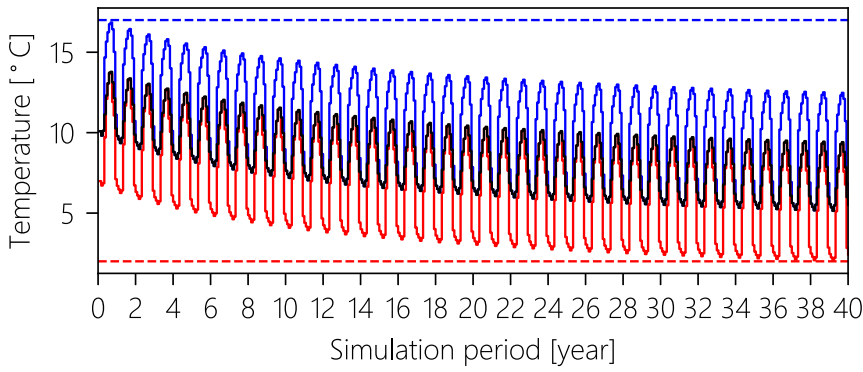
Borehole diameter: 14,0 cm

SCOP heating: 5,00; SEER cooling: 20,00

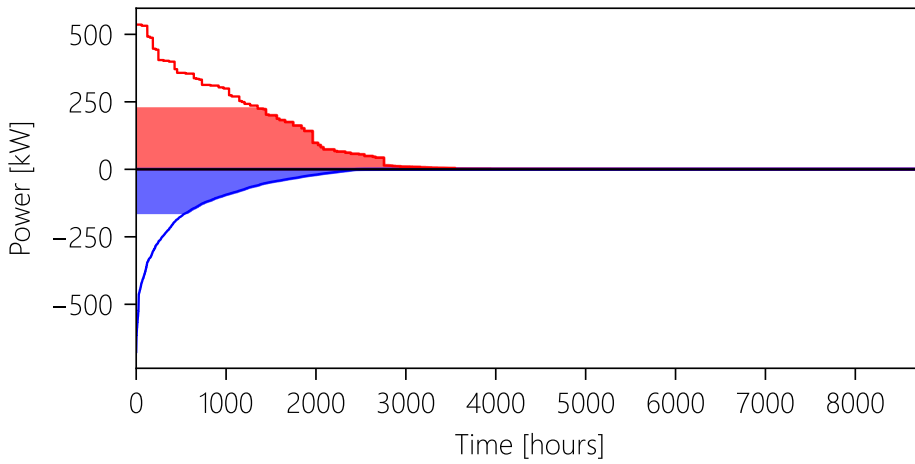
## Results

Heating		Cooling	
Geothermal load	469 080 kWh/y	Geothermal load	199 158 kWh/y
External load	173 937 kWh/y	External load	68 586 kWh/y
Geothermal percentage	72,9 %	Geothermal percentage	74,4 %
Geothermal peak	223,7 kW	Geothermal peak	159,9 kW
External peak	312,3 kW	External peak	516,5 kW
Geothermal percentage	41,7 %	Geothermal percentage	23,6 %

# Optimise power (9x9)



- Peak cooling temperature
- Peak heating temperature
- Borehole wall temperature



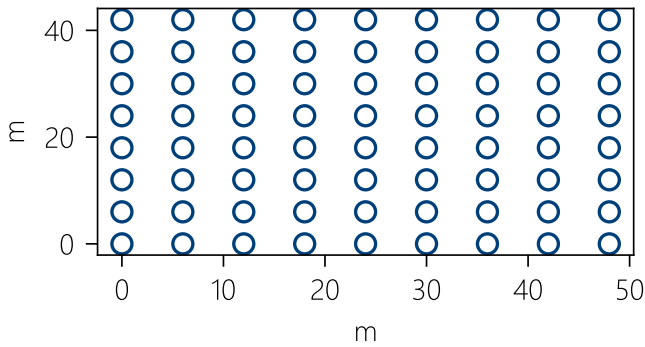
- Heating
- Cooling
- Geothermal heating
- Geothermal cooling



## Description

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## Input



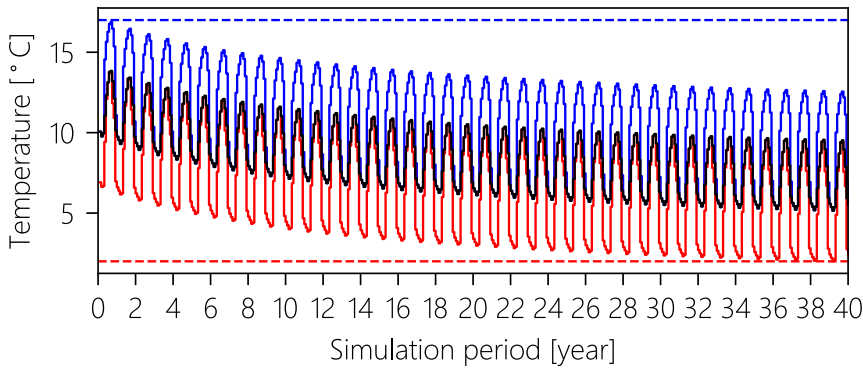
- Number of boreholes: 72
- Average minimal borehole spacing: 6,0 m
- Borehole depth: 150,0 m
- Buried depth: 0,7 m
- Borehole diameter: 14,0 cm

SCOP heating: 5,00; SEER cooling: 20,00

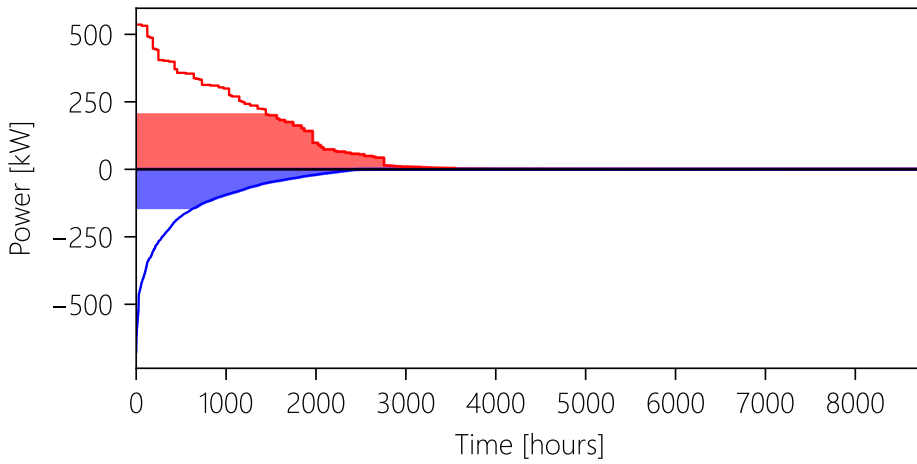
## Results

Heating		Cooling	
Geothermal load	437 044 kWh/y	Geothermal load	187 872 kWh/y
External load	205 973 kWh/y	External load	79 872 kWh/y
Geothermal percentage	68,0 %	Geothermal percentage	70,2 %
Geothermal peak	201,5 kW	Geothermal peak	141,4 kW
External peak	334,5 kW	External peak	535,0 kW
Geothermal percentage	37,6 %	Geothermal percentage	20,9 %

# Optimise power (9x8)



- Peak cooling temperature
- Peak heating temperature
- Borehole wall temperature



- Heating
- Cooling
- Geothermal heating
- Geothermal cooling

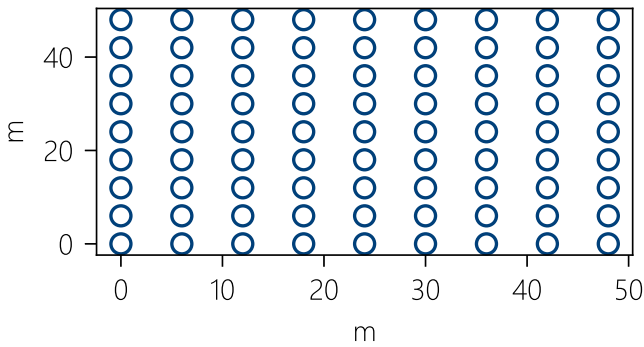




## Description

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## Input



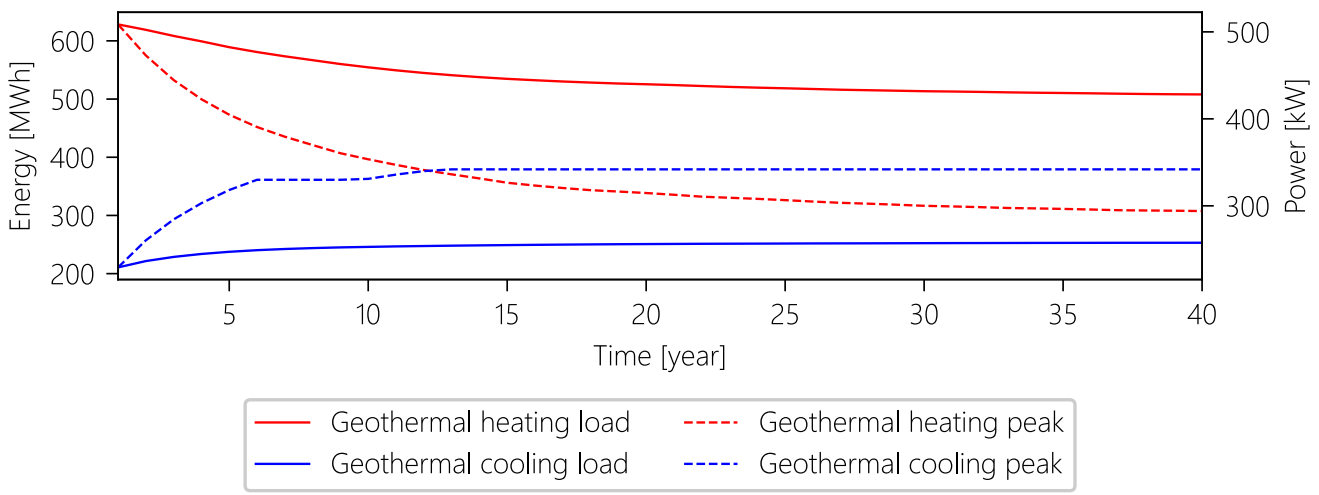
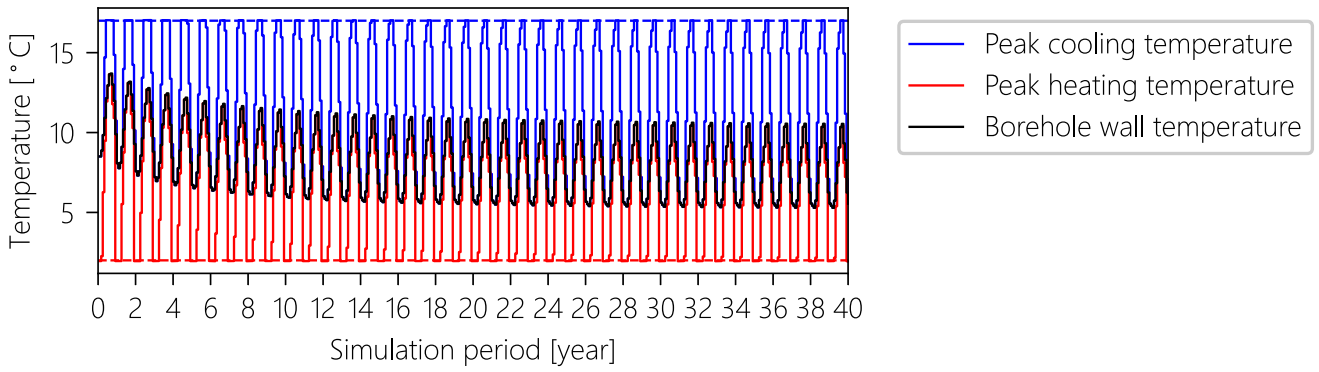
- Number of boreholes: 81
- Average minimal borehole spacing: 6,0 m
- Borehole depth: 150,0 m
- Buried depth: 0,7 m
- Borehole diameter: 14,0 cm

SCOP heating: 5,00; SEER cooling: 20,00

## Results

Heating		Cooling	
Geothermal load	537 844 kWh/y	Geothermal load	247 165 kWh/y
External load	105 173 kWh/y	External load	20 579 kWh/y
Geothermal percentage	83,6 %	Geothermal percentage	92,3 %
Geothermal peak	508,6 kW	Geothermal peak	341,9 kW
External peak	281,7 kW	External peak	503,4 kW
Geothermal percentage	64,4 %	Geothermal percentage	40,5 %

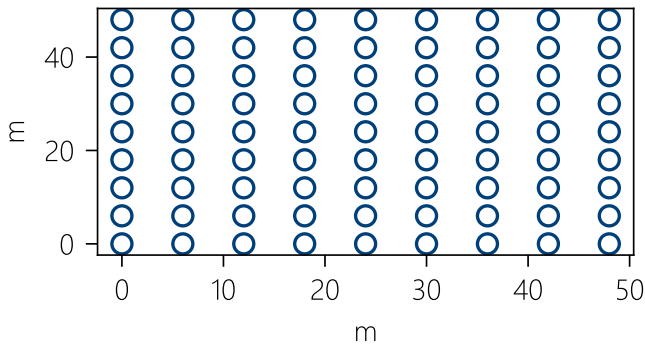
# Optimise energy (9x9)



## Description

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## Input



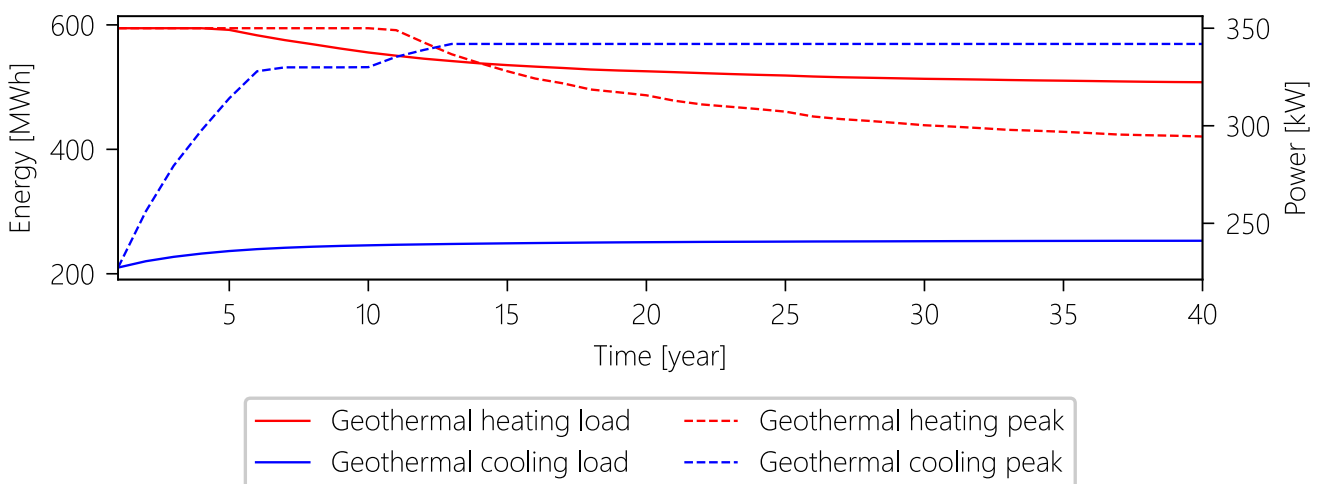
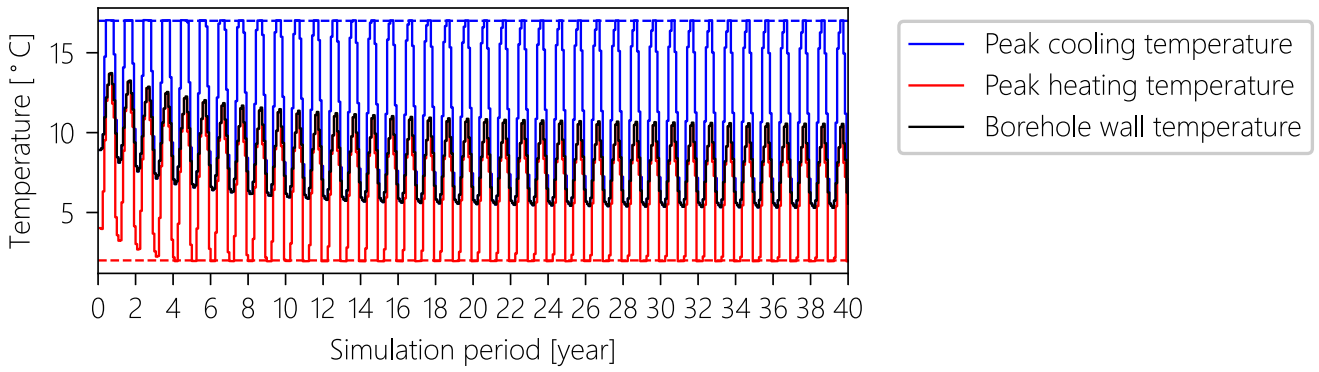
- Number of boreholes: 81
- Average minimal borehole spacing: 6,0 m
- Borehole depth: 150,0 m
- Buried depth: 0,7 m
- Borehole diameter: 14,0 cm

SCOP heating: 5,00; SEER cooling: 20,00

## Results

Heating		Cooling	
Geothermal load	536 360 kWh/y	Geothermal load	246 907 kWh/y
External load	106 658 kWh/y	External load	20 837 kWh/y
Geothermal percentage	83,4 %	Geothermal percentage	92,2 %
Geothermal peak	350,0 kW	Geothermal peak	341,9 kW
External peak	281,7 kW	External peak	505,0 kW
Geothermal percentage	55,4 %	Geothermal percentage	40,4 %

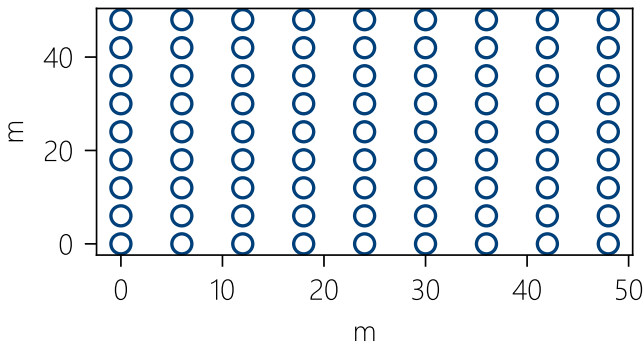
# Optimise energy (9x9) (350kW)



## Description

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## Input



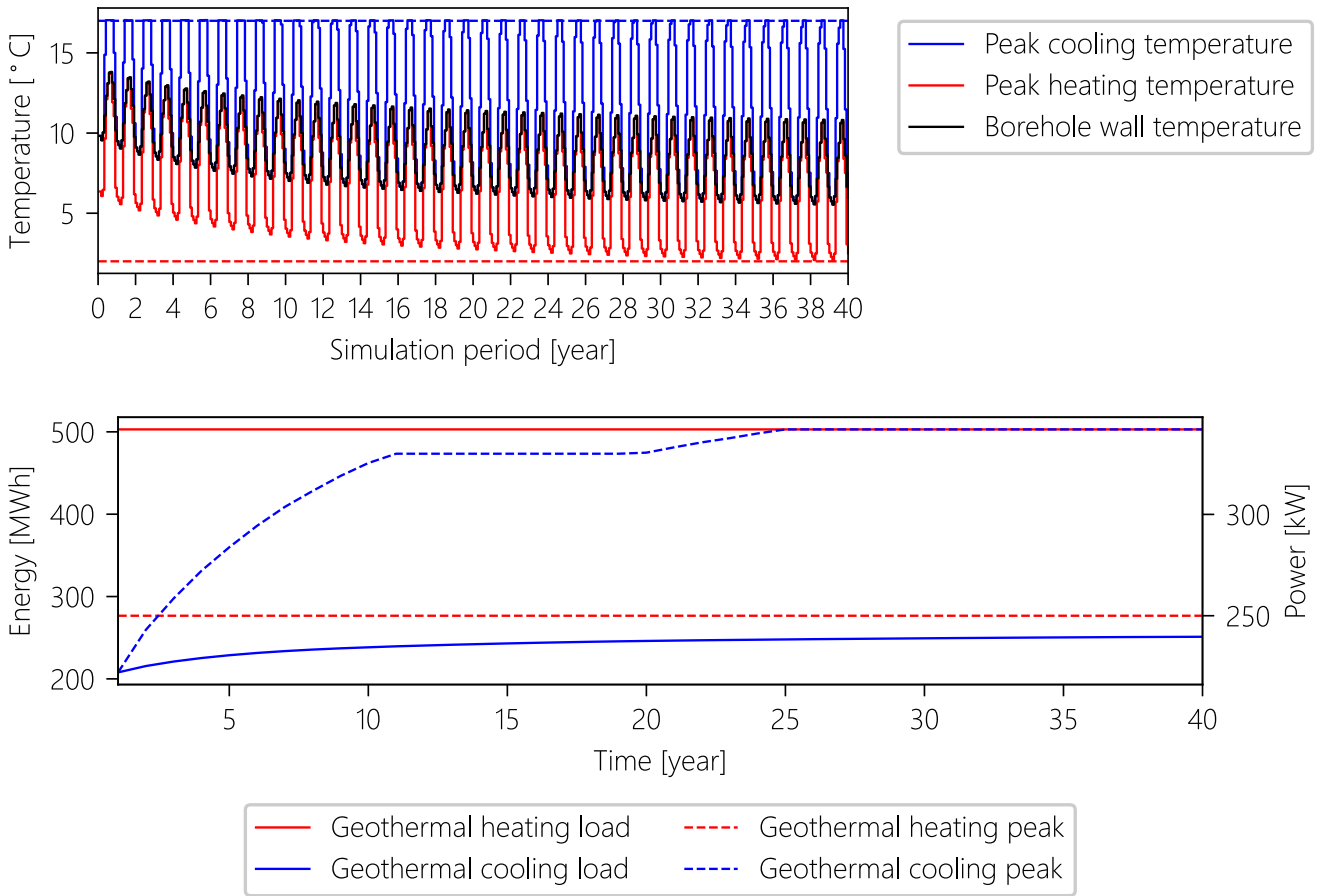
- Number of boreholes: 81
- Average minimal borehole spacing: 6,0 m
- Borehole depth: 150,0 m
- Buried depth: 0,7 m
- Borehole diameter: 14,0 cm

SCOP heating: 5,00; SEER cooling: 20,00

## Results

Heating		Cooling	
Geothermal load	502 979 kWh/y	Geothermal load	242 259 kWh/y
External load	140 039 kWh/y	External load	25 485 kWh/y
Geothermal percentage	78,2 %	Geothermal percentage	90,5 %
Geothermal peak	250,0 kW	Geothermal peak	341,9 kW
External peak	286,0 kW	External peak	509,2 kW
Geothermal percentage	46,6 %	Geothermal percentage	40,2 %

# Optimise energy (9x9) (250kW)





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