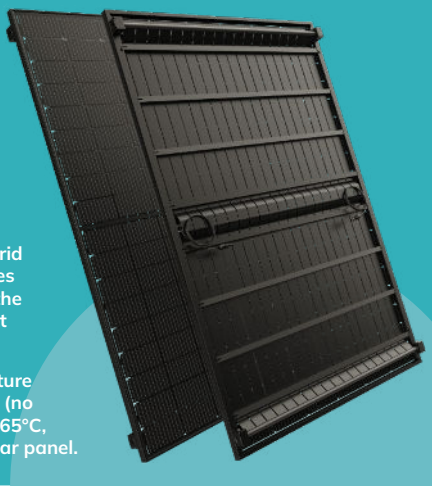
Optimize heat pump operation! Increase electricity production and boost cold boreholes with solar hybrid panels



The solar hybrid panel produces electricity at the front and heat at the back.

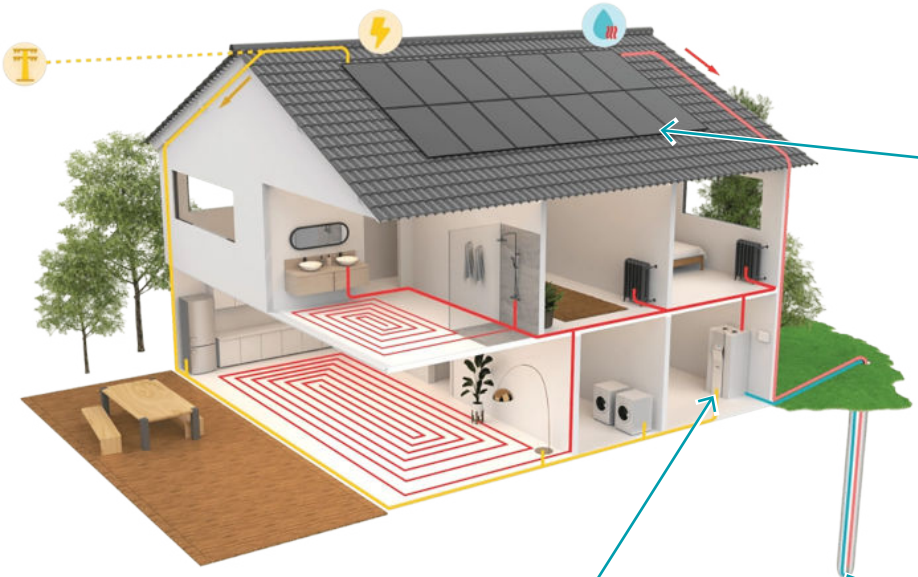
Max temperature at stagnation (no circulation) = 65°C, same as a solar panel.

Reduce your energy costs to a minimum!

In a DualSun SPRING hybrid panel the sun's energy is converted into both electricity and heat.

Electricity for your heat pump and property. Heat to recharge your ground source and optimize your heat pump operation throughout the year.

Up to 6 times more energy than one conventional solar panel.



A) Good for the solar cells:

Cooling of the solar cells

- Increases electricity production
- Extends lifespan

C) Good for the heat pump:

Higher temperatures from the borehole

- Increases efficiency and reduces electricity consumption
- Increases the heating power and decreases the use of electric peak load
- Increases the lifespan of the compressor
- Reduces the risk of operational disruptions

B) Good for the borehole:

Recharging the borehole

- Restores the energy balance in cold boreholes
- Raises the temperature all year round
- Enables greater power output
- Prevents freezing and reduces risk of damage to the collector
- Enables a larger and more efficient heat pump without complementary drilling

Diagrams with savings calculations are shown on the back →

Energy use for 8 kW geothermal heat pump with cold borehole*, supplemented with solar panels (PV) alternatively with hybrid panels (PVT)

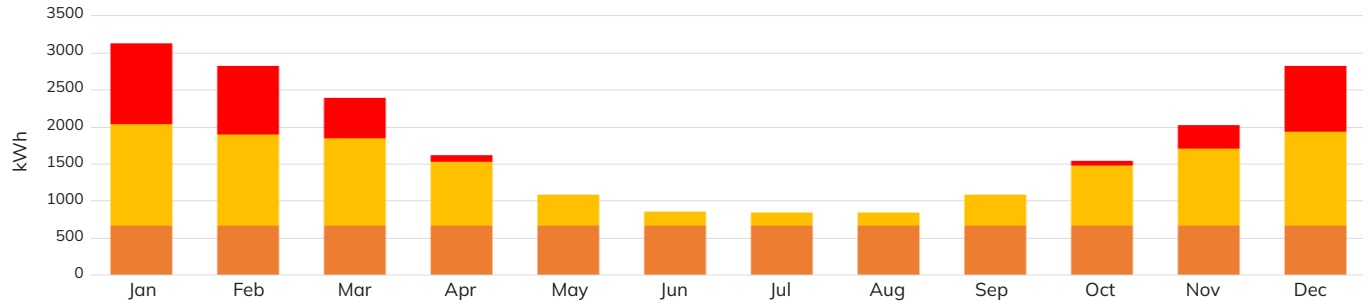
Heating:	30 000 kWh
Hot water:	5 000 kWh
Household electricity:	5 000 kWh
EV charging	3 000 kWh

Price of electricity	
Purchased:	200€ per MWh
Sold price:	50€ per MWh

*A borehole is considered cold if the brine temperature during the heating season is below 0°C.
In the example below, the temperature drops down to -5°C before completion with hybrid panels.

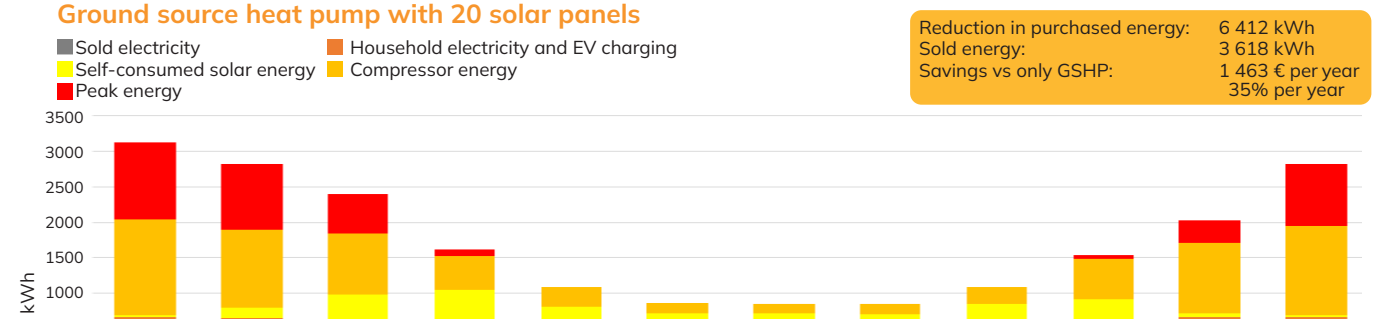
Pure ground source heat pump

Purchased energy:	21 096 kWh
Cost:	4 219 € per year



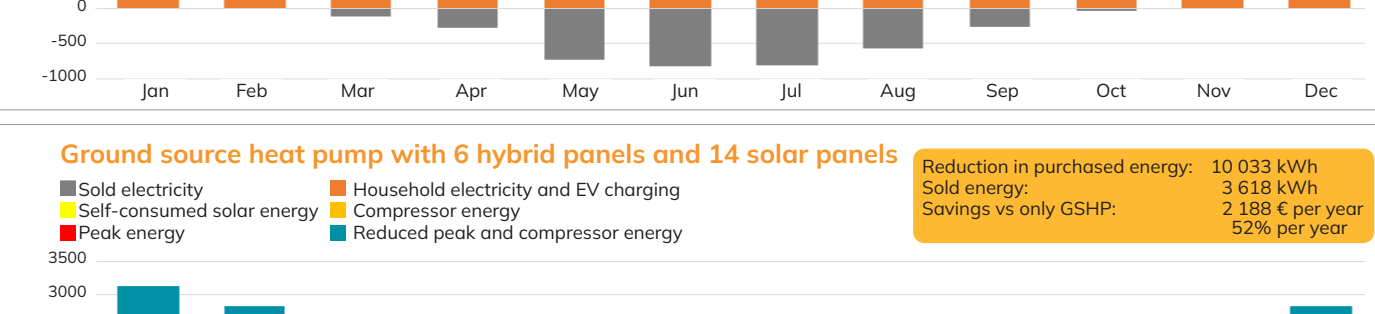
Ground source heat pump with 20 solar panels

Reduction in purchased energy:	6 412 kWh
Sold energy:	3 618 kWh
Savings vs only GSHP:	1 463 € per year
	35% per year



Ground source heat pump with 6 hybrid panels and 14 solar panels

Reduction in purchased energy:	10 033 kWh
Sold energy:	3 618 kWh
Savings vs only GSHP:	2 188 € per year
	52% per year



Hybrid panels (PVT) save energy all year round by recharging boreholes for the winter with solar heat during the summer.

How do I proceed?

Contact your local heating or solar panel installer to get a complete quote on hybrid panels (PV-T) and hybridization package for your project. They can also offer matching solar panels with 30-year performance guarantee in the same design as the hybrid panels, if you want more self-produced electricity than what the hybrid panels contribute.