

## REFERENCES

The following highlights installations where Foremica monitors solar production, monitors and balances the grid connection and controls loads.



### **Mäkelänkangas hybrid power plant**

- Finland's first hybrid power plant (wind + solar)
- Peak solar power 721 kWp

Foremica monitors the power plants operations and performance in real time. It also connects the power plant to a 24/7 control room. The control room can operate the power plant with Foremica. Monthly performance and production reports save customer's time spent on asset management.



### **SUN Mikkeli solar power plant**

- SUN Mikkeli solar power plant and product testing site
- Peak solar power 300 kWp

Foremica monitors the power plants performance and compares the theoretical production with actual environmental parameters. In addition, Foremica maximizes the power plants production by controlling local grid voltage by adjusting inverter parameters.



### **Pig farm, Kangasniemi, Finland**

- 20 kWp roof mounted solar power plant
- Geothermal heat pump

Foremica controls a geothermal heat pump based on the current electricity price and solar energy production. By estimating solar production, Foremica optimizes electricity consumption as self-sufficiently as possible. Foremica's optimization allowed the pig farm to change its heating method from oil heating to geothermal heating without having to increase the property's fuse size despite the increase in electricity consumption.



### **Detached house, Mikkeli, Finland**

Foremica comprehensively optimizes energy consumption achieving a saving of up to 40% in yearly energy costs. The following parameters are optimized:

Limited capacity available from grid for

- Heating
- EV charging
- ➔ Energy consumption is controlled by Foremica to avoid the grid from overloading

Own usage of solar

- 1.6 kWp (wall)
- 3 kWp system (ground)

Energy price management

- Avoids price peaks by timing consumption to cheap hours and by prioritizing using own solar production