



**ENERSOLVE**  
MORE EFFICIENCY, BETTER ENERGY



# Case history

Industry, 02

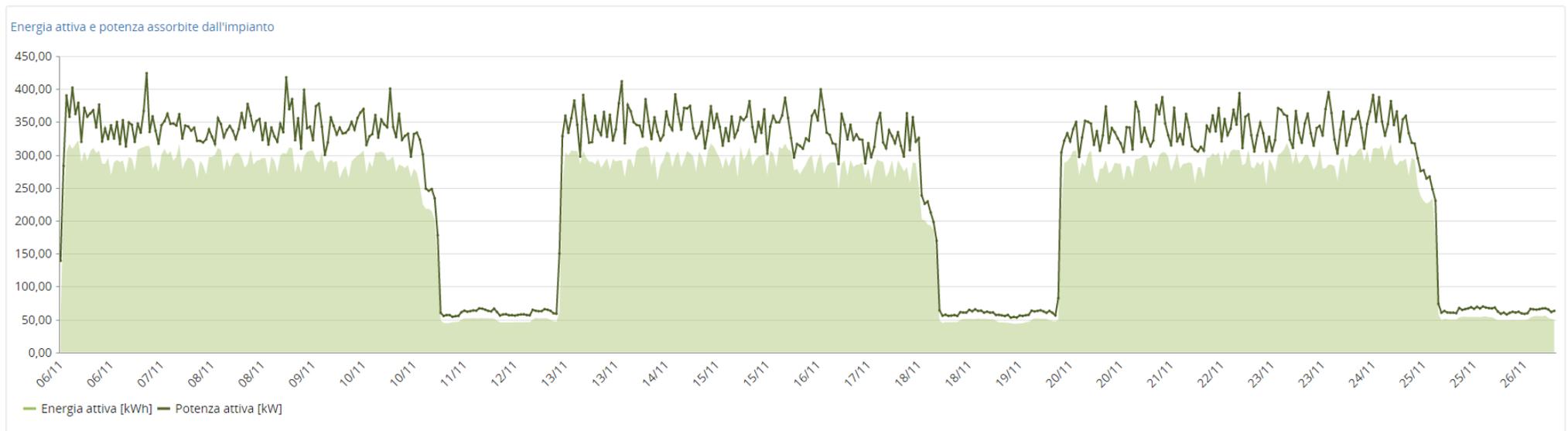
# Mechanical engineering company (Lombardia, Italy)

The customer manufactures special circular machinery.  
 The main loads of the plant are industrial machinery used for metalworking.  
 Specifically, the company workshop was taken into consideration.

The max demand of this plant rises up to 400kW.

After an appropriate assessment it has been supplied an **Enersolve PQL** featured with a rated power of 720kVA.

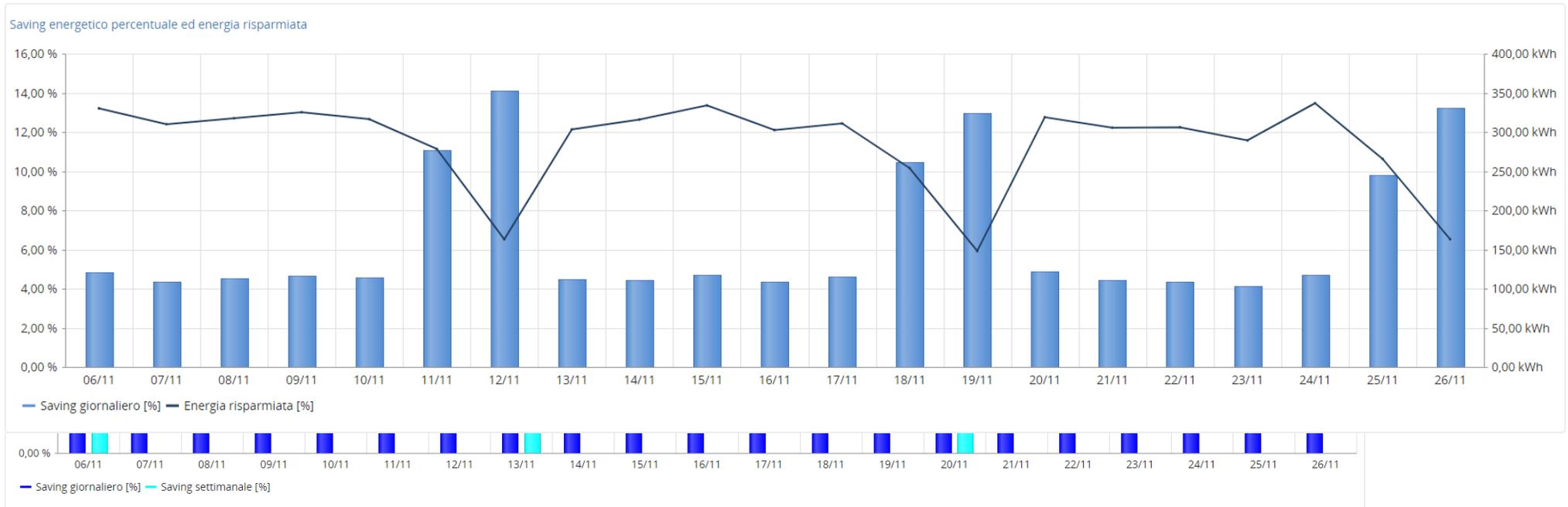
The yearly consumption of this plant is about 1.700.000kWh, which corresponds to about 250.000 Euro energy bill.



The above graph and curves are showing active energy and power load profiles, absorbed by this plant over a period of 3 weeks.

It is clear and well visible the working cycle of the plant, without interruptions during the week

The active energy consumed in such time is **115.181kWh**.



Inside the above graph, that is taken over the same period, it is drawn the **incoming voltage profile (mean value is 412,5V)** and the outgoing voltage profile (mean value is 383,6V). The gap between the voltage profiles allows figuring out the PQL benefits and effects, which are shown in the energy savings. A steady outgoing voltage is also a clear index of a great improvement in a fundamental power quality factor.

Within the above graph, it is highlighted and disclosed the daily and average weekly energy savings. The latter are within the range of **6,51% and 6,88%**.

Inside the above graph, we are showing the correlation between the percentages of saved energy over the total absorbed with the actual saved energy. In consideration of what detected over the 3 weeks measuring campaign and what drawn on the graph, it is possible to determine and extrapolate the yearly energy saving, that in this case will be about **100.000kWh**, equivalent to a money saving of **15.000 Euro**.