

# Electricity consumption analysis

Minimizing use of electricity is important to reduce energy costs and greenhouse gas emissions. Reducing the peak electricity use by moving activities to other times of the day will also reduce cost of electricity. To implement efficient measures, it is important to understand how much and when various processes and assets consume electricity. Many organizations adhere to ISO 50001 to establish, implement, manage, and improve an energy management system.

## Challenge

- Modern electricity meters provide information about electricity consumption with great time resolution. However, the electricity meter cannot tell how much and when each circuit connected is consuming electricity.
- To analyse where and when electricity is consumed, it is necessary to monitor individual circuits. This will increase the understanding of what assets and processes are using most electricity. It will also increase the understanding of when assets are consuming electricity. For instance will events such as starting a production line, or turning on heating or lighting in a building, increase the electricity consumption significantly for a shorter period.

## Solution

- Neuron Ampere sensors are installed on the circuits where a more detailed understanding of electricity consumption is needed. Installation is simple, with a clamp-on that goes over one lead of the circuit, that can be installed without rearranging any of the existing circuits.
- The Neuron Ampere sensors will monitor current consumption continuously and store all measurements in the cloud. The collected



data can be viewed and analysed in either the Neuron App, or any other software desired by using one of the open APIs available from the Neuron Cloud.

- By understanding what assets and processes use most electricity, and if there are special circumstances where these consume more electricity than normal, a plan to use electricity more efficiently can be made.
- Many price tariffs are punishing high peaks of current consumption. An industrial company can have high peak currents in the morning because all production lines are starting up, lights are turned on, and heating or cooling systems are starting. These can be avoided by following a sequenced power-on plan every morning

## What you get

- Continuous measurement of current consumption per circuit
- Easy mounting with clamp on lead
- Detailed current measurements up to one year available in Neuron Cloud
- Alerts to operators if current is at higher level than expected. Alerts can be provided on e-mail, SMS or push warnings on mobile phones.

## Products in use

- Neuron Ampere