Shortened emergency response times for TSS

Use of hybrid solar systems optimised with IXON's Cloud Notify

TSS has extensive, global experience designing and delivering reliable and high performance autonomous solar power solutions. These systems are usually situated in remote locations with limited access, which makes it difficult to monitor and resolve any problems.

"We want to learn how exactly our systems behave, to find out if and how we can improve them in the future," Sébastien Robert, project and innovation engineer at TSS, explains. When they came across IXON, the focus quickly shifted from remote access to data logging for more insight into their systems.

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The generator kept malfunctioning, and we immediately received an alarm.

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Easily setting up alarms

The gathering of machine data plays an enormous role in TSS's drive to continuously improve and optimise their products. Sébastien explains: "With Cloud Logging we can gather data. We don't share all data with the customer as some information is only important for us as we monitor and analyse our systems." TSS started using Cloud Notify to respond to malfunctions and ad-hoc issues, and now receives notifications about various important events of its solar power systems. "With the help of IXON's support page, it was easy to set up alarms," says Sébastien.

> " Operational costs can be reduced considerably. "

An example of such a notification? During the day, the energy from the sunlight is stored in batteries that supply the systems with energy at night. TSS has built in all kinds of safeguards which are monitored by alarms. "These are alarms regarding, among others, the voltage of the battery," Sébastien explains. "A battery consumes 20% of its energy per day and should be able to provide energy for five nights if the battery doesn't get recharged during the day. As soon as too much energy is consumed, we receive a notification." After receiving such notifications, TSS examines the problem with the machine data gathered via Cloud Logging and solves any issues.

Fixing a diesel generator in Oman

The maintenance of solar panels is crucial in order to guarantee efficiency. "Over time, these panels get dirty, which negatively affects its efficiency," says Sébastien. "We have now set an alarm which notifies us that the solar panels have to be cleaned when they have reached low efficiency." If a customer doesn't respond it will eventually lead to lower battery capacity.

Benefits the IXON Cloud offers TSS:

- ☑ Monitoring solar systems globally
- ☑ Machine data analysis for system optimisation
- ☑ Notifications of important events with Cloud Notify
- ☑ Reducing operational costs

Cloud Notify has already yielded its first results. In Oman, TSS has a hybrid solar power system which is supported by diesel generators. A short circuit occurred due to a faulty connection after some maintenance activities were performed. "We immediately received an alarm," Sébastien says.

Later they received another valuable notification from the same system. "The generator kept malfunctioning and wouldn't turn on anymore. We immediately received a notification about this via Cloud Notify. From the logged data we could trace what went wrong and were able to replace the defective part in time," Sébastien describes.

In cooperation with the supplier, and with the help of Cloud Logging data, TSS managed to localise the problem and resolve it. With data-based advice and decision-making, customers can make optimum use of their solar power systems. Resulting in greatly reduced operational costs.

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