

ELECTRICITY IN CASE OF EMERGENCY AT ERASMUS MC HOSPITAL



THE CHALLENGE

The likelihood of power failures in Europe is growing dramatically due to stretched energy supply networks, growing customer demand, and a greater reliance on variable sources of energy. Power shortages are inconvenient for any business but, for critical establishments like hospitals, can cost lives. That's why Erasmus University Medical Centre in Rotterdam, Netherlands, turned to Ovarro, the control technology specialist, to provide an automated backup energy management and SCADA system that would help protect it from power outages.

Europe is currently facing a growing energy crisis thanks to a perfect storm of factors including colder winters, importing natural gas, the coronavirus pandemic, and lower-than-usual output from renewable energy sources. All this brings home the fact that the transition to renewable energy generation, while essential to reduce CO₂ emissions, results in an increasingly fragile energy supply. An uncertain power supply can, in turn, lead to costly power outages.

THE SOLUTION

Long before this crisis, the Erasmus University Medical Centre recognized its need for a backup power system. Without backup generators, any power outage could leave essential parts of the hospital completely in the dark, and everything from automatic doors to life-support machines without power.

The Erasmus University Medical Centre is the largest of its kind in Europe, making it impossible to keep the entire hospital running on backup power. A more focused solution was needed, where key systems could be prioritized depending on the amount of electricity available at any given time. Critical systems were needed that could switch to the backup power as soon as an outage occurred, without the need for time-consuming manual switching or decision-making. The hospital also wanted a dynamic system rather than a hardwired one, so the system's priorities could be added or changed as needed. That's why, in 2010, the hospital turned to Datawatt, now part of Ovarro, to help create a solution that would automate the Erasmus University Medical Centre's backup power grid.



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POWER



MONITORING
& CONTROL



RTU'S



THE SOLUTION

In response, Datawatt designed a complete energy management, supervisory control, and data acquisition (SCADA) system.

The energy management system and SCADA uses standard hardware, which is connected through a fast and reliable fiber network. Where the system is really unique, however, is in the level of control it gives for *where* the backup power is directed. Very specific areas or assets in the hospital — the emergency lights, for example — can be swiftly provided with power thanks to the energy management system's fine-tuned switching capabilities.



“With Erasmus University Medical Centre’s automated energy management and SCADA system supplied by Ovarro, backup power can now be supplied almost immediately and exactly where it needs to go”.



A GROWING SYSTEM

Although the system was initially built with the Do5 RTU model, it has gradually been updated to the latest version, the DSG RTU. The DSG offers maximum security and even more flexibility than its predecessors. The RTU combines 600 remote Input/Output (I/O) units placed in various cabinets, to offer complete control over where power can be directed. Ovarro has combined the DSG RTUs with other components to create a full-cabinet system that can be installed easily around the hospital.. As pressure mounts on the European electricity grid, power cuts may become more common. Fortunately, this needn't be a major concern for Rotterdam's Erasmus University Medical Centre. With its automated energy management and SCADA system supplied by Ovarro, backup power can now be supplied almost immediately and exactly where it needs to go.

KEY DELIVERABLES

- Automated energy management
- DSG RTUs - maximum security and more flexibility
- Modular system design can be expanded easily
- Data can be monitored and analysed
- More control over the hospital's power system keeps everything running safely

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