

IOT

A decentralized, self-healing solution for a Medium Voltage underground network in Vietnam's largest city

EcoStruxure™ for Utility helped Thu Thiem Power Company in Vietnam to implement a decentralized, self-healing Smart Grid solution to ensure reliable electricity to the Saigon High Tech Park, an important industrial zone where over 40 high-tech companies are located

Thu Thiem Power Company, Ho Chi Minh - Vietnam



The Thu Thiem Power Company is one of 22 subsidiaries of the Ho Chi Minh City Power Corporation, which specializes in energy sales and power network services.

Improving the energy availability of Vietnam's largest city

Because the power grid of Vietnam's largest city is perpetually at risk, the government approved smart grid development projects, in which the Saigon High Tech Park (SHTP) was included. This important industrial zone is home to 40 companies involved in manufacturing, research, training, and servicing advanced technologies, including an Intel factory. These companies are highly sensitive customers for the Thu Thiem Power Company, which must reliably and constantly supply power, as well as repair faults immediately after they occur.

The Thu Thiem Power Company and Schneider Electric

Because of these demanding requirements, the Thu Thiem Power Company contracted Schneider Electric to implement a decentralized, self-healing grid solution on two existing MV networks for the SHTP and its end customers. In only three months, they moved from customer order intent to commissioning.

To satisfy the Thu Thiem Power Company's needs, Schneider Electric upgraded their MV/LV substations with the decentralized Self-Healing Grid (SHG) capabilities of its T200. In the case of a fault on the MV network, the loop is now quickly and automatically reconfigured (in less than 30 seconds) and the outage impact is greatly reduced.

Thanks to this solution, the Thu Thiem Power Company dramatically reduced re-energization times on its two strategic loops supplying their high tech areas.

Goal

To significantly improve energy availability for sensitive end customers

Story

Thu Thiem Power Company (a distribution system operator) is responsible for the power supply to Ho Chi Minh City. In 2013, it provided 17,600 billion kWh to the city and its 10 million inhabitants. The Ho Chi Minh City Power Corporation actively participates in the city's industrialization and modernization.

Solution

- A decentralized Self-Healing Grid (SHG) with feeder automation for 2 loops: SHG intelligence embedded in 13 T200 RTUs (Remote Terminal Units)
- IA dedicated Easergy SCADA L500 communicating with T200s, allowing MV network state visualization and remote MV switching commands

Results

- Fault isolation and service restoration in under 1 minute for 66% of customers
- Quick design and simple implementation and roll-out, with no Distribution Management System (DMS) required
- Cost-effective modernization using off-the-shelf products
- Flexibility and ease of configuration via decentralization
- Ease of scalability and replicability



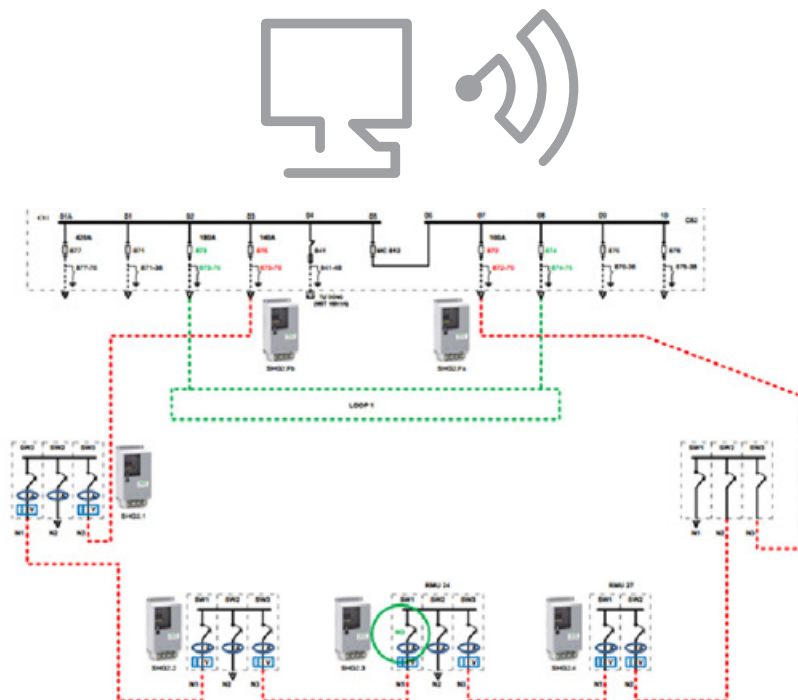
The Solution

- Two MV loops with a total of 13 T200I SHG Remote Terminal Units.
- One L500 mini SCADA communicating via WiMAX with T200I, Sepam Protection relays, and Power Monitoring units.
- Nine existing RM6 units were equipped with switch motorization and VPIS-V0 Voltage Presence Indicator & VD23 Voltage Relay.
- The main substation was equipped with two T200 interconnecting relays and communication bus with nine Sepam relays (in MCset panel) and two Power Meters.

L500 SCADA communicates in WiMAX with Easergy T200I RTU, Sepam protection and Power Monitoring

66%

of customers will benefit from fault isolation and service restoration in under 1 minute



EcoStruxure™

Innovation At Every Level

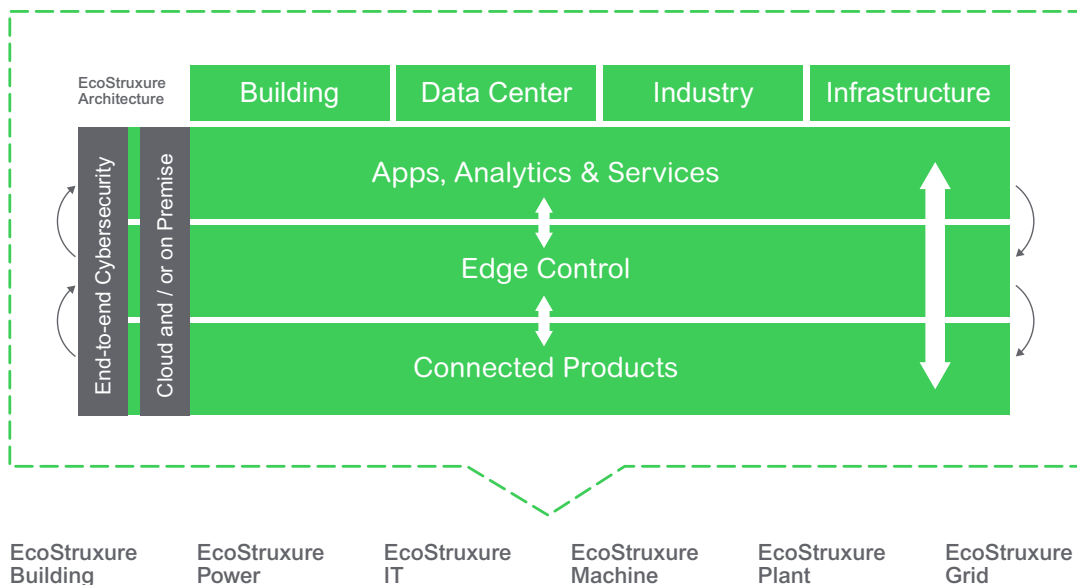
IoT-enabled solutions that drive operational and energy efficiency

EcoStruxure is Schneider Electric's open, interoperable, IoT-enabled system architecture and platform.

EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity for our customers.

EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level including Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure has been deployed in 450,000+ installations, with the support of 9,000 system integrators, connecting over 1 billion devices.

One EcoStruxure architecture, serving 4 End Markets with 6 Domains of Expertise



Connected Products

The Internet of Things starts with the best things. Our IoT-enabled best-in-class connected products include breakers, drives, UPSs, relays, sensors, and more. Devices with embedded intelligence drive better decision-making throughout operations.

Edge Control

Mission-critical scenarios can be unpredictable, so control of devices at the edge of the IoT network is a must. This essential capability provides real-time solutions that enable local control at the edge, protecting safety and uptime.

Apps, Analytics & Services

Interoperability is imperative to supporting the diverse hardware and systems in building, data center, industry, and grid environments. EcoStruxure enables a breadth of agnostic Applications, Analytics, & Services for seamless enterprise integration.

Find out more about EcoStruxure

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Contact us to start your journey



Smarter, faster power restoration



Self-Healing Smart Grid Solution
Re-energizes Network in Less
Than a Minute

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