



# SMART

## Empowering Enel for a bright, connected future

Enel – Rome, Italy

EcoStruxure™ ADMS provides more accurate data to predict the impact of power outages, generation, and voltage variation.

#WhatsYourBoldIdea

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Life Is On

**Schneider**  
Electric



Enel is Italy's largest power company and Europe's second listed utility for installed generation capacity. Enel operates in 40 countries worldwide, has around 95,000 MW of net installed capacity, and sells power and gas to more than 61 million customers.

### Challenges

Enel recognized the need for an advanced distribution management system, but lacked the internal resources necessary to create mathematical algorithms to enhance distribution management. "In the past, some employees tried inventing solutions, but without an adequate technical background it held no scientific value," explained Christian Noce, DMS integration manager at Enel. "Our employees were spending too many resources trying to create a solution without solid analysis. Without the analysis, the data meant nothing."

### Solution

Schneider Electric EcoStruxure Advanced Distribution Management System (ADMS) is a real-time solution that provides complete functionality for the planning, operation, and analysis of a utility's distribution system.

Designed to help complex utilities like Enel, Schneider Electric EcoStruxure ADMS is packed with a deep, versatile toolset that helps utilities minimize power and energy losses. Additionally, it optimizes voltage profiles and further reduces general costs by enabling peak sharing via demand response (DR) and distributed system and demand response (DSDR).

## Goal

Installation of a new system that can predict the impact of power outages, generation, and voltage variation.

## Story

Enel needed an advanced solution that could help with minimizing power and energy losses. The solution also helped Enel to manage its distribution system most effectively by optimizing voltage profile and enabling peak sharing.

## Solution

- EcoStruxure ADMS\*

## Results

- Energy savings of 144 GWh per year
- Significant cost savings through optimization of existing network resources and operations
- Open architecture enabling smooth integration with the utility's SCADA, GIS, and OMS



144 GWh/year

Equivalent energy savings

95,000 MW

Net installed capacity

61 million

Number of Enel customers

40

Number of countries Enel operates

Enel used Schneider Electric EcoStruxure ADMS to provide a visual, mathematical model of its distribution network, including detailed models for voltage management, micro-generation, frequency variation, DR, and other Smart Grid management data. The utility now has more accurate data and a system that can predict the impact of power outages, generation, and voltage variation.

**The bottom line**

By implementing Schneider Electric EcoStruxure ADMS, Enel has experienced significant energy and cost savings through the optimization of its existing network resources and operations. This has led to streamlined energy production and decreased CO2 emissions.

After the initial optimizing process, Enel has experienced a steady gain of about 4% all year round. This equates to a significant reduction in fuel and CO2 emissions. The estimated savings is about 144 GWh per year of energy, for a corresponding 75,000 tCO2 per year.

“Because of our ability to calculate and reduce energy losses, we now have a better idea of how we can reduce losses without great investments,” said Noce.

Schneider Electric EcoStruxure AMDS has also helped Enel with supply restoration and network reconfiguration, which reduces time and creates a fast and reliable system for producing results. Enel appreciated the Schneider Electric EcoStruxure AMDS open architecture, which allowed for smooth integration with the utility’s SCADA, GIS, and OMS.

“The fact that we were able to integrate Schneider Electric EcoStruxure ADMS\* with our existing systems (in particular the SCADA system) has proven to be one of the best features yet.”

— Christian Noce, DMS Integration Manager



# EcoStruxure™

## Innovation At Every Level

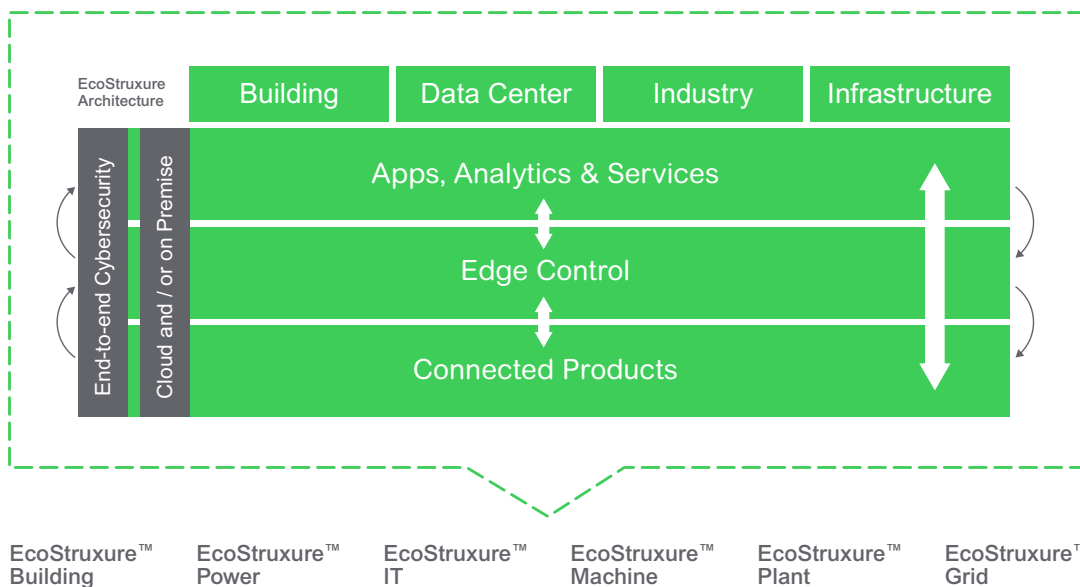
IoT-enabled solutions that drive operational and energy efficiency

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 480,000+ sites, with the support of 20,000+ system integrators and developers, connecting over 1.6 million assets under management through 40+ digital services.

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

[schneider-electric.com/ecostruxure](https://schneider-electric.com/ecostruxure)

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Discover EcoStruxure™



Discover EcoStruxure™ Grid



EcoStruxure™ solution for utilities



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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Janaury 2019

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998-20427480\_GMA-US

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