



EcoStruxure™ Power

Microgrids eGuide



Life Is On

Schneider
Electric



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EcoStruxure Power digitizes electrical distribution

Microgrid solutions help facilities become more resilient, efficient, and sustainable

By the year 2040, annual global electricity consumption will be 70% higher than in 2015, according to international Energy Agency (IEA) estimates. We face a new energy landscape.

Today's electrical systems are on the brink of disruption. Our electrical system has served us well for 100 years, but is facing a fundamental threat to its existence. We have an opportunity to co-create a new energy world with Microgrids.

Read on to discover how EcoStruxure Power helps your business be more resilient, efficient, and sustainable with [Microgrids](#).

Read the eBook



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Challenges and Opportunities

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What's driving the new energy landscape?

Grid stability and energy costs are becoming more difficult to manage

Today's electrical grid and distribution system is arguably the most complicated structure ever created. Efforts to manage energy costs and grid stability grow more challenging as technology innovates and as demand on the grid continues to increase.

This change highlights the urgent need for a new approach. Today, a growing number of companies now look to microgrid-based, renewable energy generation models. As more and more businesses adopt renewable energy sources and move away from a legacy system, prices for solar, natural gas, and for the storage of that energy, continue to drop dramatically.

“At least 22 companies in the Fortune 500 have announced plans to buy 100% renewable energy.

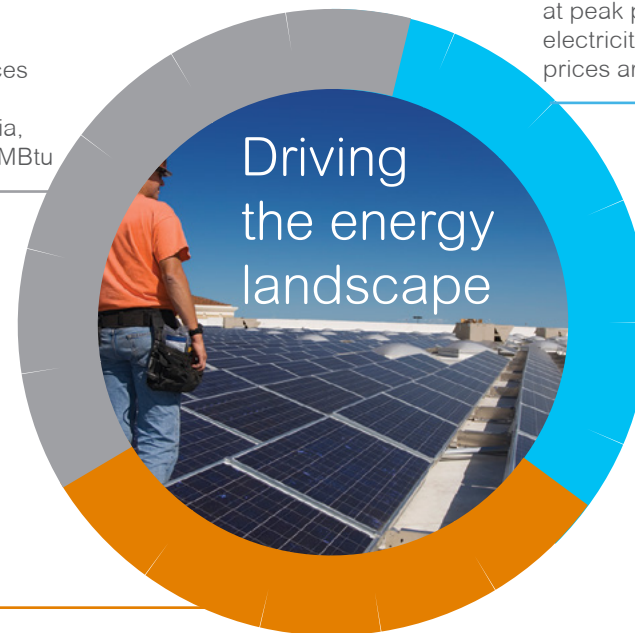
NY Times, June 1, 2018

Natural gas

North America
wholesale gas prices
are still ½ to
⅓ Europe and Asia,
about US\$1.5-4 MMBtu

Solar

Solar PV is a cost effective tool for lowering an organization's energy bill. Non-Residential costs average U.S. \$0.05 to \$0.12 per kWh. Solar generation is often at peak production when electricity demand and prices are highest.



Energy storage

The cost of lithium ion-based battery energy storage systems are decreasing dramatically, helping solve the intermittency of renewables and helping “behind the meter” enterprises balance supply and demand

Integrated energy outcomes

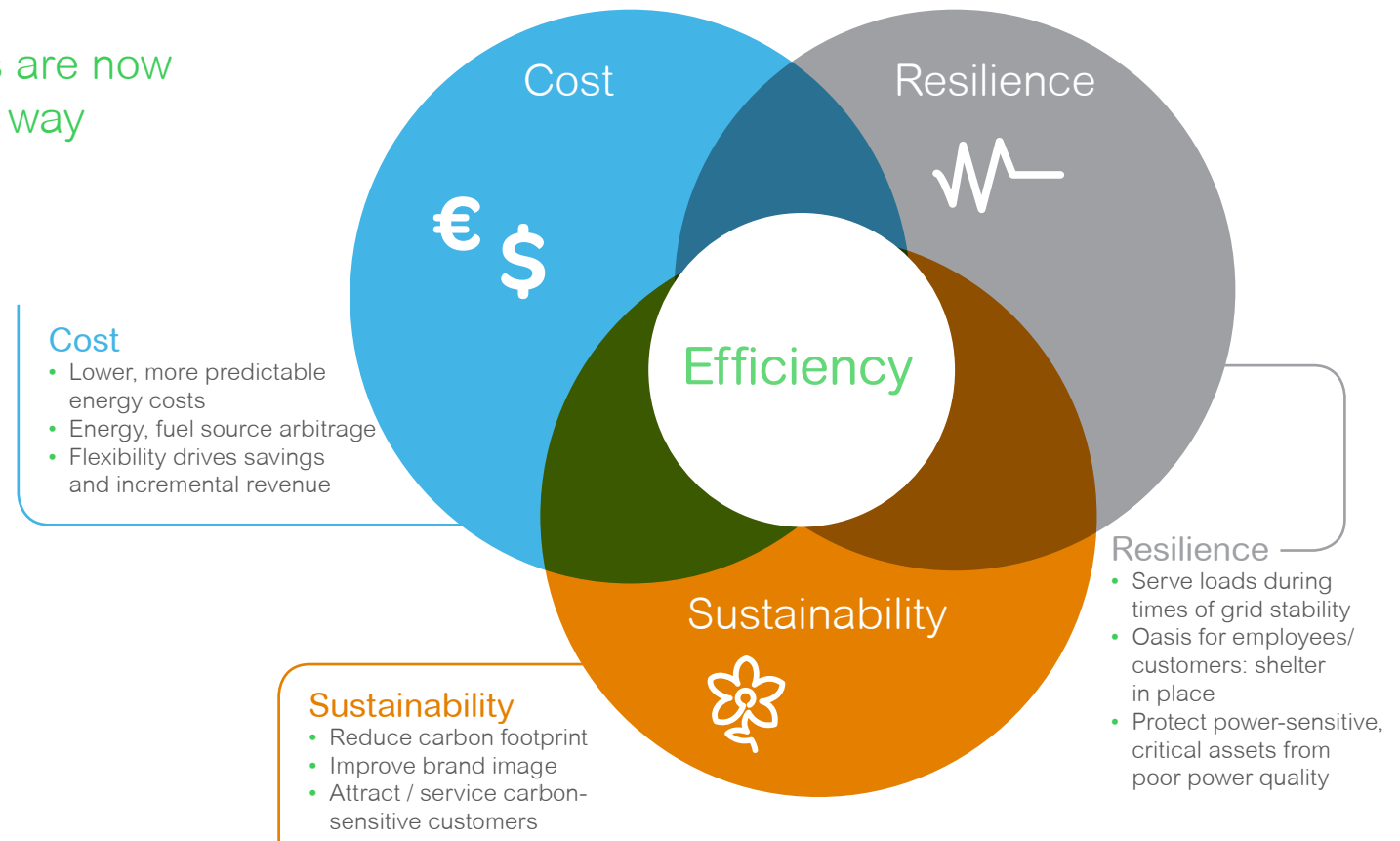
Historically-passive consumers are now thinking about energy in a new way

In the past, energy demand and consumption grew at relatively foreseeable rates. But as the IIoT continues to grow exponentially, and as the rate of technological change and innovation expands, energy demand and consumption will grow with it.

As a result, facilities are increasingly taking control of their energy systems and thinking about energy in a new way: a resource that can be resilient, less expensive, and sustainable.

“85% of S&P 500 Index® Companies Publish Sustainability Reports in 2017.

Yahoo News, March 20, 2018



IoT enabled applications for Microgrids

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Power application for Microgrid

Transform your energy into a strategic business asset

Microgrid



I want to fortify my business' energy future with proven, IoT-enabled microgrid solutions that have flexible business models.

Find out more!

Gain resilience

- **Never lose power again:** protect against extreme weather, cyberattacks, and grid instability to avoid costly downtime.

Reduce risk

- **Predictable energy prices:** best-in-class strategic partners provide Energy-as-a-Service (EaaS) with flexible governance models, enabling you to control your financial and operational risks.

Optimize energy

- **Unlock new revenue streams:** seamlessly integrate your DER and become empowered with actionable insights on when to consume, store, and sell energy for the greatest financial advantage

Increase sustainability

- **Easily quantify your carbon reduction efforts:** meet your sustainability goals, and become a leader in the new energy landscape



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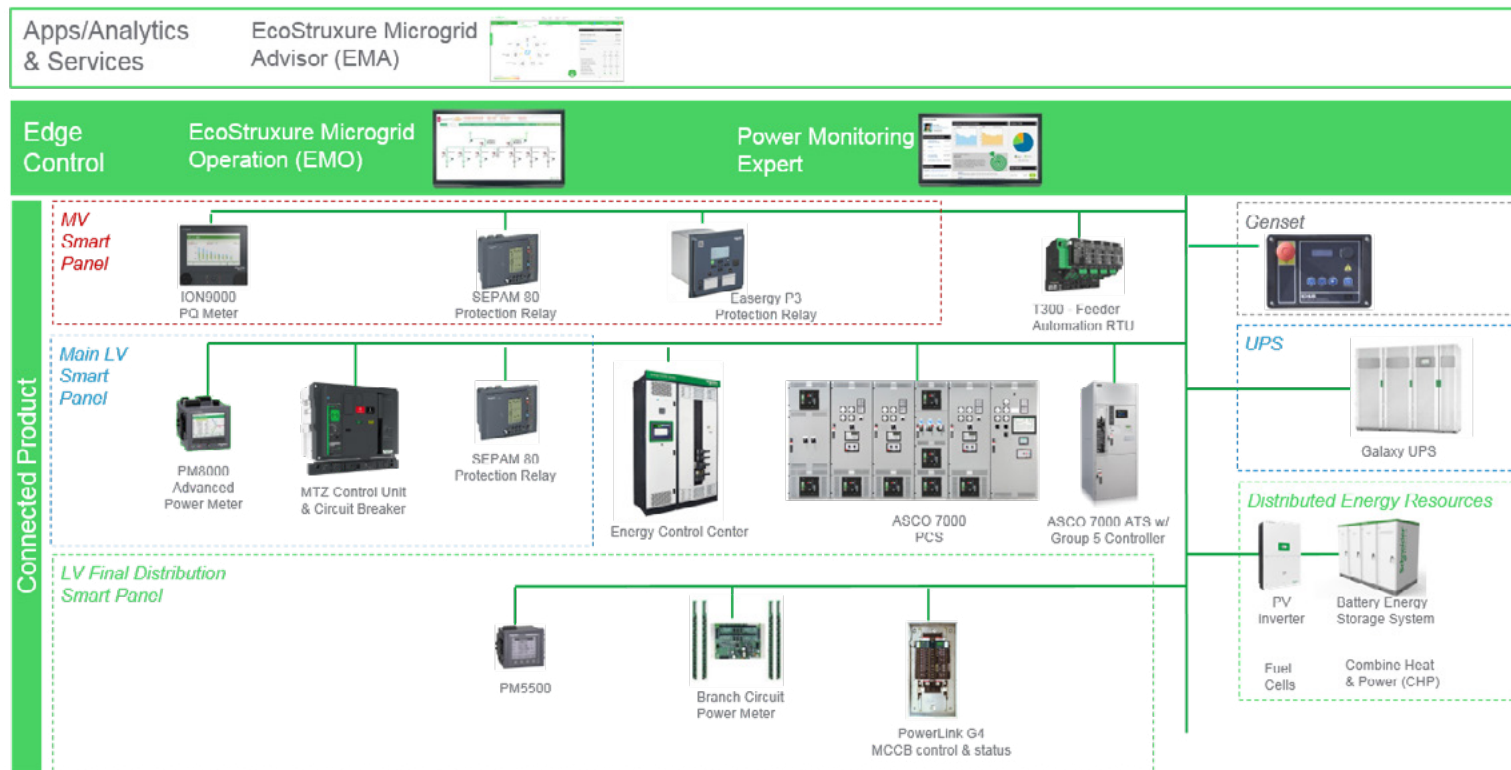


Architectures

Architecture 1

Create a more resilient, efficient, and sustainable operation (NEMA)

Use the microgrid electrical distribution network to reduce carbon footprint, protect your power-critical assets from power quality issues, and make your energy costs lower and more predictable.



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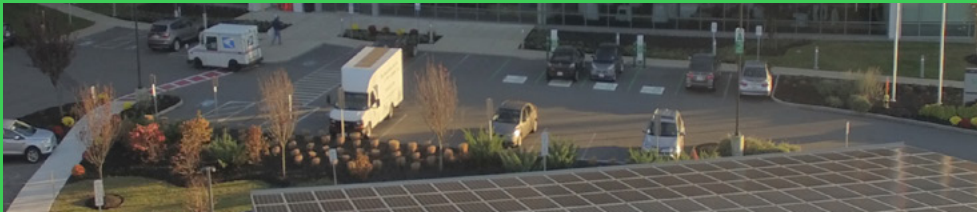
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Learn more



Video: IoT-enabled microgrids powering the digital economy



Video: EcoStruxure Power and EcoXperts deliver clean power



White paper: Bringing critical power distribution out of the dark



Contact us to start your journey.

This document presents general, non-binding information regarding the potential value that digitized power distribution products and solutions can bring to the user. Due to varying user situations and goals, Schneider Electric does not warranty or guarantee that the same or similar results represented in this document can be achieved. Please refer to Schneider Electric product and solution catalogs for actual specifications and performance.

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