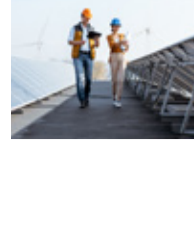
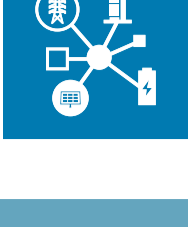


Unlocking the energy potential of MICROGRIDS



What are microgrids?

Microgrids are stand-alone electrical power systems that integrate electrical loads and two or more generating assets that can operate autonomously or "islanded" from the utility grid. Microgrids are a reliable solution to unexpected power loss by balancing variations in energy demand and usage that can also help lower energy costs and reduce carbon emissions.



Ensuring resiliency no matter what

Severe weather events—such as hurricanes, earthquakes and wildfires — are becoming increasingly more destructive with a lasting impact to the electrical grid. In response, states and municipalities are introducing numerous publicly-funded initiatives focused on improving energy resiliency to ensure that critical facilities and infrastructure stay up and running during a grid outage.



Keeping up with new energy demands

As sources of power become more renewable and uses of power become more electric, this shifting energy mix is straining the traditional power grid.

Universities, hospitals, corporations and local communities are turning to microgrids - giving them the ability to take control of their energy needs.



Energy security in the midst of cyber threats

With the rise of smart grid technology it has become a necessity for distribution and transmission network operators to safeguard themselves against cyber attacks. In fact, a U.S. Government Accountability Office (GOA) report¹ found operators "are increasingly at risk from cyber attacks" with more work to be done to thwart attacks. Eaton's Power Xpert Microgrid Controller leverages substation automation hardware with advanced cybersecurity features to keep the microgrid protected from evolving threats.



Addressing energy equity

Many low-income and disadvantaged communities are facing energy poverty - lacking access to adequate, affordable and clean energy. Recent U.S. legislation includes grants and targeted tax credits for technologies like microgrids to help provide energy equity to these vulnerable, underserved communities.



Generating revenue with flexible resources

After a site's energy needs are met and on bill cost savings are maximized, any excess energy or available generating assets can be used to earn additional revenue by offering flexibility and selling power back to the utility or virtual power plant aggregators.



Delivering on broader sustainability benefits

As many large energy users commit to accelerate the transition to a zero carbon energy infrastructure, microgrids that incorporate renewable energy sources plus energy storage will play a major role. Energy storage technology lowers your overall energy consumption from the grid by allowing you to store the clean power while also compensating for the intermittent nature of renewables.

Supporting EV charging infrastructure

By 2030 The electric vehicle (EV) market will require more than **55 million** chargers in buildings that consume at least **525 TWh** per year

As building owners consider the benefits of installing EV chargers, integrating a microgrid system at the same time can be a cost-effective approach to expand a facilities' electrical capacity in order to support the increased demand from EV charging.

Future-proofing your electrical system



To build a more flexible and cost-effective energy infrastructure for your site, it is important to consider how your power needs may change over time.

Eaton's Power Xpert Microgrid Controller offers a modular, scalable approach which allows microgrid operators to integrate existing generating assets today while planning for new assets that may be added down the road.

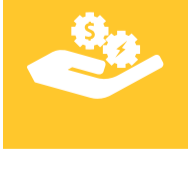
Taking advantage of government funding and clean energy incentives



Federal and state governments have introduced funding initiatives and clean energy tax incentives to promote the development of microgrids

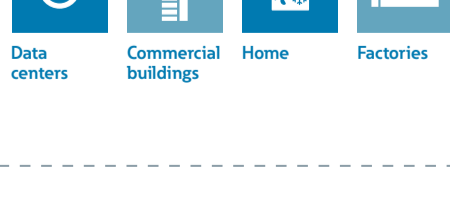


Many of these programs are highly attractive providing tax credits that cover up to 70% of eligible project costs and are now eligible for tax-exempt entities to benefit from.



In addition, Energy-as-a-Service business models are available for microgrid project financing without the up-front capital.

We're applying our Everything as a Grid approach to:



What matters: powering companies and communities that power themselves

For data centers, commercial buildings, homes, utilities and factories, our Everything as a Grid approach is working to optimize existing infrastructure, integrate renewables, offset rising energy costs and support a low-carbon energy future for all.



Find out how Eaton's Power Xpert microgrid solutions provide reliable power that delivers operational resilience, minimizes carbon emissions and reduces energy costs.

Learn more at Eaton.com/microgrid

¹United States Government Accountability Office (March 2021). Report to Congressional Requestors. Retrieved from: <https://www.gao.gov/assets/gao-21-81.pdf>

²Hoover, Nägele, Polymeneas and Sahdev (Jan 2021). How charging in buildings can power up the electric-vehicle industry. Retrieved from: <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/how-charging-in-buildings-can-power-up-the-electric-vehicle-industry>

