Challenges and opportunities for the open source microgrid industry

OSS has the potential to **democratize, standardize, and better integrate** microgrids, but the open source microgrids market is still nascent.

**Collaborative and consistent policymaking** is needed to revamp energy regulation that is outdated, fragmented, and favorable to centralized grid infrastructure.

By driving consensus on standards and fostering transparent collaboration, **open source can improve interoperability and standardization of microgrids.**

**Resistance from industry incumbents must be met with onramps to open source programs and education to address security concerns.**

The diverse group of stakeholders—from utilities to governments to communities—need a **central hub to collaborate, engage, and build the microgrid landscape.**

**Data sharing, education, and goal alignment** will support energy incumbents as they face economic hurdles and uncertainty in the adoption of microgrids.

**Data standardization, application modularity, demonstration of cost benefits, and market coordination** will support greater microgrids interoperability.

**Resistance to technical adoption and talent gaps can be diminished through a focus on education, community access, and skills development.**

**Open source models increase access to microgrids** by lowering financial barriers to entry and sharing best practices, designs, and tools.

Different components of **open source business models**, such as software, support services, training, customization, and modularity, enable innovation and optimization of microgrids.

**Open source accelerates microgrid design and time-to-market,** enabling better modularity, efficiencies, and open data sharing.

**Open source enables market innovation toward energy resilience at scale** via open source-enabled business models, security, talent pipelines, and cost reductions.

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