

AT A GLANCE

Making the Switch

Navigating the smart grid transition



US power outages
cost businesses

\$150 bn per year

Power grids worldwide are under pressure from a more volatile climate, growing demand for renewable energy, and rising urbanization.



Global population living
in urban areas reaching

~2.5 bn by 2025

Traditional grid technology holds back the integration of distributed energy sources and restricts consumer energy contributions. With two-thirds of the global population expected to live in urban areas by 2050, energy demand will only increase the load on existing infrastructure.

As with any period of transition, modernizing grids comes with challenges. But, in a world increasingly defined by disruption, smart grids equipped with advanced technologies are necessary to tackle complex global risks. Planning for short-term implementation pains while building for long-term value capture can give businesses a competitive advantage.

Benefits of smart grid technologies

1/3

of energy bill payers in the UK prefer a flexible time-of-use tariff approach. Smart grid technology can provide consumers with a range of real-time, flexible customer services.

\$20 bn

estimated market size for data monetization in the utility sector by 2030. Smart meters can allow business to collect data more frequently.

41%

savings provided by smart charging technologies for residential EVs. Vehicle-to-grid (V2G) technologies can facilitate the ability to send surplus power back into the grid at cheaper rates.

\$1 bn

in annual grid benefits provided by vehicle-to-grid technologies (V2G) in California in 2030. Time-of-use charging can help reduce grid operating costs, emissions and energy use inefficiencies.

Transition challenges on the horizon

4.6 mn

average cost of a data breach in the energy sector. Technological advancements in the smart grid will also be accompanied by increased cyber risks.

40%

of respondents do not trust businesses in the energy industry to do "what is right". Resistance from communities can hinder smart grid projects.

50%

of US energy sector employees are 45+ years old. With an ageing workforce, the energy industry will have to invest in reskilling and upskilling initiatives.

70%

of large transformer facilities and power distribution lines in the US are older than 25 years. Investors may prefer fully capitalizing on legacy grid infrastructure than quickly transitioning to smart grid technologies.

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