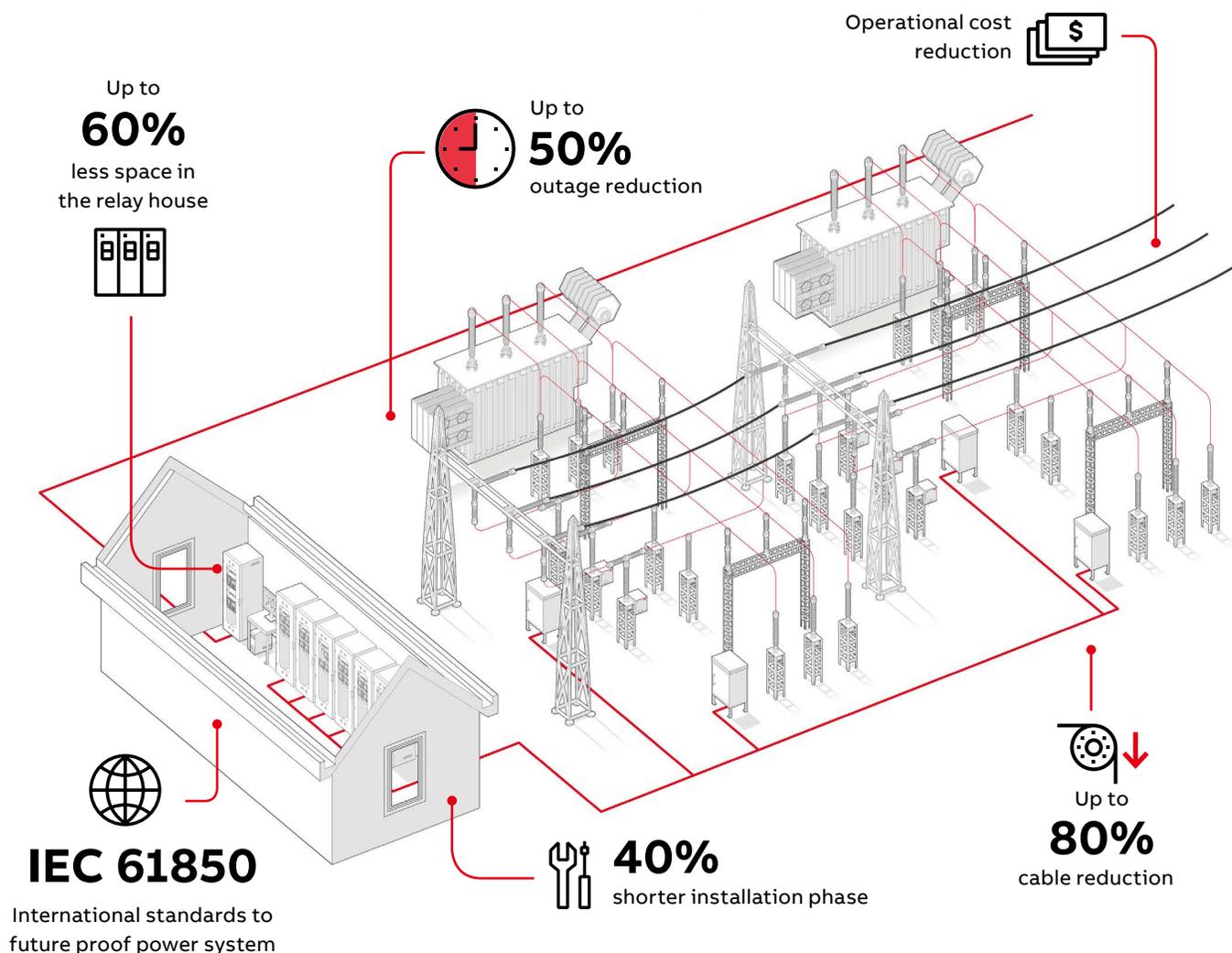


ABB POWER GRIDS

# Your data centers deserve reliable, sustainable, and smart power

## Smart data center substations



In today's society, consumers and businesses expect to receive data and information in seconds, with no interruptions, 24/7. This mission critical requirement creates an enormous demand for data centers.

As power demand grows at an ever-increasing rate, the requirements for clean, reliable and smart power to support data center operations are expanding as well.

Whether you need data center energy solutions for cloud, colocation, telecommunication or financial services, ABB Power Grids' solutions can be tailored to your specific needs and scaled to your demand.

## Smart data center substation vs. traditional substation



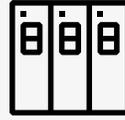
### Smaller switchyard

Digital GIS takes up 30% less physical space than a traditional substation by using non-conventional instrument transformers (NCITs) for current, voltage and integrating local control cubicle (LCCs) with GIS switchgear.



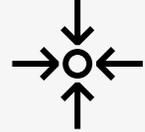
### Fewer copper cables

By replacing copper cables with fiber optics, you reduce the number of physical connections by 50% by going digital. For typical data center substations, that's a cost savings of roughly 4,000 lbs of copper control wires.



### Space reduction

Relay rooms in digital substations take up 60% less space than traditional substations. Modern IEDs are smaller, so you can fit more IEDs per rack as well as multi-functional, so one unit can replace multiple older relays.



### Reduced carbon footprint

More compact substations mean less materials and foundation needed during installation, meaning a reduced carbon footprint.

Smart, reliable and clean power starts with smart substation designs:

- **Reduce design cycle and time to market with our EPC and power consulting services to deliver smaller and more compact substations.** Substation products include high voltage GIS, high voltage AIS, power transformers, medium voltage/eHouse, substation automation & controls
- Discover next-generation digital substations that are safer, more sustainable, and smarter

Sustainable operational excellence with asset performance management:

- Minimize operating costs with condition-based maintenance program and increase substation reliability with less downtime
- Reduce your operating and maintenance costs with advanced lifecycle services: from condition assessment to lifetime extensions and increased system reliability

The ABB Power Grids difference – What sets us apart from our competitors:

- Work with a single point-of-contact for the entire project, to give you flexibility to choose from AIS to GIS to containerized, or mobile systems
- Take advantage of a complete portfolio of transformers, high voltage products, and substation automation
- 36KV to 345KV full range of solutions to connect any utility or power provider
- Minimize CAPEX/OPEX from installation to end-of life