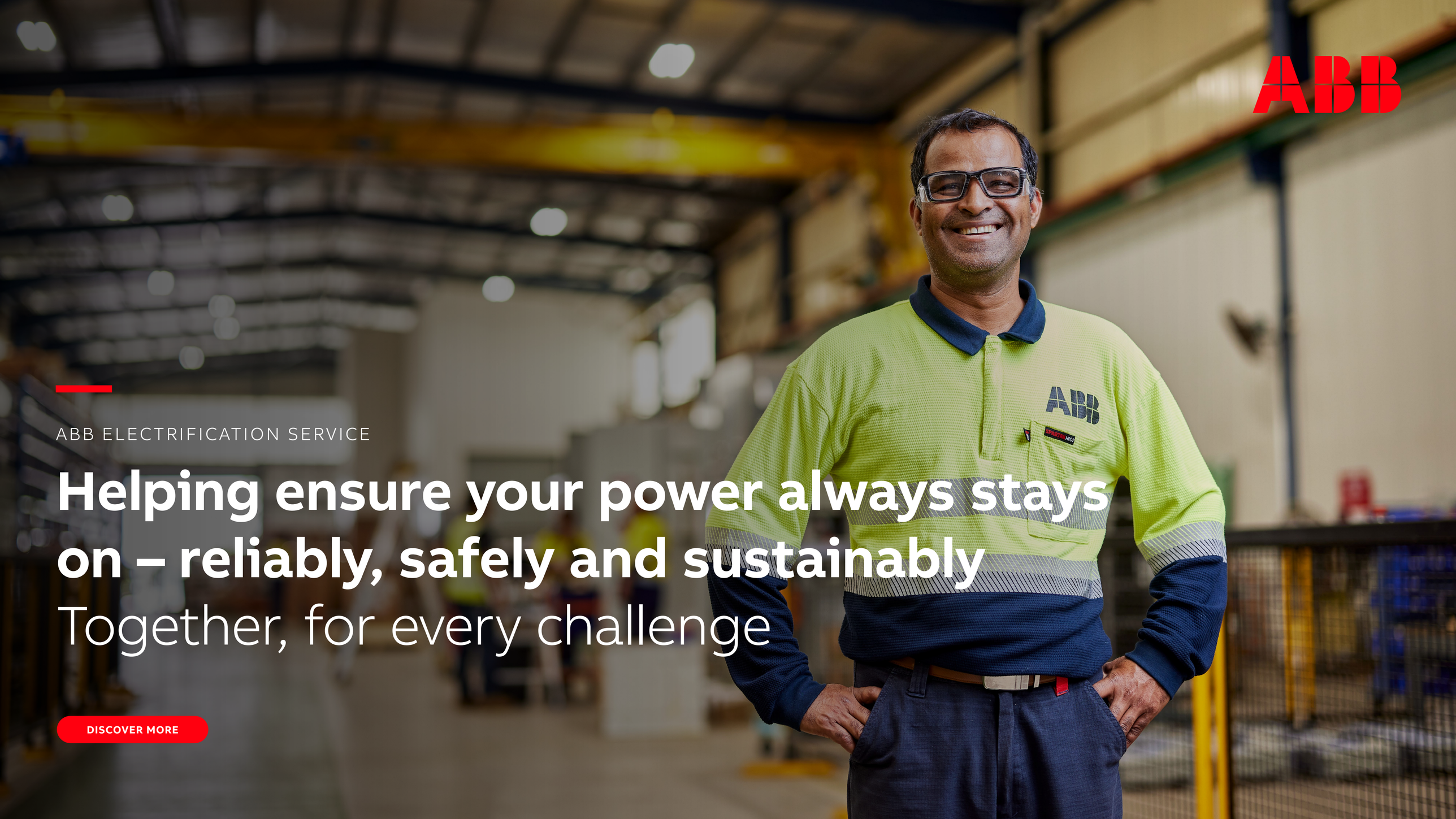

ABB ELECTRIFICATION SERVICE

Helping ensure your power always stays on – reliably, safely and sustainably

Together, for every challenge

DISCOVER MORE

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01 Introduction

Together, for every challenge

At ABB Electrification Service, we're not just committed to solving challenges, we're committed to solving them together.

Through our global team of experts and extensive portfolio covering Care, Modernization and Advisory services, we're there for you whatever comes your way. From day-to-day operations to strategic innovations, our teamwork turns challenges into opportunities and ambitions into realities.

As a global leader in electrification service, our innovative solutions elevate the safety, reliability and efficiency of electrical systems across the globe – transforming the way the world powers its future.

Together, we're committed to electrifying our world in a safe, smart and sustainable way, by helping increase maximum uptime, productivity and profitability for our customers, while accelerating your journey to net zero CO2 emissions.

We do this by:

01 Enhancing the **availability, reliability** and **efficiency** of electrical products and installations, helping you **reduce carbon emissions** and **achieve energy efficiency targets.**

02 **Innovating service delivery** through digital technologies such as **Augmented Reality and Artificial Intelligence** for remote assistance to advanced diagnostics for **monitoring the health of assets and avoid failures.**

03 Increasing the **predictability of your assets** through **digital solutions** that monitor the **health of assets** to **avoid failures** and i**mprove and optimize operations.**

04 **Upgrading outdated components** so that existing electrical equipment **lasts much longer, uses minimal energy in production** and **helps prevent downtime from breakdowns.**

Global presence, local knowledge

Powering thousands in utilities, data centers, oil & gas, buildings, renewables and beyond, our dynamic portfolio spans low- to medium voltage equipment. We help ensure unparalleled power availability, reliability, sustainability and predictability – delivering localized, responsive service to customers in every corner of the world.

With ABB Electrification Service, energy works smarter, not harder.

3,800+
service professionals

50+
countries

5,900
variants of service solutions for modernization needs such as retrofits and upgrades:

1,400+ medium voltage solutions

4,500+ low voltage solutions

Every challenge, every opportunity, together

We work with you to make sure you're always making the most of your infrastructure. From the smallest spare parts to the biggest technological upgrade, we're here for you.

By helping ensure the availability and reliability of power through our innovative services and technologies, we're able to help improve performance, extend equipment lifetime and deliver new levels of operational and sustainable efficiency.

We do this across three different services:

02 Care

24/7 support

We help maintain and support electrical systems, helping ensure they operate efficiently, reliably and safely. These services help extend the life of equipment, enhancing sustainability performances, reducing downtime and improving safety standards.

REDUCED TOTAL COST OF OWNERSHIP

Up to 40% saving on operational maintenance cost by increasing maintenance intervals without affecting safety and reliability.

MAXIMIZE UPTIME

Up to 70% potential asset failure causes detected in the early stage.

IMPROVE SAFETY

Up to 60% reduction of preventive maintenance, reducing the amount of time personnel spend near equipment.

Installation & commissioning

We can streamline your power systems from the very start. With installation and commissioning, we can help ensure lower risks, faster startups and peak performance – slashing operational costs while increasing reliability and safety.

Installation services:
- Verification of the foundation frame and equipment room requirements
- Equipment assembly and transport section connection according to the respective manual
- Installation of bushings and busbars, helping ensuresecure and reliable electrical connections
- Installation of top-mounted boxes when applicable
- Connection of control cables and interconnection bundles
- Connection of the grounding system
- Pressure relief duct assembly, when applicable, according to specific assembly manual
- Cable connections, if included in the scope of work

Pre-commissioning tests:
- Pre-commissioning conductivity and insulation tests: Conductivity test on primary circuits; Insulation test; Power frequency withstand test (High voltage test on primary circuits)
- Pre-commissioning functional tests: Primary injection and polarity test for CTs; Primary injection and polarity test for VTs; Insulation resistance test on auxiliary circuits; Function test; general check of the equipment overall status

Commissioning tests:
- Set protection parameters given by the customer
- Protection relay test of main protection parameters by secondary injection
- Functional test: confirm correct operation of control panel and apparatus, including mechanical and electrical interlocks
- Interface tests: confirm correct operation of the panel upstream/downstream interlocks, external input and output hardwired signals
- Communication interface test, based on agreed scope
- Startup assistance (support to equipment first energization), based on agreed scope

FIND OUT MORE

Service agreements

Power Care is the most convenient and efficient way to help ensure low- and medium voltage equipment availability and reliability. It encompasses a variety of business needs, from skills development, condition assessment and regular maintenance to emergency assistance and sustainability services.

We provide a variety of service packages with customizable agreements to suit your needs.

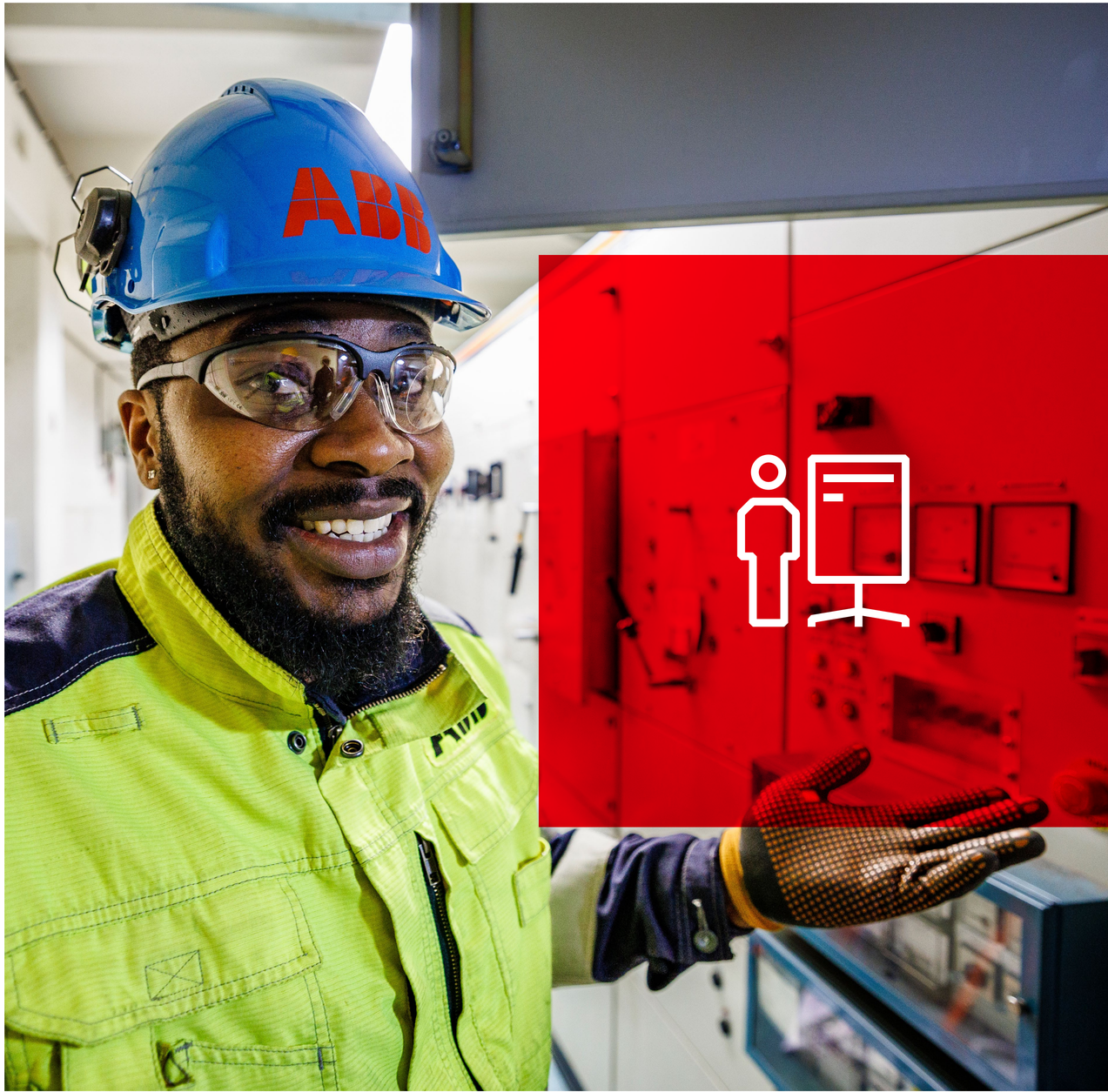
FIND OUT MORE

Training

With ABB training programs, you can improve your team’s expertise in managing and maintaining electrical installations – helping ensure a self-reliant approach, maintenance cost savings and operational excellence.

A large selection of specialized training programs is available, and training programs can be tailored to meet the specific needs of customers. Developed for operators, engineers and technicians, we help them become proficient in the application, installation, operation, maintenance, testing and commissioning of ABB switchgear, circuit breakers, relays and related components and upgrades.

FIND OUT MORE



Maintenance

When looking at today’s maintenance strategies, preventive maintenance is the most common method used. A preventive maintenance approach offers higher reliability and increased safety for installed power products.

We offer tailor-made maintenance strategies to maximize plant reliability and optimize maintenance frequency. From initial inspections and analysis to mechanical and operational evaluations, troubleshooting, and continuous monitoring for proactive maintenance planning, our certified experts partner with you to develop targeted and cost-effective maintenance strategies to meet your needs.

FIND OUT MORE

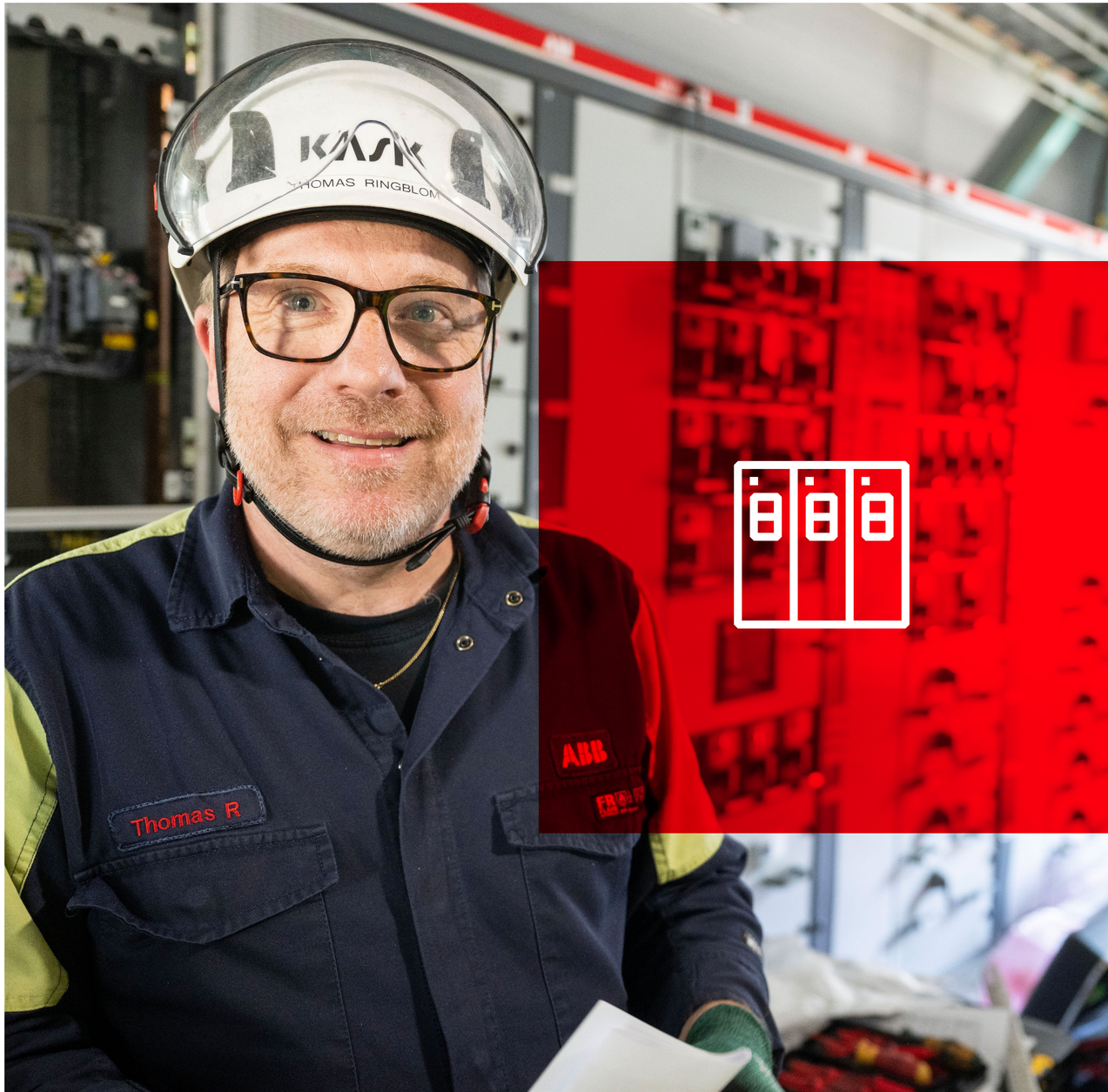
Spare parts

Need spare parts? Our team can provide you with essential spares and consumables for quick, efficient upkeep. Plus, with original ABB parts you'll have unparalleled reliability and safety, helping ensure your system keeps working at its best.

Using replacement parts from third-party sources can lead to catastrophic failures. These parts often have an unknown history and may introduce substandard components that put your plant's electrical system at risk.

At ABB, every spare part meets our rigorous quality standards thanks to precisely defined manufacturer specifications, comprehensive examinations, and thorough type testing. This helps ensure that each component not only aligns with our high-quality criteria but also reflects the latest technical advancements.

FIND OUT MORE



On-demand and emergency services

Get expert support anytime, anywhere. With our mix of on-site help, Augmented Reality remote support and easy self-troubleshooting guides, you will always have the guidance you need. Our unmatched technical support and fast repairs come from a global network of ABB certified product experts ready to help you 24/7. They will provide you with quick, expert repairs in emergencies or during any planned or unexpected downtime. Our repairs use officially-approved parts made to the latest design standards.

FIND OUT MORE

Advanced digital services
We can support you in digitalizing your assets and, with analyzation, we can transition you to a predictive maintenance strategy. This approach minimizes the likelihood of failures and shutdowns while extending asset lifespans and reduces total operational expenses.

FIND OUT MORE

Sustainability
Environmental and social sustainability is at the core of every service activity we offer. From extending equipment lifetime and efficiency to improving safety standards and sustainability practices, Care services help ensure optimal sustainability performances. We support our customers in measuring the environmental impact of their products and services and provide you with solutions that reduce CO2 emissions and overall environmental footprint.

03 Modernization

Helping your oldest infrastructure live on

We upgrade and update existing electrical infrastructure to enhance performance, integrate advanced technologies and comply with current standards – **helping customers adapt** to evolving technological and regulatory landscapes while **optimizing operational efficiency** and **sustainability.**

Retrofits

With just a few tweaks to your current switchgear, retrofit kits can upgrade your electrical system sustainably. If you're looking to modernize or get more life out of your systems with the latest technology, our experts will find the best solutions for you.

Retrofitting replaces outdated parts, like old circuit breakers, with smarter, more advanced systems. It not only boosts your energy handling and safety, but also reduces costs and carbon emissions by updating parts instead of swapping out the whole setup.

Thanks to our extensive experience, both globally and locally, we're trusted for quickly and effectively carrying out retrofit projects. With over 5,900 retrofit options, our team can help boost your equipment's performance, productivity and sustainability, potentially extending its life by up to 30 years.

Our services are also available for systems and devices that were originally provided by other manufacturers, as well as for products whose manufacturers no longer exist.

FIND OUT MORE

Upgrades

ABB offers upgrade services to **evolve or upgrade the existing system to the next generation hardware and software.** Our upgrade solutions are designed to **enhance reliability** and **extend the operational life** of switchgear while **minimizing investment and downtime.** We achieve this by replacing outdated and obsolete components and upgrading the overall system functionality.

During an upgrade, the core elements of your switchgear – such as the frame, bus bars, mechanical structure, and power cables – **remain intact while we focus on replacing or adding new electronic and communication components.**

FIND OUT MORE

ABB supports customers with a range of upgrade options:

01

Safety upgrade: An arc flash is one of the most hazardous events in electrical installations, posing serious risks to both people and equipment. The time it takes to interrupt the arc is crucial, as it is directly proportional to the energy released during the incident. This energy determines the extent of damage caused by an arc flash. ABB leads the way in electrical safety with the development of advanced solutions, including a top-tier optical arc flash mitigation device. This device boasts the fastest reaction time in the industry, clearing internal arc faults in less than 4 milliseconds.

02

Performance upgrades: As power systems become more interconnected and line kVA ratings rise, distribution switchboards are increasingly likely to face unacceptably high short-circuit currents. ABB addresses this challenge with the world's fastest switching device, the "I_s-limiter." This fast-acting device uses a small charge to open the main conductor, which typically handles high operating currents and commutates the current to a parallel fuse with high breaking capacity. This action effectively limits the short-circuit current right at its initial surge.

03

Digital upgrades: On-premise condition monitoring helps ensure that analyzed data remains within the plant's operational systems. By integrating ABB Ability™ Condition Monitoring for electrical systems on-premise, plants gain significant value through enhanced condition-based capabilities. This helps increase uptime and reduce maintenance costs. Furthermore, ABB's solutions simplify the technological upgrade of electrical distribution systems. They facilitate the integration of solutions like ABB Ability™ Asset Manager and the ABB Cloud platform into existing installations. These tools provide a real-time understanding of energy consumption and pinpoint areas for improvement, making them straightforward and beneficial additions to any facility.

Replacements

At ABB, we're committed to continuously enhancing the design of our heritage brand products to protect your investments well beyond their initial manufacturing life cycles. We keep our heritage brand products available for sale until a superior or equivalent alternative is developed. Our commitment is to support these products for as long as there is significant customer demand by providing suitable replacement options.

Replacing medium and low voltage products or systems with the same model is a trusted process. It involves removing the old equipment and seamlessly installing a new or similar model in its place, helping ensure all connections, settings and specifications are perfectly matched. Choosing the same model guarantees compatibility and interoperability, reducing the need for further adjustments to your existing infrastructure or operational procedures.

This strategy is particularly effective when the current equipment is at the end of its service life or is underperforming due to age. Opting for an exact replacement simplifies maintenance, provides continuity, and upholds the reliability of your electrical system. Additionally, updating to the latest version of the same model makes it easier for maintenance teams to manage the equipment, as it minimizes the learning curve associated with new systems.

Our skilled service team is well-equipped to assess the availability of older products and recommend the most technical and commercially convenient solutions. If a direct replacement is not available, our team will guide you through the alternatives so you continue to receive the best possible support and value from ABB.

FIND OUT MORE

End-of-life services

At ABB Electrification Service, we recognize the need to help customers address the end-of-life phase of your installed base. We partner with you to enable circularity and a focus on sustainability through responsible decommissioning, disposal and recycling of any equipment, whether it’s from ABB or other manufacturers. Our “take-back” program is designed to promote safety and protect the environment.

We provide a comprehensive life-cycle management service that includes effective migration and obsolescence planning. This service also encompasses a replacement procedure that complies with all local environmental laws, regulations and community expectations, so that the disposal of products is conducted responsibly.

FIND OUT MORE

04 Advisory

With you every step of the way

Advisory Services help you start your sustainability journey on the right foot by leveraging our electrification expertise to build a foundation of reliability, safety and energy efficiency on which all other operational technology is based.

Our services provide insights and advice that is rooted in diligent data collection. The transparency and granularity of this data allows us to make recommendations on changing or upgrading our customers' digital and operational infrastructure, to optimize energy usage and minimize environmental impact.

We provide expert guidance on energy management, sustainability and digital transformation strategies, helping you do the right thing at the right time. With our assistance, customers are able to make informed decisions to improve energy efficiency, reduce environmental impact and leverage digital technologies for better operational insights and control.

FIND OUT MORE

01

Reliability

- **Electrical system health checks:** Offering cost savings, risk mitigation and access to industry best practices through comprehensive assessments, digital maturity, and operational benchmarking.
- **Power systems studies:** Leveraging over 100 years of expertise, we will conduct essential power system studies to increase system reliability under all conditions, offering maximum uptime, cost savings and informed decision-making for system expansion and upgrades.

02

Safety and security

- **Increasing system safety:** We will enhance your system through assessments, arc flash risk analysis and safety training that complies with regulations and enhances your reputation by prioritizing responsible business practices.
- **Cybersecurity risk management:** Our cybersecurity experts assess your operational technology systems to recommend improvements for compliance, and how to navigate the regulatory landscape, protecting your operations from cyber threats.

03

Energy and carbon

We help businesses achieve sustainability and net zero goals through energy audits, monitoring, and advising on sustainable supply chain management – aiming for significant emission reduction and energy optimization.

Through our energy assessments, we combine production and energy data to accelerate the optimization of energy intensity in industrial facilities and deliver a fast return on investment. We can also support you with real-time carbon monitoring across all three emission scopes: direct, indirect and value chain emissions – helping you correctly calculate CO2 reductions for carbon credit reporting.

04 Success in action

Companies we’re helping build a better tomorrow

See how we’ve delivered impactful services and technological enhancements, focusing on sustainability, efficiency improvements and reliability across various sectors.

EnBW, Germany

EnBW, one of Europe’s largest energy companies, partnered with ABB to modernize their electrical system by upgrading their switchgear with cutting-edge digital switchgear solutions, not only helping with critical energy production efficiency but also elevating safety, sustainability and predictability at the plant.

READ MORE

Meilahti Hospital Area, Finland

By upgrading the hospital’s power systems, adding next-gen vacuum circuit breakers to cut the use of SF6 gas and enhancing equipment life, we help ensure reliable power for over 500,000 patients every year.

READ MORE

Subaru of Indiana Automotive (SIA), United States

Since 1988, we’ve worked with SIA to keep their auto manufacturing plant powered safely and sustainably, while production jumped from 4,087 cars to 298,837. We also helped SIA become the first U.S. auto plant to achieve zero landfill, showing their dedication to sustainability.

READ MORE

Steel Dynamics, USA

Steel Dynamics Heartland Division teamed up with ABB to modernize their steel processing operations with smart power and control relays that help ensure reliable power supply and quick response to any anomalies, protecting SDI Heartland's operations from unexpected interruptions.

READ MORE

City of Cape Town, South Africa

ABB partnered with the City of Cape Town to modernize their electrical infrastructure that provides power to 4.8 million residents of the Western Cape. Thanks to ABB's full-circle end-of-life service, the old SF6 circuit breakers and gases were disposed of safely and sustainably.

READ MORE

Billerud, Sweden

The world's most northerly paper mill, Billerud in Karlsborg, Sweden, has relied on ABB technology for many years to help ensure production runs around the clock. With the assistance of our local Service team, Billerud upgraded its aging switchgear to give it a new lease on life and enhance the reliability, safety and sustainability of the plant's electricity needs.

READ MORE

Kemijoki Oy, Finland

Two of Finland's major hydro power plants operated by Kemijoki Oy, located in the freezing Arctic Circle, are now SF6 'greenhouse gas' free thanks to an ABB turn-key generator circuit breaker retrofit that gears them up for a more resource-efficient future.

READ MORE

Nordværk, Denmark

Nordværk, one of Europe's major waste to energy plants, modernized its aging circuit breaker with minimal downtime, thanks to ABB's innovative Direct Replacement solution. This not only meant minimal downtime but also extended the lifespan of the system, keeping it live and efficient for as long as possible and avoiding CO2 emissions and raw materials usage.

READ MORE

Jämtkraft, Sweden

ABB future-proofed operations for Swedish utility Jämtkraft by upgrading switchgear with digital components, extending the life of the switchgear, reducing maintenance costs and contributing to Jämtkraft's sustainability goals by upgrading rather than replacing the whole switchgear.

READ MORE

Mälarenergi's cogeneration plant, Sweden

Our retrofit at Mälarenergi in Västerås, one of Sweden's largest cogeneration plants, boosts efficiency, cuts CO2 emissions, and extends equipment life, supporting their goal for net-zero CO2 emissions.

READ MORE

Finkl Steel®, Canada

We upgraded Fink Steels's furnace circuit breaker in Quebec, slashing maintenance costs and enhancing production efficiency. This shift to a single, advanced circuit breaker reduces total ownership costs by nearly 35%, marking a move towards maintenance-free operations and minimizing environmental impact.

READ MORE

ENGIE, Belgium

Belgium energy supplier Engie embraces the circular economy with a retrofit switchgear upgrade that also reduces total cost of ownership. Modernization of aging circuit breakers with the latest vacuum technology delivers a more efficient and reliable energy supply, helping provide safer and more future-proof energy power plants.

READ MORE

LondonEnergy, UK

We upgraded an energy-from-waste facility in North London, serving 1.9 million residents. The upgrade, involving a modern digital protection and control scheme for five generators, helps sustain energy production and waste processing efficiently.

READ MORE

Käppala Wastewater Treatment Plant, Sweden

For the Käppala plant treating wastewater for 650,000 residents daily, we replaced old circuit breakers with SACE® Emax 2 circuit breakers, enabling preventive maintenance and remote monitoring. This upgrade was achieved with minimal downtime, significantly enhancing plant reliability.

READ MORE

INPEX Ichthys LNG project, Australia

Collaborative planning was the key to success on the massive electrical maintenance shutdown at the INPEX Ichthys floating offshore facilities in the Timor Sea. ABB was the chosen partner on the first major inspection and testing of the systems that form the electrical backbone of extraction and offshore processing facility.

READ MORE

05 Connect with us

ABB Electrification Service

Get ready to improve the availability, reliability, predictability and sustainability of your assets.

Whatever your challenge, we’re here for you.

CONNECT WITH AN ABB EXPERT

VISIT ABB’S ELECTRIFICATION SERVICE WEBSITE