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# **ABB Power Generation**

## Empowering tomorrow





**The future of power generation is driven by distributed, weather-dependent, and complex systems. Embracing the evolving energy landscape presents an excellent opportunity to:**



**harness the full potential of digitalization**



**unlock new levels of efficiency and innovation**



**reduce Levelized Cost of Electricity (LCOE)**

## The Future of Power Generation

In today's rapidly evolving energy landscape, power-generation companies are facing multiple challenges in their quest to drive down the Levelized Cost of Electricity. Unlocking the potential of decentralization, decarbonization and digitalization depends on seamlessly aligning people, processes, and technology.



By addressing these challenges with innovative solutions and strategic planning, power-generation companies can continue to provide reliable, sustainable, and secure energy in an ever-changing world, while optimizing the Levelized Cost of Electricity.



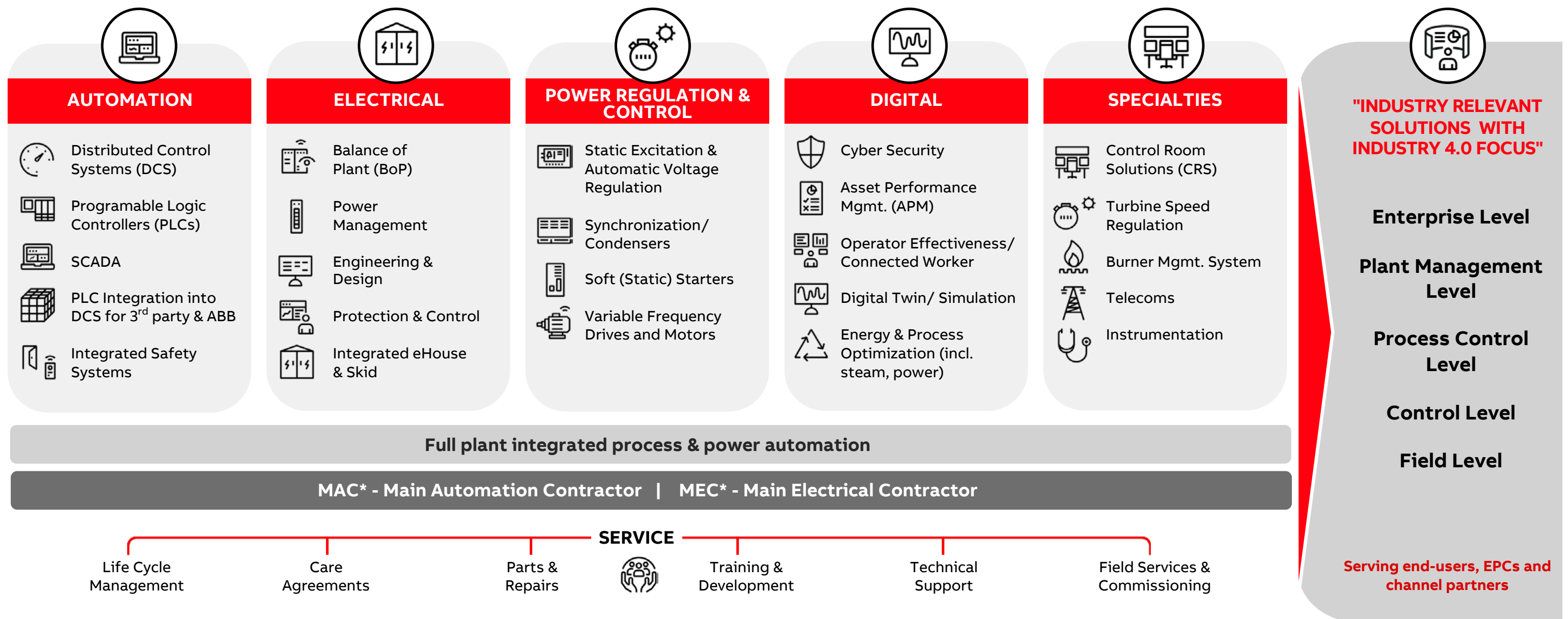


# ABB Power Generation focused segments

Helping you drive down LCOE with reliable and predictable technology



# Solutions, products and services for your 3D transformation journey with profitability & predictability goals



MAC: assumes full scope responsibility for the design, engineering, implementation, delivery, commissioning and start-up of the automation system

MEC: assumes full scope responsibility for the design, engineering, implementation, delivery, commissioning and start-up of the electrical system

"3D": - Decentralization, Decarbonization and Digitalization



# ABB’s Integrated Solutions for Power Generation

ABB supports power generation companies at every stage of their projects, ensuring efficient, reliable, and sustainable outcomes. Our comprehensive offerings cover the entire project lifecycle, from feasibility evaluation to operations, making your vision a reality.

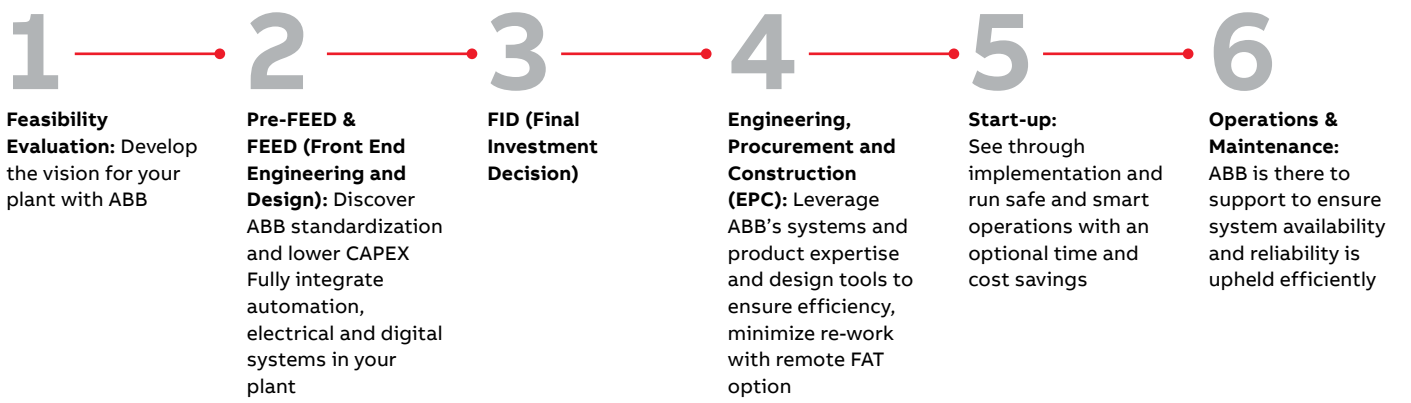
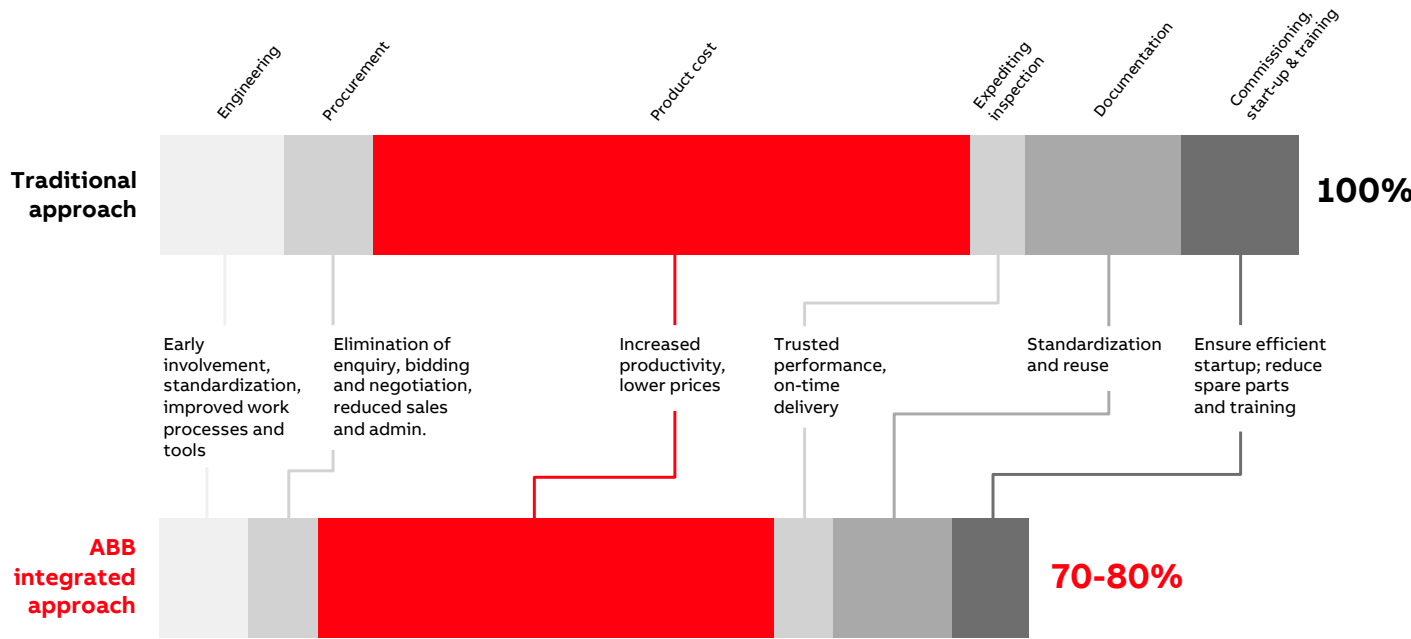


ABB Integrated Solution implementation – ECTD (project execution plan)



# Integrated, comprehensive, power-generation specialized portfolio

From concept to build and beyond, ABB’s integrated offerings ensure that your power generation projects are executed efficiently, reliably, and sustainably, turning your vision into reality.



**Automation**  
ABB’s Automation solutions lead the industry in plant-level digitalization, transforming 24/7 operations. Our control architecture enhances productivity, asset utilization, and production quality, while ensuring safety and cyber security. By optimizing raw material use, energy levels, and waste, ABB DCS solutions reduce environmental impact, maximizing plant efficiency and reliability.



**Electrical**  
ABB’s Modular solutions integrate automation and electrical systems to enhance energy efficiency and connectivity. With in-house expertise, ABB offers point and end-to-end solutions, including pre-fabricated e-houses. Our global team collaborates on design, project management, and manufacturing, ensuring comprehensive, customized solutions that address customer needs from concept to commissioning.



**Power regulation & control**  
ABB provides a comprehensive range of excitation solutions for generators and motors, supporting 5A to 12 kA. With a 6th generation core synchronization portfolio, digital services, and a global support network, ABB leads the market with over 40,000 systems installed, offering life cycle services and agreements.



**Digital**  
ABB’s digital vision delivers comprehensive value across the digital value chain, combining industry expertise with advanced technologies to enhance sustainability, productivity, and security. Our integrated digital solutions empower power generation plants to achieve operational excellence, asset performance, safety, and supply chain optimization in a new business environment.



## Services

ABB excels as both a **Main Automation Contractor** and a **Main Electrical Contractor**, delivering comprehensive solutions that integrate seamlessly into your operations. Our expertise ensures optimized performance and efficiency. Coupled with our **Service support**, ABB helps maximize asset reliability.

### Main Automation Contractor

ABB has extensive experience as the Main Automation Contractor (MAC) for global projects, managing automation/instrumentation selection, manufacturing, installation, commissioning, and after-sales support. By involving ABB early in the project, we can help you optimize scope definition, CAPEX and OPEX, and project schedule.

### Main Electrical Contractor

As a Main Electrical Contractor (MEC), ABB offers comprehensive project planning and design, ensuring that all electrical plans meet regulatory standards and client specifications. We handle the procurement and installation of electrical systems, integrating them seamlessly with other project components.

Our **project management expertise** helps ensure timely, cost-effective completion, while our **maintenance and support services** deliver long-term system reliability.




### ABB Care

Providing lifelong support for your assets, ABB Care customizes its services to align with your specific maintenance and lifecycle strategies. ABB Care's customizable service levels, including optional packages for various power plants, simplify service delivery, control costs, extend asset life, and enhance the functionality of your automation and electrical assets.







# Why ABB




**Engineering expertise**  
140+ years of experience in engineering and integrating systems for power generation firms.



**ABB Ability™ systems**  
#1 in automation technology for 20+ years with Symphony® Plus and 800xA



**Broad portfolio**  
A broad portfolio of motors, drives, instrumentation and electrical products & solutions second to none.



**Global experience & support**  
More than 7,000 projects across the globe.

## Proven results



**Solar**  
ABB technology automates giant solar energy farm in Abu Dhabi, UAE  
[READ MORE >](#)



**Synchronous Condensers**  
ABB's integrated technology stabilizes power grid as Spanish islands transition to green energy  
[READ MORE >](#)



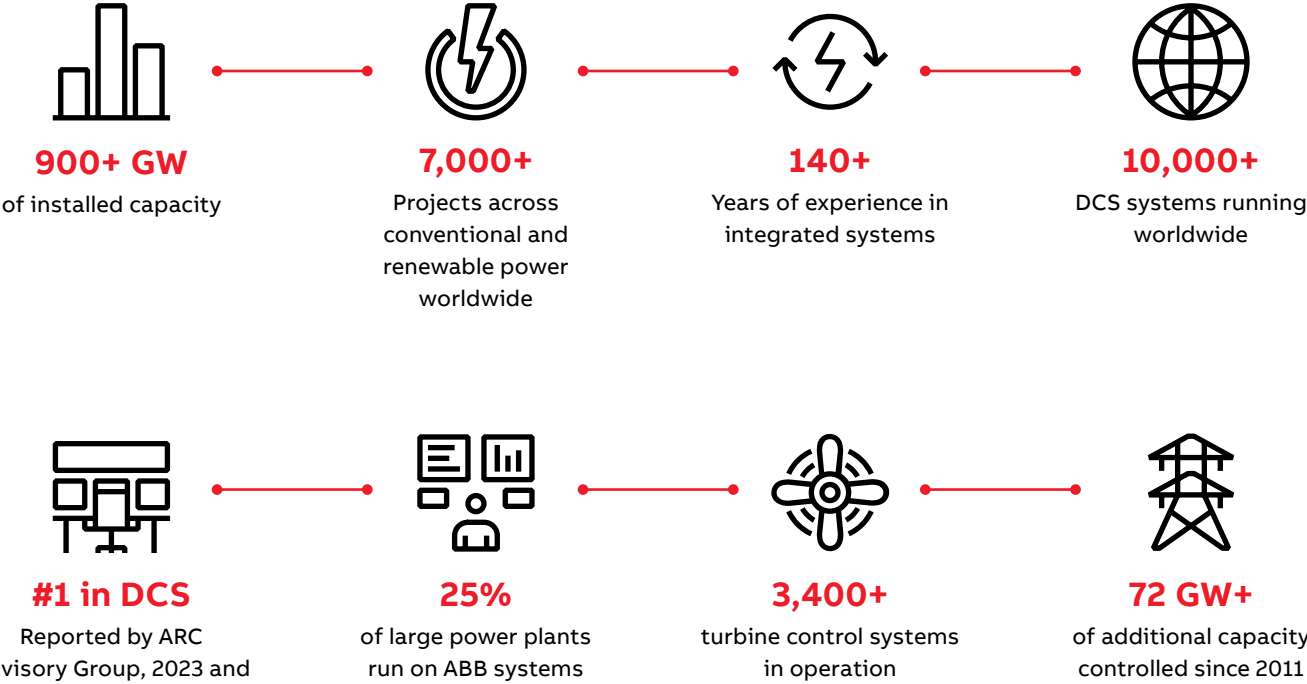
**Cyber Security**  
ABB upgrades control systems at two of EDP's power plants in Spain  
[READ MORE >](#)



**Biomass**  
ABB supports Japan's growing biomass power market with ninth automation order  
[READ MORE >](#)

# ABB Energy Industries in power generation

## A track-record of successes







**Ready to empower your project  
with proven solutions?**

**SPEAK TO AN ABB EXPERT**

**ABB Inc.**  
Operating in more than 100 countries.

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Information to come

