Maximising the power output of any reactor type

DISCOVER ALSTOM’S NUCLEAR PORTFOLIO
Alstom’s nuclear portfolio at a glance

Clean Power
Clear Solutions™ (CPCS)

Nuclear power

Turbine Island

Products offering
- ARABELLE™ steam turbine
- Turbogenerator
- Pumps
- Heat exchangers
- Emergency Diesel Generator

Services

References
Alstom is helping our customers meet the challenges of energy sustainability. Our offering is based on a deep understanding of power markets and our customers’ needs. It is organised around 3 levers to maximise the return on customers’ assets over their entire lifetime.

REDUCING COST OF ELECTRICITY

It takes competitive assets to keep electricity affordable. We enable you to compete successfully in the marketplace and reduce the cost of electricity.

LOWERING ENVIRONMENTAL FOOTPRINT

Being environmentally responsible requires clean generation and lower resource usage, visual impact and noise pollution. To help you meet or exceed regulations and environmental standards, we innovate in various business areas.

INCREASING FLEXIBILITY & RELIABILITY

Dependable operations are essential to ensuring energy security. That is why we help you meet the demands of intermittent power generation and adapting an installed base to changing market conditions.
Nuclear power  
CO₂ free energy, powerful performance

Some countries’ energy security is challenged by the rising demand in electricity (due to the population and economic growth) and by the growing concern for the environment protection.  

Nuclear power generation is part of the solution, providing at large scale a CO₂ free, stable and reliable energy supply. Nuclear energy fits perfectly within a balanced portfolio.

Watch the Nuclear capabilities video ➤
Turbine Island solutions

Maximising the power output of any reactor type is what we do at Alstom. We have been working for 55 years in continuously improving our turbine island design and integration while increasing the efficiency and reliability of all the main components to optimise our customers’ investment, shorten our delivery time and lower the operating and maintenance costs.
Turbine Island
products offering

Discover our turnkey turbine island offering through a virtual tour ➤
ARABELLE™
Proven and cutting edge technology

ARABELLE™ is available today for all type of reactors in output range from 900 MW to 1,900 MW, in both 60 Hz and 50 Hz with the same footprint and can match any site cooling condition with up to four LP modules and three different types of last stage blades.

In addition to improved efficiency, today’s power producers demand lower maintenance costs and high reliability. Alstom’s ARABELLE™ turbines are designed for optimised maintainability, and have an outstanding reliability rate of 99.96% over 350,000 operating hours.

Explore the ARABELLE™
Learn more on the ARABELLE™
ARABELLE™ key benefits

Maximising the power output of any reactor type

Nuclear products offering

Listen to our customer's experience

Go to products overview
Turbogenerator

Maximum performance and availability for the nuclear market

Alstom’s **GIGATOP 4-pole turbogenerator** with its great reliability and efficiency is a solid investment for the future.

GIGATOP 4-pole turbogenerators are the **world’s largest and most reliable hydrogen and water-cooled turbogenerators in operation today**. They cover an output range from 900 MW to 2,000 MW, in both the 50 and 60 Hz markets.

Our innovative and environmentally-friendly technologies have made Alstom a by-word for efficiency, reliability and performance.
With more than 6,000 large pumps installed worldwide, Alstom has unparalleled experience in designing, installing and maintaining large and specialised pumps for nuclear turbine islands (circulating cooling water pumps, condensate extraction pumps, main and booster feed-water pumps).

Through 100 years of innovation and expertise across all types of fuel, Alstom has developed class-leading designs that are proven reliable, simple and hardwearing.

We offer a full range of products:
- Feedwater pump
- Cooling water pump
- Condensate extraction pump

Learn more on our pumps ➔
Cost effective and reliable

Heat exchangers

With an installed base of over 450 GW and heat exchange sizes up to 1,900 MW electrical output, Alstom offers a wide range of heat exchange products and services, from turnkey retrofit to component supply, and consulting and field support to respond to any customer requirement.

Our integrated design, procurement, manufacture, erection and commissioning offer you superior operational flexibility, high efficiency and reliability and overall cost-effectiveness. Alstom can help you increase the efficiency and safety of your nuclear power plants with services and solutions tailored to fit your project needs.

- Condenser
- Moisture separator reheater

Discover our full portfolio

Go to products overview
Alstom’s experience in the development and installation of Emergency Diesel Generators (EDG) is recognised worldwide. With a market share of 50% since 2000 Alstom is a proven leader in EDG packages for nuclear plants of any reactor type.

Alstom supplies the EDG as a fully integrated package, to reduce customer risk and achieve rapid delivery. EDG packages cover the entire emergency power range from 3 MW to 10 MW.

Learn more on our EDGs
Services

Extensive, reliable servicing across the lifecycle of nuclear power plants

With more than 50 years of experience, Alstom is the number one provider of services for the turbine island.

We can maximise nuclear plant availability and reliability, helping you meet your business goals with our tailored services. These range from daily maintenance, spare parts and outages, to advice and lifetime extension, capacity increase retrofits and integrated solutions.

Backed by our experience as an original equipment manufacturer (OEM), we provide services for components and systems from other manufacturers as well as our own.
Main references  Extensive and successful experience all around the world
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