Shaping Tomorrow's Future Energy Victories

About Westinghouse

Approximately

9,000 Employees

Locations in

19 Countries Comprised of

Business Units

AMERICAS OPERATING PLANT SERVICES

EMEA OPERATING PLANT SERVICES

ASIA OPERATING PLANT SERVICES

ENERGY SYSTEMS

ENVIRONMENTAL SERVICES

More Than

(0)

Facilities

Our Technology Generates Nearly

50%

Of the World's Nuclear Power

Global Products & Services Portfolio

Global Products & Services Portfolio Snapshot



Nuclear Fuel



Components & Manufacturing





Field Services and Plant Modifications

Instrumentation

& Control



Staffing Services



New Plants



Engineering Services



Decontamination & Decommissioning Solutions



Project and Engineering Services



Nuclear Fuel

Fuel types:

- Pressurized Water Reactor (PWR)
- Boiling Water Reactor (BWR)
- Water-Water Energetic Reactor (VVER)
- Advanced Gas Reactor (AGR)

Complete fuel supplier:

- Development
- Manufacturing
- Core engineering
- Safety analysis
- Licensing and testing of nuclear fuel
- Fuel component manufacturing

Fuel manufacturing facilities in Columbia, South Carolina, United States; Springfields, United Kingdom; and Västerås, Sweden



BWR Nuclear Fuel – SVEA-96 Optima2/3

- Fully licensed SVEA-96 Optima2 Fuel
 - Maximizes reliability, value, and flexibility.
 - Low parasitic absorption
 - Support high-energy cycles with increased power densities and variable cycle lengths.
 - Has been used in reload quantities in United States and European reactors, with more than 12,500 fuel assembly deliveries.
- SVEA-96 Optima3 Fuel, licensed in Europe since 2008 and in the USA in 2020
- Possibility of transitioning to our advanced TRITON11TM design
- Reload Engineering Support:
 - Transition Analyses
 - Full-scope Reload Engineering Services
 - Technology and Methodology Licensing
 - Other Optional Services







Components & Manufacturing

Components:

- Reactor pressure vessels
- Reactor coolant pumps
- Steam generators
- Fuel-handling equipment
- Critical spare parts supply
- Nuclear Steam Supply System (NSSS)

Centers of excellence and services in the following areas:

- Heavy and light machining
- Manufacturing, welding and fabrication
- Material supply and commercial dedication
- Plant outage rapid component supply
- Design for manufacturability consultation

Engineering Services

Focused on:

- Enhancing plant safety
- Improving plant performance and reliability
- Extending plant life

Products and services for nuclear operations fleet and adjacent markets:

- Systems and risk applications
- Component replacements and engineering
- Primary system design and repair
- Operations engineering and training



Westinghouse Long Term Operation

LTO Vision

Innovative Solutions Industry Leadership & Engagement Fully Integrated Expertise Collaborative Solution

- Westinghouse works with the utility to apply early long-term strategic thinking and technical innovation for asset management, outage delivery, and plant modernization
- Bringing new ideas in modern computing, automation tools, and utilization of data to reduce cost of plant activities



Long Term Operations

Importance of LTO:

- As plants extend their operating life, they face a series of investment decisions. The implications of an extension decision depend on several factors e.g., economics, age, expected operating life and licensing, material condition, future operating plans (e.g., load follow, extended cycle length), political and social factors.
- Westinghouse can add strategic value for LTO, both in terms of traditional products and services as well as choices that maximize the long-term value of the plant.
- Customers may need support for many steps in the process licensing, assessments, upgrades, and operating support that align with existing Westinghouse capabilities.
- Plant life extension from 40 to 60 and beyond 60 years is less about the licensing process but more about aging management of plant assets.

	License Extension	 Risk assessments Licensing support Plant analyses
and the second se	Plant Asset Management	 Component replacements I&C Upgrades Inspection, testing & monitoring
These constructions and the second seco	Performance Improvement	 Power uprates Improved fuel technology and fuel cycle costs Outage improvements
	Digitalization	 Advanced analytics Intelligent procedures Parts management
	Workforce Optimization & Management	Resource sharingStaff augmentationTraining



Instrumentation & Control

Full lifecycle of instrumentation and control products for all plant designs:

• Support operating nuclear plants, including improvements and upgrades, and new plants

Products and services:

- Control system component services
- Outage support
- Training
- Cyber security
- Safety-related platforms
- Flux mapping
- Plant computer systems
- Nuclear instrumentation systems

Field Services & Plant Modifications

Offering value-add services for our nuclear utility customers through:

- Full-scope global outage services, including for:
 - PWR and BWRs
 - Steam generators
 - Refueling and associated outage work
 - Fuel inspection and repairs
 - Outage management
- Outage control center
- Shop and service center operations
- WesDyne inspection services
- Welding, machining and installation services
- Technology and innovation





Deactivation & Decommissioning Solutions

Complete range of deactivation and decommissioning solutions:

- Decommissioning plans
- Nuclear component segmentation
- Waste optimization and packaging
- Deactivation for decommissioning
- Final site surveys and monitoring
- Waste storage and disposal facilities design
- Regulatory issues management
- Post-operation support
- Spent fuel services
- Waste treatment systems
- Site and waste characterization plans

Staffing Services

WECTEC Staffing Services has the technical and professional resources to recruit, onboard and staff your needs in a variety of areas with expert services in:

- Contingent labor
- Contract-to-hire
- Direct hire
- Outage support
- Project-based solutions







New Plants

The Westinghouse AP1000[®] plant, a Generation III+ two-loop pressurized water reactor (PWR), is considered the most advanced commercially available plant, offering an industry-leading design featuring passive safety systems.

Westinghouse provides the development, licensing, detailed engineering, project management, component manufacturing and startup support for new nuclear power plants.

130 Years of

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Triton11[™] Fuel:

The latest innovation in BWR fuel from **Westinghouse**

With its best-in-class uranium utilization and thermal margins, **TRITON11™ fuel** offers utilities the power to improve fuel cycle cost savings and optimize operations. Each key aspect of the TRITON11 design has been carefully considered, analyzed and tested to meet customers' current and anticipated operational requirements.

Rov-a-Scan

We're developing advanced technologies to address current and future operations and maintenance challenges.



Westinghouse eVinci™

Complete range of deactivation and decommissioning solutions:

- 4.5 MW net electric power output
- Transportable for ease of deployment and installation
- Cost-competitive plant lifecycle

2021

2020

Electrical

Demonstration

- Minimal onsite personnel
- Mature technology, manufacturing, and regulatory readiness

Component Development

Nuclear Demonstration

Cogeneration and load following capability



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