

Shaping Tomorrow's Future



Westinghouse

David Durham, President
Energy Systems

Commission to Investigate the Implementation of Next Generation Nuclear Reactor Technology
in New Hampshire

Agenda

Monday, Jan. 23, 2023

Energy Systems Technology Overview

- About Westinghouse
- Westinghouse Global Products & Services
- AP1000® Reactor
- eVinci™ Microreactor
- Westinghouse Small Modular Reactor (SMR)
- Newington Nuclear Components Manufacturing Facility

About **Westinghouse**

Approximately
10,500
Employees

Locations in
21
Countries

4

Global Business Units

OPERATING PLANT SERVICES

ENERGY SYSTEMS

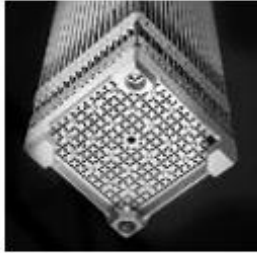
ENVIRONMENTAL SERVICES

NUCLEAR FUEL SERVICES

More Than
70
Facilities

Our cutting-edge technology is the basis for
Nearly Half
of the world's nuclear plants
in operation today.

Global Products & Services Portfolio Snapshot



Nuclear Fuel



Instrumentation & Control



Staffing Services



Components & Manufacturing



Field Services and Plant Modifications



New Plants



Engineering Services



Decontamination & Decommissioning Solutions



Project and Engineering Services

AP1000 – Technology Overview

Providing clean, carbon-free power and paving the way for generations to come



- Most advanced, proven Generation III+ technology in the world
- Nth-of-a-kind standardized design uses modular construction
- Gross power rating of 3,415 megawatt thermal (MWt); net electrical output of ~1,200-megawatt electric (MWe)
- Nuclear island (NI) is the costliest portion of any reactor – AP1000 NI is only 1/4 to 1/3 size of competitors' nuclear islands
- 4 operating units (Sanmen & Haiyang, China), 2 units nearing completion (Vogtle, USA), 4 units under construction (China)
- Firm commitments for at least 14 more AP1000 reactors (Poland, China, Ukraine) ... well positioned across Europe
- Global licensing pedigree in USA, Europe and Asia
- Longstanding relationships with leading global technology and manufacturing firms provides a reliable supply chain
- Key components manufactured in New Hampshire

AP1000 – A Proven Pedigree

Operational and safety excellence with record-setting, global performance



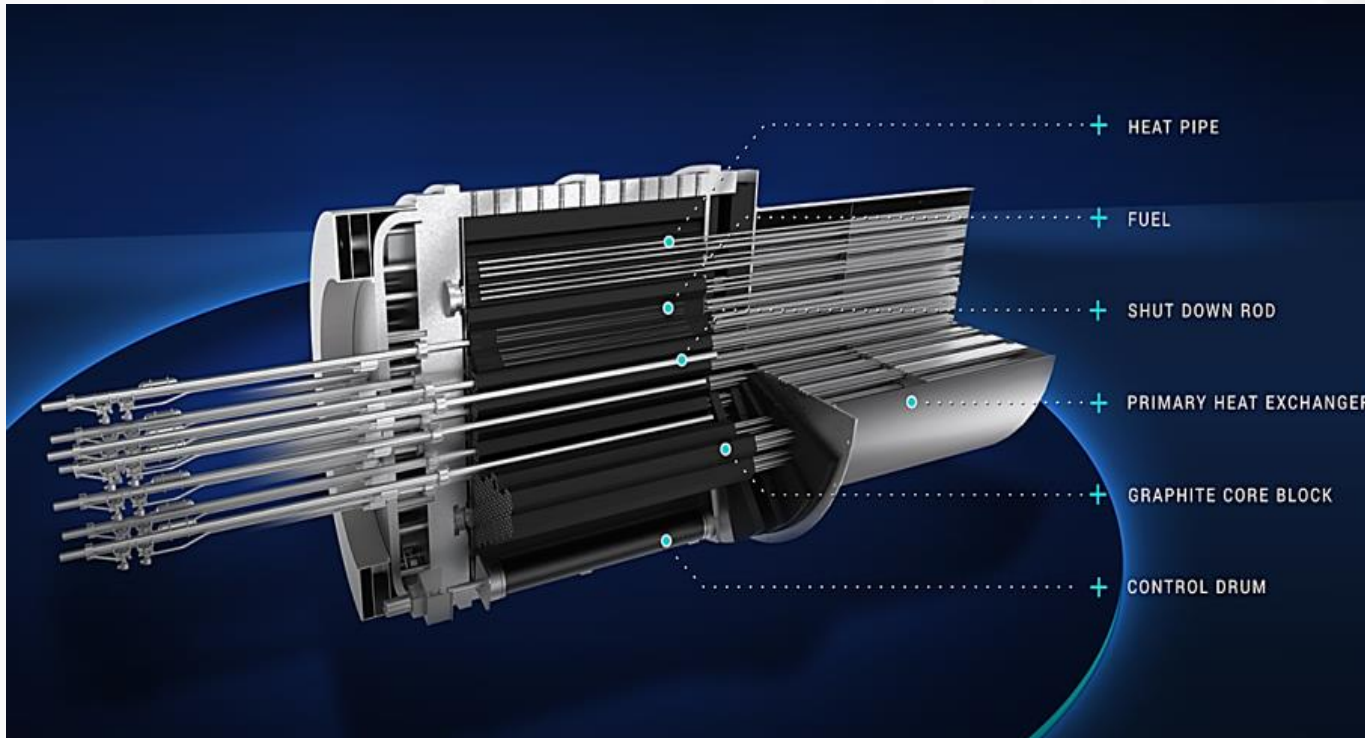
Sanmen Site, China
Photo © Sanmen Nuclear Power
Company, Ltd. All rights reserved

- Superior operating performance with availability factors ~92.5%
- Dramatically reduced start-up test programs from 10 months to 5 months or less (includes 1 month @ full power)
- Industry performance records set for 1st and 2nd operating cycles
- Operates in both baseload and load-follow modes with ramp rates of 1 MW per second
- Simplification of Safety Systems
 - Passive safety systems inside containment / shield building
 - Active non-safety systems optimized for normal operation
 - Significantly reduces safety-related quantities due to simplification
 - The only available reactor with fully passive safety systems and 72+ hour coping after station blackout

eVinci Microreactor – Technology Overview

eVinci nuclear battery is designed for safe, reliable and long-term clean energy generation

Key Features



- 5 MWe with ~7MWth @ 200° C usable heat
- 15MWth @ >700° C heat only
- Commercial deployment before end of decade
- 8+ years of operation without refueling
- Transportable for ease of installation ... eliminates long-term spent fuel storage on site
- Cost-competitive plant lifecycle (vs diesel)
- Minimal site construction and onsite personnel
- High speed load following capability

Westinghouse SMR – Technology Overview

Bringing Westinghouse's 70+ years of reactor development to SMRs



- 1-Loop PWR producing 300 MWe (900 MWt)
- Unlike all the other FOAK SMRs, proven and demonstrated licensing and operations ... “smaller AP1000”
- Passive containment and core cooling systems ensure robust safety measures
- Ultra-compact, simplified design reduces construction, operating and maintenance costs
- Leverages Westinghouse’s diverse portfolio of manufacturing facilities and proven supply chain
- Global regulators’ knowledge of Westinghouse technology brings licensing certainty

Nuclear Components Manufacturing Overview – Newington, N.H.



An integrated manufacturing solution

- Specializing in first-of-a-kind, large, complex and highly regulated precision component manufacturing
- World-class nuclear, ASME Quality Assurance Program

Employing nearly 100 skilled workers

- Engineers, project managers, machinists, welders, fabricators and others
- 152,000 square-foot facility equipped with a 200-ton crane
- Serving customers around the world



New nuclear equals more work for Newington ...each additional AP1000 reactor means:

- 325,000 additional work hours manufacturing Reactor Vessel Internals
- 67,000 additional work hours manufacturing Control Rod Drive Mechanisms

Thank You



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Electric Company



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