



Watts Bar Nuclear Plant "Delivering the Nation's First New Nuclear Generation of 21st Century"

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Agenda

- Watts Bar Overview
- Unit 2 Project
 - Assumptions/Principles
 - Licensing Uniqueness
 - Refurbishment Program
 - Regulatory Initiatives
 - Completion Status
- Summary



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Watts Bar Overview

- Tennessee Valley Authority (TVA)
 - Federal corporation
 - Provides electricity, economic development, flood control, and navigation
 - Funded entirely by power sales
 - Serves 9 million people
- Watts Bar
 - Located on the Tennessee River system
 - Two pressurized light water moderated reactors – Westinghouse 4-loop, ice condenser containment
 - Electric output per unit – 1,150 megawatts electric – Powers 650,000 homes



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Watts Bar Unit 2 Assumptions and Principles

Key Assumptions

- Licensed under 10 CFR Part 50
- Relied on the docket record that supports Unit 2 as well as Unit 1, and the extensive Unit 1 licensing basis that was successfully implemented, to close out any remaining construction issues for Unit 2

Guiding Principles

- Ensuring public health and safety
- Safe continued / uninterrupted operation of WBN Unit 1
- Fidelity of the Unit 1 and Unit 2 Design Basis and Physical Operation
- Maintaining a consistent, predictable, transparent process for completion

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Uniqueness of Watts Bar Unit 2 Licensing

- Licensed under 10 CFR Part 50
- Refurbishment Program
- Legacy Commitments and Inspection Activities
 - 10,000+ Commitments
 - CAP and Special Programs
 - Customized Inspection Program
- Pilot Inspections
 - Fukushima
- Limited exercising of 10 CFR Part 52 Inspection Procedures

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Watts Bar Unit 2 Refurbishment Program

- Equipment scope
 - Active components
 - Passive components
 - Safety related
 - Quality related
 - Non-quality related
- Required outcome
 - Plant meets licensing, design, and equipment vendor specifications
 - Rebuilt or replaced systems, structures, and components using modern materials and current technology



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Regulatory Initiatives

- Fukushima Order – Complete
- Cyber security – Complete
- Hydrology improvements – Complete
- Seismic mitigation – Complete
- Fire protection – Complete



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Watts Bar Unit 2 Completion Status



- Completed critical pre-operational milestones
 - Open vessel testing
 - Cold hydrostatic testing
 - Hot functional testing
 - Structural integrity and containment integrated leak rate testing
 - Integrated safeguards testing
- Proved major components
- Completed American Society of Mechanical Engineers stamping of plant systems

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Watts Bar Unit 2 Completion Status



- Received recommendation for approval of operating license from Advisory Committee on Reactor Safeguards
- Completed a World Association of Nuclear Operators Pre-startup Review
- Completed the Operational Readiness Assessment Team Inspection
- Received operating license
- Loaded fuel
- Began power ascension testing

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Watts Bar Summary

- Working safely and with quality
- Critical to finish right way and demonstrate ability to operate two units safely
- Moving diligently through complex power ascension testing on Unit 2 while protecting Unit 1
- Area work, demobilization, and project close-out progressing
- Challenges and issues being addressed



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