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# **TENNESSEE VALLEY AUTHORITY WATTS BAR UNIT 2 CONSTRUCTION COMPLETION PROJECT**

## **PUBLIC MEETING WITH NRC**

**December 11, 2008**



# Agenda

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- Project Overview M. Bajestani
- Engineering / Procurement E. Freeman
- Construction J. Schlessel
- Refurbishment B. Briody
- Quality Assurance R. Baron
- Safety Conscious Work Environment G. Arent
- Licensing Activities G. Arent
- Conclusion M. Bajestani



# WBN Unit 2 Construction Completion

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- Unit 2 – Substantially Complete at time of Unit 1 Operating License
- Detailed Scoping Estimating and Planning Study Performed - 2007
  - Plant equipment and material condition good
  - WBN 1 and SQN 1 and 2 plants are proven technology - all units have performed well
- Integrated Schedule Developed - June 2008
- Developed Project Procedures
- Started Detailed Walkdowns to Assess Remaining Scope



# WBN Unit 2 Construction Completion

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- Guiding Principles for Construction Completion :
  - Ensuring public health and safety
  - Safe continued and uninterrupted operation of WBN Unit 1
  - Fidelity of the Unit 1 and Unit 2 Design Basis and physical operation
  - Lessons Learned from Browns Ferry Unit 1 Recovery



# WBN Unit 2 Major Contractors

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- Bechtel
  - Engineering, Procurement and Construction
- Siemens
  - Turbine/Generator Activities
- Westinghouse
  - NSSS Activities

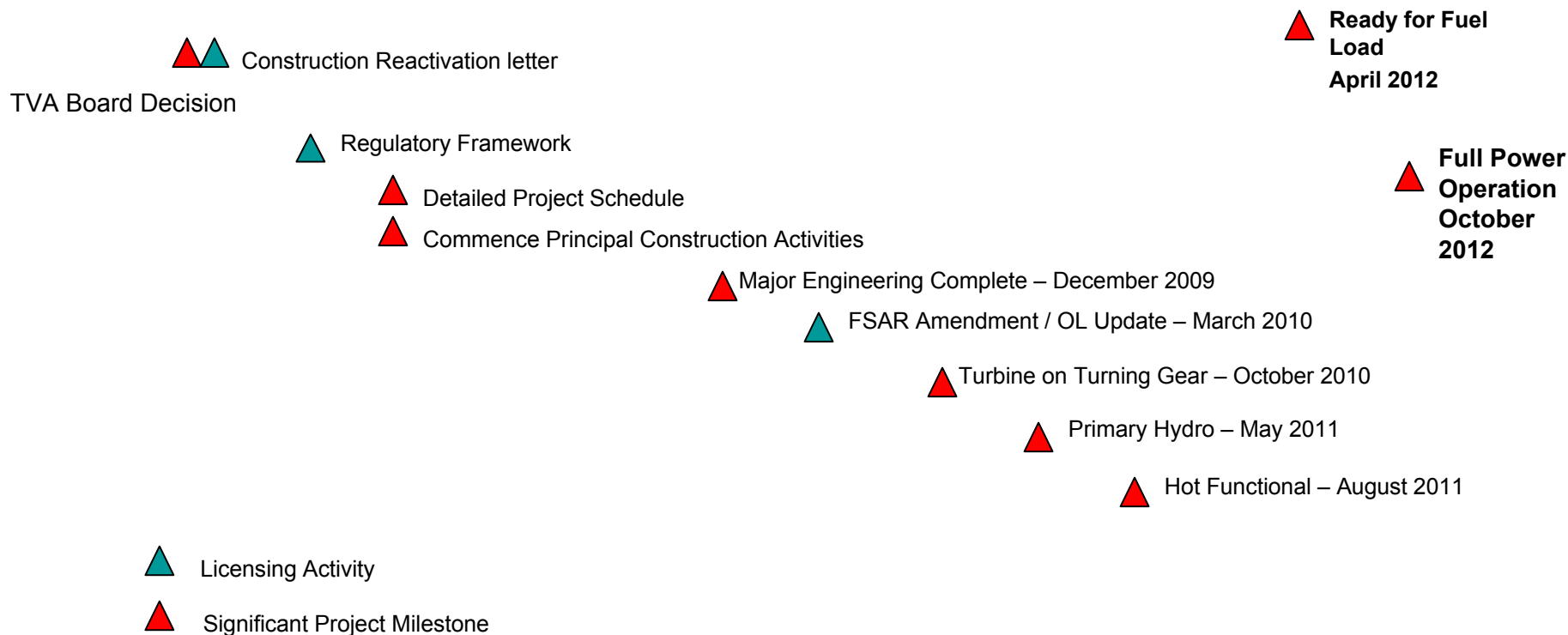


# WBN Unit 2 Integrated Schedule



FY 2007												FY 2008												FY 2009												FY 2010												FY 2011												FY2012												FY 2013											
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DSEP





# Engineering / Procurement

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- Engineering
  - Walkdown packages
  - Calculations
  - Work Packages and Design changes
  - Corrective Action Program work
  - Review of Employee Concerns and other historical documents
  
- Procurement
  - Requests for long lead material
  - Vendor oversight



# Construction

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- Infrastructure in place
- Scaffolding
- Walkdowns
- Secondary Side work
  - Turbine/Generator
  - Condenser retube
- Nuclear Safety System work
  - Snubber removal
  - Penetration seals



# Construction



COMMODITY	TOTAL PROJECT (estimate)
Piping - Large Bore	8,000 feet
Piping - Small Bore	30,000 feet
Hangers	9,400
Cable	840,000 feet
Conduit	73,000 feet
Conduit Supports	12,000
Terminations	193,000
Tubing	57,000 feet



# Refurbishment

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- Rework or Replace Components based on
  - Programmatic requirements
  - Vendor recommendations
  - Lessons Learned from WBN1
  - Operating Experience
- Replacement of Elastomer Seats, Gaskets and Packing as required to Restore Components to Meet or Exceed Original Specifications



# Refurbishment



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COMMODITY	TOTAL PROJECT (estimate)
Pumps	80
Motors	90
Breakers	600
Manual Valves	4000
Air Operated Valves	500
Motor Operated Valves	200
Safety/Relief Valves	300



# Quality Assurance

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- QA Program
  - TVA Revised QA Program
  - TVA Approved Bechtel QA Manual
- ASME Code
  - TVA Issued ASME QA Manual
  - Bechtel Issued ASME QA Manual
- TVA Oversees Bechtel Safety and Quality Related Activities
- Lessons Learned from Browns Ferry Unit 1 Recovery



# Safety Conscious Work Environment

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- Bechtel & TVA Employee Concerns Programs (ECP) in place
- New Employee Orientation includes a presentation of ECP/SCWE
- Training provided to TVA and Bechtel Managers regarding their role in maintaining a SCWE
- Exit Interviews are conducted for released employees to offer opportunity to raise any nuclear safety/quality issues
- Corrective Action Program Training



# Licensing Activities

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- License Basis Reconstitution Completed
  - Regulatory Framework
    - Review of NRC Safety Evaluation Report
    - Status of Generic Communications
    - Corrective Action Plans
- Extended Construction Permit to Allow for Construction Completion and Testing
- Next Steps
  - Amend Safety Analysis Report
  - Update Operating License Application
  - Evaluate New Regulations
  - Continuing Support for NRC Inspections



# Conclusion

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- Detailed Walkdowns to Assess Remaining Scope in Progress
- Preparing Work Packages and Design changes
- Procuring Long Lead Time Material
- Started Secondary Side Work
- Employee Concerns Programs in Place
- License Basis Reconstitution Completed

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