

TVA



Watts Bar Nuclear Plant Unit 2 Completion Studies

TVA Board Meeting
August 1, 2007



Watts Bar Nuclear Plant Unit 2

Agenda

Power Supply Assessment

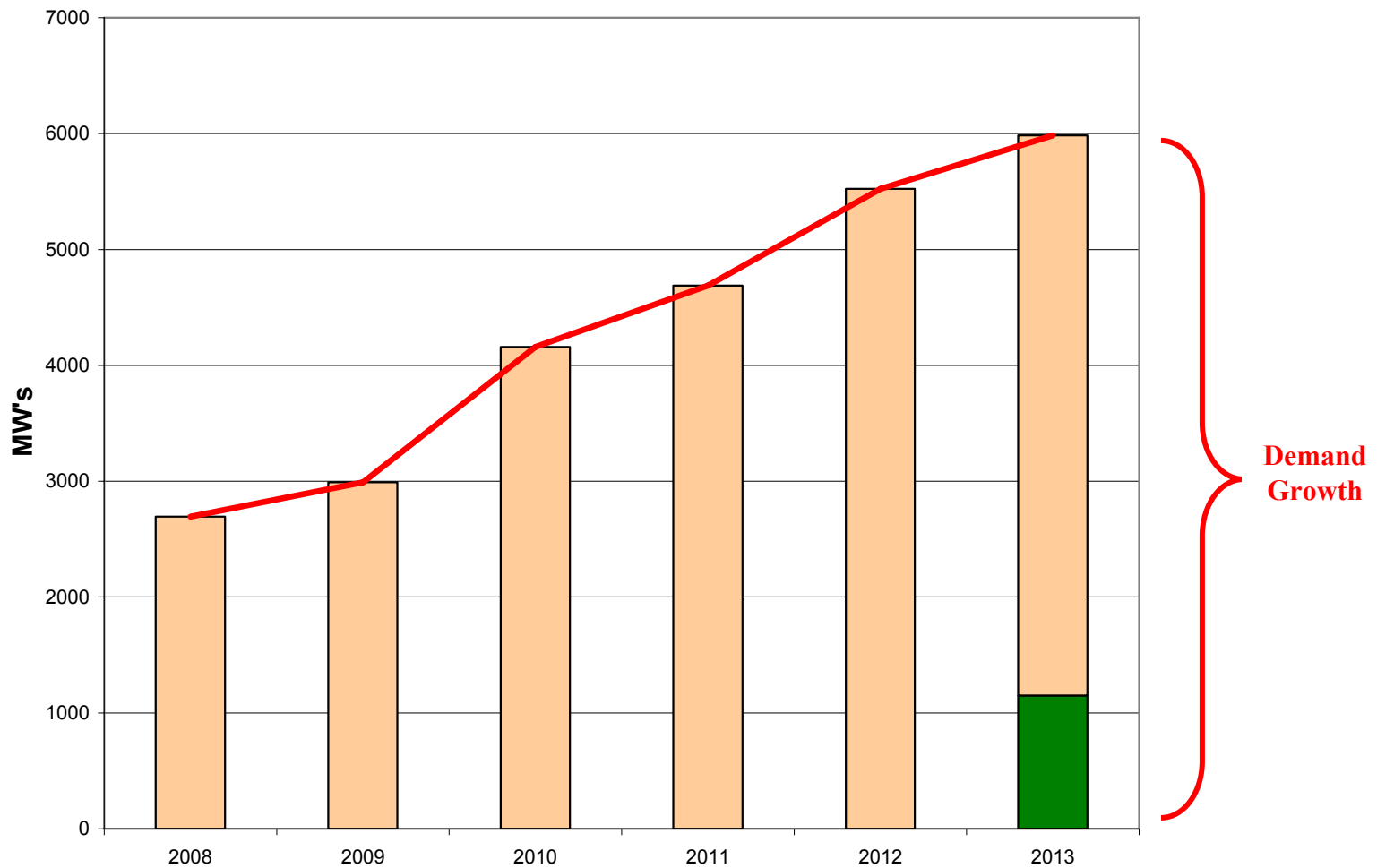
Detailed Scoping, Estimating, and
Planning (DSEP) Project

Environmental Review

Project Benefits and Risks

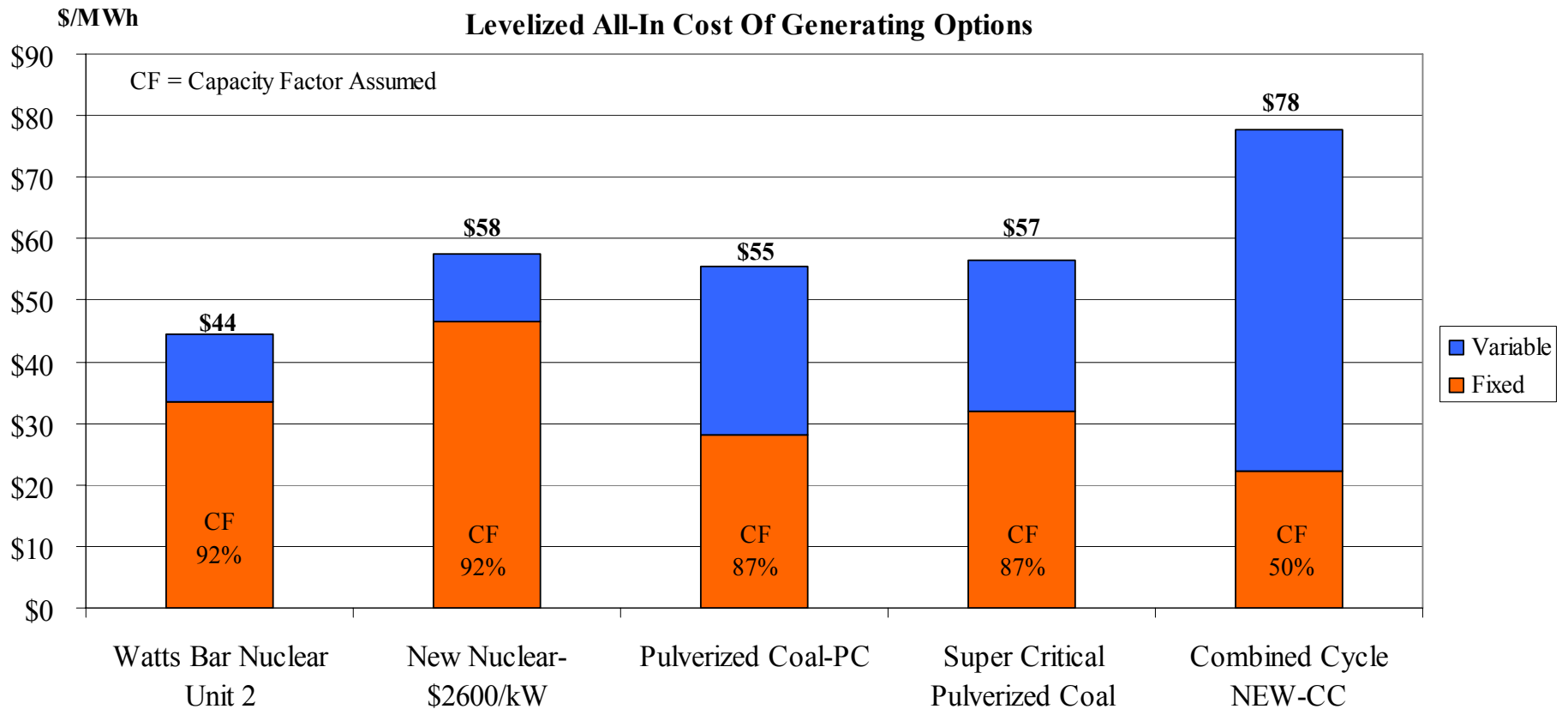


Power Supply Assessment





Power Supply Assessment

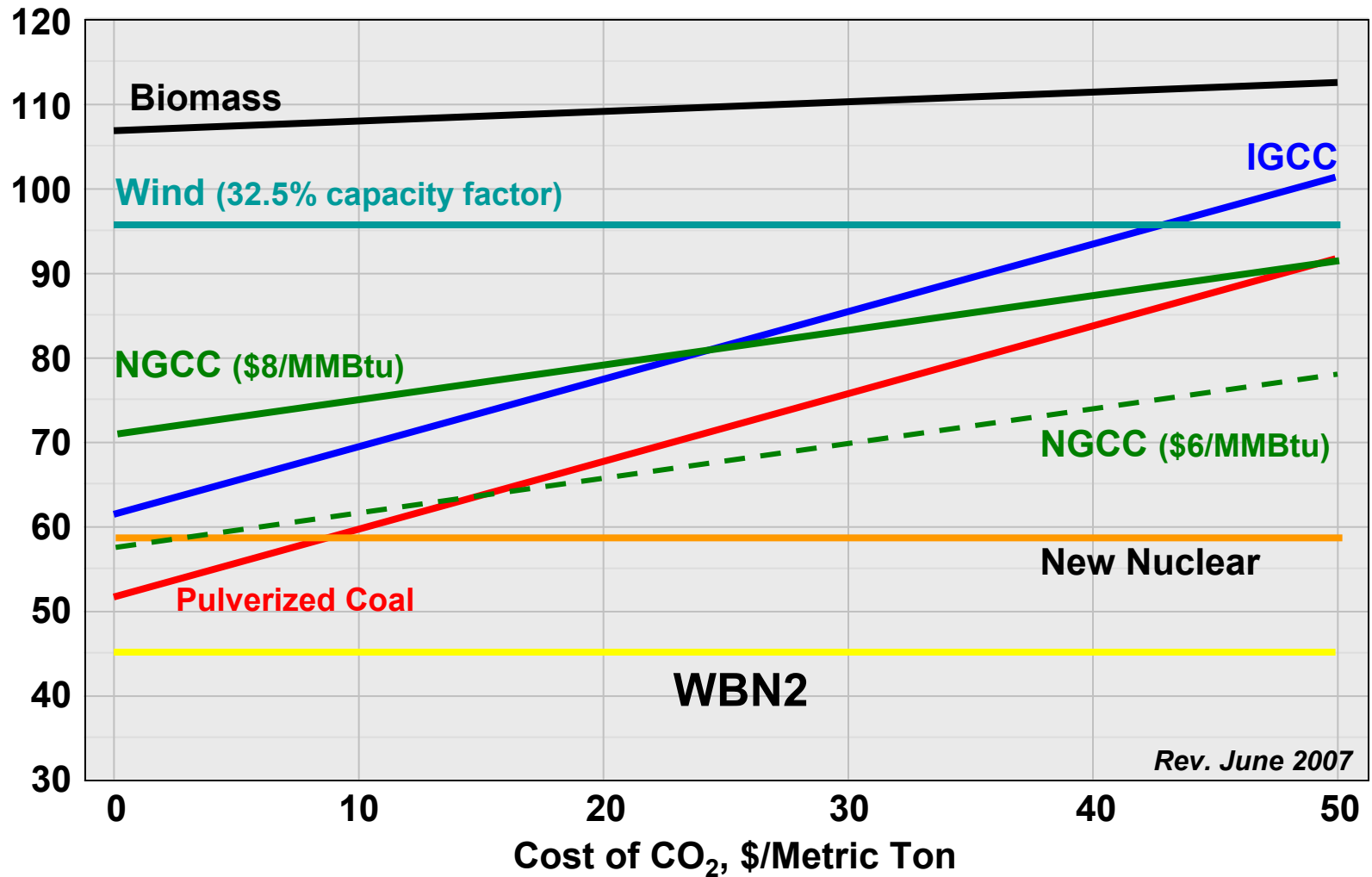




Why Nuclear? The Carbon Factor

EPRI Comparative Costs in 2010-2015 vs. WBN2

Levelized Cost of Electricity, \$/MWh



Rev. June 2007



Watts Bar Nuclear Plant Unit 2 DSEP Project

Project Purpose

- Define Scope
- Develop Licensing Strategy
- Determine Material Condition of WBN2
- Define Schedule and Cost for Completion & Start-up
- Determine Project Risk
- Reduce Uncertainty in Completion Cost Estimate and Schedule Duration
- To Provide a Proven, Reliable Basis for Decision-making (Process has been proven through completion of BFN1)



Watts Bar Nuclear Plant Unit 2 DSEP Project

DSEP Results

- DSEP study provided a thorough analysis.
- Plant equipment and materiel condition good.
 - DSEP inspections revealed no significant issues.
- Project risks are manageable.
 - Licensing
 - Staffing
 - Equipment
 - Mitigation plans for risks developed
- WBN1 and SQN1/2 plants are proven technology--all units have performed well.
- High confidence in cost and schedule.



Watts Bar Nuclear Plant Unit 2 DSEP Project

Project Cost and Schedule

Total Completion Capital Cost Estimate (Year of Expenditure Dollars)	\$2.49B
Project Schedule Duration	60 mos.
Project Peak Engineer & Craft Staffing	2,300
Confidence Cost/Schedule	High
Net Dependable Capacity Rating	1,180



Environmental Review

- Final Supplemental Environmental Impact Statement (FSEIS) was issued June 22, 2007.
- Preferred Alternative--Complete and Operate WBN-2.
 - No significant environmental impacts.
 - Provides for use of an existing asset, reduces potential for impacts, and provides more flexibility in emission reduction planning.



Project Benefits and Risks

Benefits

- Reduces the overall delivered cost of power
- Avoids 6 - 8 million tons CO₂ per year
- Lowest fuel cost option
- Fastest option to meet baseload power needs
- Costs 35% less than next alternative

Risks

- Licensing complexity could impact cost and schedule
- Near term capital expense



Completion Study Summary

- Extensive study yielded no significant issues.
- No significant environmental impacts.
- Payback in 12 years from the beginning of the project.
- Watts Bar Unit 2 would provide the valley with 1,180 MW of clean, safe, and reliable low-cost generation by 2013.



Board Actions Requested

- Authorization to resume all activities to complete and startup Watts Bar Unit 2.
- Delegation of authority to the Chief Executive Officer to approve any procurement contract for goods and services required for execution of the project.

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