

**TRANSMITTAL OF MEETING HANDOUT MATERIALS FOR  
IMMEDIATE PLACEMENT IN THE PUBLIC DOMAIN**

*This form is to be filled out (typed or hand-printed) by the person who announced the meeting (i.e., the person who issued the meeting notice). The completed form, and the attached copy of meeting handout materials, will be sent to the Document Control Desk on the same day of the meeting; under no circumstances will this be done later than the working day after the meeting.  
**Do not include proprietary materials.***

DATE OF MEETING

**12/17/2001**

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s) **050-460**

Plant/Facility Name **Washington Nuclear Project No. 1 (WNP-1)**

TAC Number(s) (if available) \_\_\_\_\_

Reference Meeting Notice **December 4, 2001**

Purpose of Meeting  
(copy from meeting notice) **Energy Northwest commissioned a study to determine**  
**the feasibility of completing the construction of WNP-1.**  
**The purpose of the meeting is to discuss this study**

NAME OF PERSON WHO ISSUED MEETING NOTICE

**Joseph M. Sebrosky**

TITLE

**Project Manager**

OFFICE

**NRR**

DIVISION

**NRLPO**

BRANCH

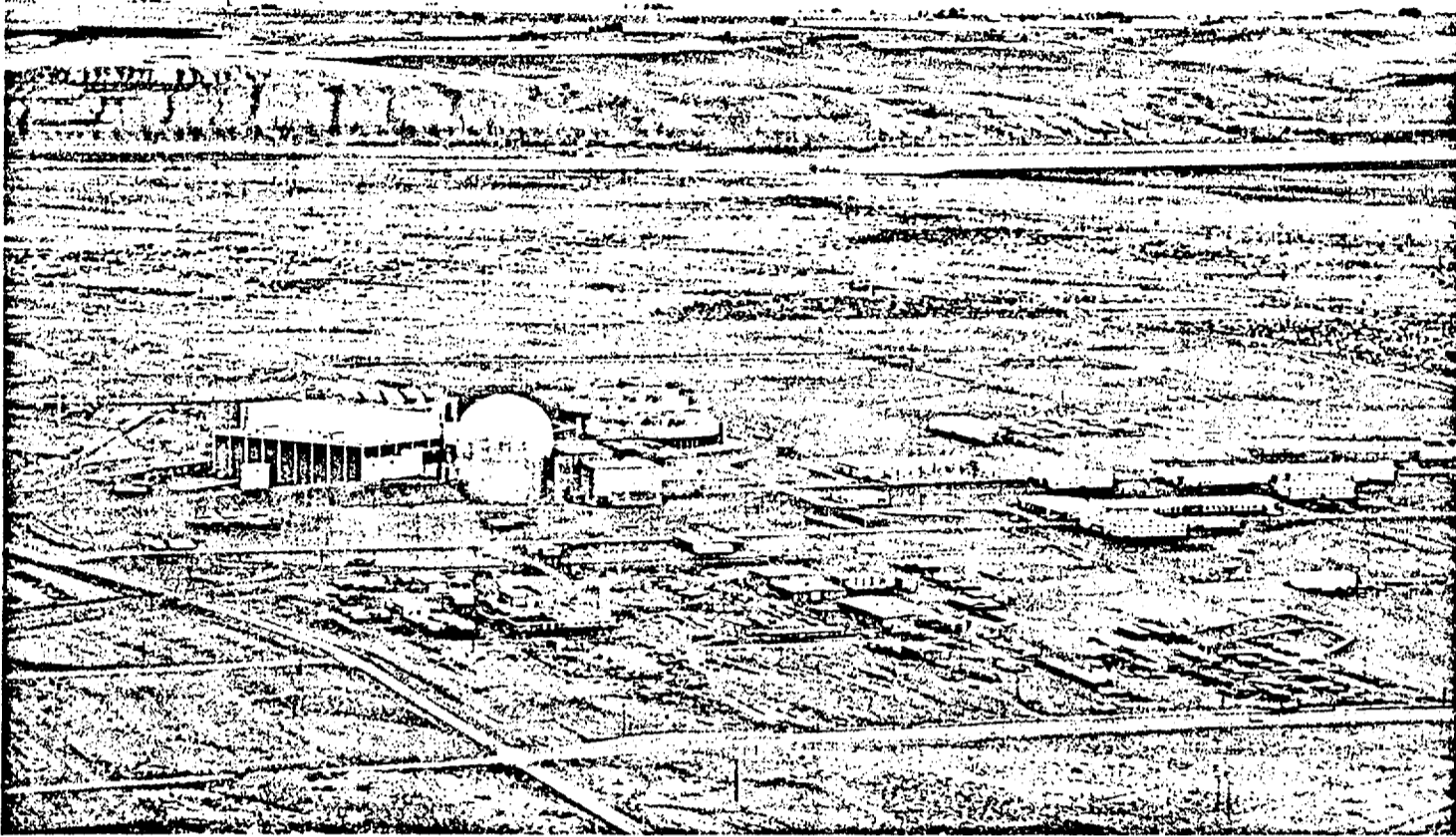
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PUBLIC

A001

# WNP-1

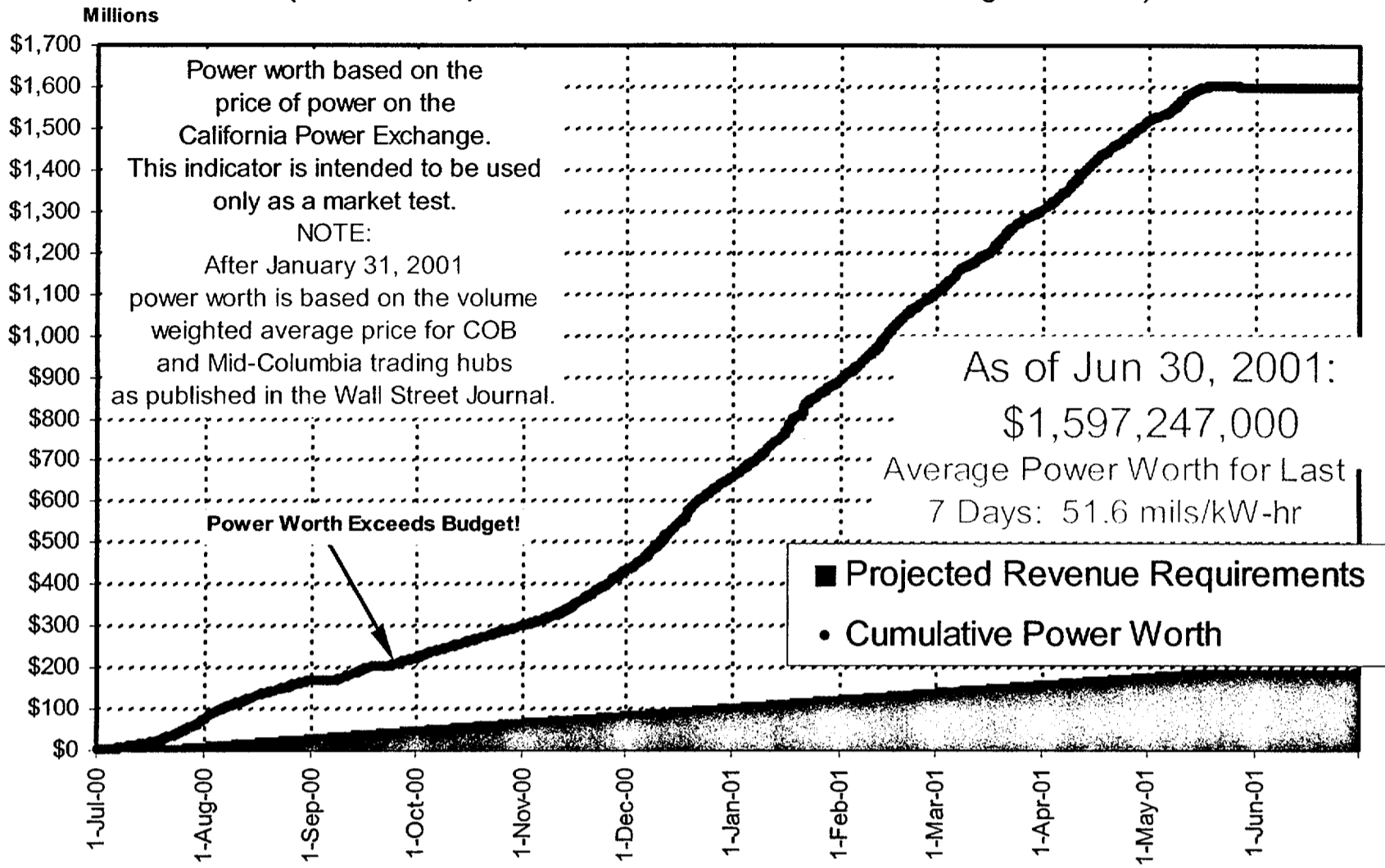


Presentation to  
US Nuclear Regulatory Commission

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# Cumulative Replacement Power Worth

(Revenue Requirements based on \$199.5 Million Budget Estimate)



## **Columbia Generating Station Emissions Avoided Annually**

- **SO<sub>2</sub> avoided by nuclear generation 62,000 tons**
- **Carbon dioxide avoided by nuclear generation 5,320,000 tons**
- **NO<sub>x</sub> avoided by nuclear generation 28,000 tons**

# WNP-1 Feasibility Study Components

Reports Components	Energy Northwest	Bechtel/ Framatome	Independent Assessment Contractor RW Beck	CEO VP Ops Support	Independent Review Team Goldschmidt- Imeson	Executive Board
Completion Cost & Schedule	Input	Prepare	Review/Comment	Approval	Review/Comment	Customer
Operating Cost Forecasts	Prepare		Review/Comment	Approval	Review/Comment	Customer
Financing Options/Estimates	Prepare		Review/Comment	Approval	Review/Comment	Customer
Market Forecast			Prepare	Approval	Review/Comment	Customer
Competing Alternatives		Prepare*	Prepare**	Approval	Review/Comment	Customer
Legal Analysis	Prepare			Approval	Review/Comment	Customer
Conclusions/ Recommendation	Prepare		Prepare	Approval	Prepare	Decision
Status	Complete	Complete	Complete	Approved	April 2002	

\*Comparisons With existing nuclear alternatives

\*\* Comparisons with other alternatives

# Operating License

**Unique Features**                      **B&W 205 design, evaluated for power uprate conditions**

**Plant Preservation**                      **Good record keeping and NRC approved preservation program**

**Generic Issue Resolution**                      **Appendix R, MOVs and Alloy 600 all addressed**

**Digital Controls**                      **Upgrade effort at two plants provides experience base**

→ **A 40-year Operating License for WNP-1 can be obtained without impacting construction schedule.**  
**A 20-year License extension is readily available.**

## Base Case

### Assumptions for WNP-1

- **Base EPC Cost:** \$3 billion
- **Project Operation Period:** 40 years
- **Net Plant Capacity Factor:** 93%
- **Plant Net Electrical Output:** 1350 Mwe
- **Term Debt Tenor:** 30 years
- **Term Debt Interest Rate:** 6.25%
- **Interest Rate During Construction (IDC):** 6.25%
- **Fuel Costs:** \$50 million a year
- **O&M/Capital:** \$135 million a year
- **D&D Sinking Fund Amount:** \$400 million
- **First Capital Addition after 10 years:** \$90 million for low pressure rotors
- **Second Capital Addition after 25 years:** \$100 million for steam generators

## **Base Case**

### **Estimate to Complete**

**\$2,907 M\***

**Increase of \$1,600 over 1984 estimate**

- ~ 75% or \$1,200 results from current pricing of 1984 scope
- ~ 25% or \$400 are scope differences

**Initial fuel core and redesign (\$132 M)**

**Digital control & protection and simulator (\$99 M)**

**Replace sold equipment (\$84 M)**

**New plant improvements (\$67 M)**

**\*Bechtel number \$3,041 M less:**

- initial core \$120 M moved to operating cost
- pre-construction \$14 M not financed



# Base Case

## Critical Path Schedule

- Owner pre-construction activities
  - Initial project planning and preparation
    - Fuel design, fabrication, and delivery
      - Fuel load
      - Start-up testing
      - Power ascension

### Conservative Schedule

Not shortened from 1991 V&V schedule yet assumes 20% overtime

### Pre-construction Initiatives

Early start (with \$14 M investment) of selected engineering activities\*

### Simulator and Training

Careful review of development and training schedule and requirements.

\*Fuel design, simulator and control room, NSSS upgrades, training and IT plans.

# Plant Costs

<u>Cost Category</u>	<u>Base Case</u>
Construction Costs	\$ 3,192,517
Working Capital	100,000
Reserve and Contingency	100,000
Financing Expenses	74,620
<b>Subtotal</b>	<b>\$ 3,467,137</b>
Interest During Construction	944,273
Investment Income	(176,910)
<b>Total Bonds</b>	<b>\$ 4,234,500</b>

# Cost of Power

	<b>Base</b>	<b>Best</b>	<b>Mills/</b>
<b><u>Public/BPA participation</u></b>	<b><u>Case</u></b>	<b><u>Case</u></b>	<b><u>kwh</u></b>
<b>Construction Risk</b>	<b>\$2,907M</b>	<b>\$2,400*</b>	<b>3.75</b>
<b>Reduce work capital, R&amp;C</b>	<b>200M</b>	<b>28M</b>	<b>1.31</b>
<b>Lower interest rates</b>	<b>6.25%</b>	<b>5.75%</b>	<b>1.20</b>
<b>Lower underwriter fee</b>	<b>75M</b>	<b>45M</b>	<b>.22</b>
<b><u>Dual Plant Efficiencies</u></b>			
<b>Reduce O&amp;M</b>	<b>\$ 115M/yr</b>	<b>\$ 105M/yr</b>	<b>1.50</b>
<b>Reduce capital</b>	<b>20M/yr</b>	<b>10M/yr</b>	<b>1.50</b>
<b>Owner's construction</b>	<b>401M</b>	<b>300M*</b>	<b>.75</b>
<b><u>Other Efficiencies</u></b>			
<b>NRC minimum decommissioning</b>	<b>\$ 400</b>	<b>\$ 234</b>	<b>.33</b>
<b>Non-manual ratio</b>	<b>406</b>	<b>300*</b>	<b>.75</b>
			<b>(11.3)</b>
<b>Mills/kwh</b>	<b>51</b>	<b>39.7</b>	

**\*Construction/capital cost**

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### Market Prices and WNP-1 Costs

