

# **Renewables**

## **Financial Choices Workshop: September 17, 2002**

	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
<b>Public Benefits Expense</b>					
Cost of Renewables Program at Current Level	25.5	33.2	48.0	72.3	72.7
Revenue Offsets	20.7	24.8	40.9	59.2	59.2
Net Cost of Renewables Program at Current Level	4.8	8.4	7.1	13.1	13.5
Cost of Renewables Program at Reduced Level	25.5	32.3	30.6	55.4	55.8
Revenue Offsets	20.7	24.8	24.2	42.5	42.5
Net Cost of Renewables Program at Reduced Level	4.8	7.5	6.4	12.9	13.3

### **Major Subcategories:**

1. Current level of spending includes:
  - Power purchase cost of 6 wind, 1 geothermal, and 2 solar projects already under contract
  - Estimated power purchase cost of 50 aMW of additional cost-effective wind power
  - Currently funded resource assessment and R&D funding (mainly wind and solar data collection)
  - New funding for a wind forecasting network
2. Reduced level of spending eliminates additional wind power purchase and wind forecasting network.

### **Drivers of Difference from Rate Case:**

1. Power projects were added to or subtracted from those in the Rate Case estimate.
2. The Conservation and Renewables Discount commitment for renewables is not accounted for in the Rate Case and is not shown in the forecast.

### **Consequences of cost cuts/tradeoffs:**

1. Under both the Current and Reduced funding levels, the net cost of the Renewables Program is still below the \$15 million ceiling anticipated in the Rate Case. If BPA reduces the spending ceiling, we would not meet a commitment made to renewable resource advocates during the Comprehensive Review.
2. Power purchase contracts include buy-out provisions to accommodate early termination. In the early years of the contracts, the cost of terminating far exceeds the power purchase cost. Early termination would also necessitate termination of EPP and green tag contracts that rely on these resources.
3. Eliminating resource assessment funding would end long-standing programs of proven value to the region. For example, the long-term wind monitoring site at Kennewick was critical to the development of the Vansycle Wind Project.
4. Further large-scale wind power development in the PNW may be impaired by lack of ability to forecast output.

**Calculation of Revenue Offsets/Efficiency Gains (if any):**

1. Revenue offsets were computed by multiplying the sum of the long-term forecast cost of a flat block of power and estimated green tag revenue by the annual output of the renewable generation projects.

**Current Mechanisms for enforcing spending levels:**

1. PT has developed procedures to better track costs and revenues associated with the Renewables Program. These procedures include assigning costs for transmission and other support services, as well as tracking EPP revenue.
2. The net cost of the Renewables Program will not be allowed to exceed \$15 million per year.

### RENEWABLE GENERATION PROJECTS

PROJECT NAME	LOCATION	DEVELOPER/ OPERATOR	MW	Average MW	ANNUAL OUTPUT (MWH)	ONLINE DATE	STATUS/ NOTES	PROJECT MANAGER	EIS MANAGER
<b>Operating Wind Projects</b>									
Foote Creek 1	Carbon County, WY	PacifiCorp/ EWEB/ SeaWest	15.3	6.3	55,399	4/22/1999	Operating. BPA takes 37% of output from the 41.4-MW project	George Darr	
Foote Creek 2	Carbon County, WY	SeaWest	1.8	0.8	6,906	6/18/1999		George Darr	
Foote Creek 4	Carbon County, WY	SeaWest	16.8	7.4	64,460	10/1/2000		George Darr	
Condon	Gilliam County, OR	SeaWest	49.8	12.0	104,700	24.6 MW online 12/31/01; 25.2 MW online 6/7/02	Operating	Tom Osborn	
Stateline	Walla Walla County, WA, & Umatilla County, OR	FPL Energy/ PacifiCorp Power Marketing	90.4	30.2	264,114	12/18/2001	90.4 MW from the 263- MW project.	Tom Osborn	
Klondike	Sherman County, OR	Northwestern Windpower	24.0	7.4	64,413	12/31/2001	Operating	Tom Osborn	
<i>Total for Operating Wind Projects</i>			<b>198.1</b>	<b>64.0</b>	<b>559,992</b>				
<b>Wind Projects in Progress</b>									
Maiden	Yakima and Benton Counties, WA	Pacific Winds	150.0	49.5	433,620	2003	agreement signed; EIS in progress.	Tom Osborn	Sarah Branum
<i>Total for Wind Projects in Progress</i>			<b>150.0</b>	<b>49.5</b>	<b>433,620</b>				
<b>Shortlisted Wind Projects</b>									
Roosevelt	Klickitat County, WA	SeaWest	150.0	49.5	433,620	2004	Shortlisted	John Pease	Mickey Carter
Summit Ridge	Wasco County, OR	SeaWest	50.0	15.0	131,400	2004	Shortlisted	George Darr	Rick Yarde
Columbia Wind Ranch	Klickitat County, WA	Cielo Wind Power	80.0	28.9	253,160	2004	Shortlisted	John Pease	Mickey Carter
Horse Heaven Hills	Benton County, WA	Pacific Winds	150.0	47.6	417,000	2004	Shortlisted; EIS in progress.	Tom Osborn	Kimberly St. Hilaire
<i>Total for Shortlisted Wind Projects</i>			<b>430.0</b>	<b>141.0</b>	<b>1,235,180</b>				
<b>Total for Wind Projects in Progress or Shortlisted</b>			<b>580.0</b>	<b>190.5</b>	<b>1,668,800</b>				
<b>Total for All Wind Projects</b>			<b>778.1</b>	<b>254.5</b>	<b>2,228,792</b>				
<b>Geothermal Projects</b>									
Fourmile Hill	Siskiyou County, CA	Calpine	55.0	49.9	437,100	10/1/2004	agreement signed. Drilling in progress.	George Darr	
<i>Total for Geothermal Projects</i>			<b>55.0</b>	<b>49.9</b>	<b>437,100</b>				
<b>Solar Projects</b>									
Solar Ashland Project	Ashland, OR	City of Ashland	0.015	0.0031	27	6/15/2000	Operating	George Darr	
White Bluffs Solar Project	Richland, WA	Energy Northwest	0.038	0.0077	49	5/30/2002	Operating	Tom Osborn	
<i>Total for Solar Projects</i>			<b>0.053</b>	<b>0.0108</b>	<b>76</b>				
<b>Total for Renewable Resource Projects</b>			<b>833.19</b>	<b>304.4</b>	<b>2,665,968</b>				

## RENEWABLE RESOURCE PROGRAM RESEARCH AND DEVELOPMENT PROJECTS

PROJECT	DESCRIPTION	CONTRACTOR	FUNDING	NOTES
Wind Data Collection Network	Long term wind data is collected at 5 Northwest sites	Oregon State University	\$100,000	Annual funding amount
Regional Solar Data Collection	Long term, high-quality, solar data is collected at 14 Northwest sites	University of Oregon	\$130,000	Average annual fundin
Wind Power Impacts Study	Developing modeling tools for assessing impacts of large-scale wind power development on FCRPS	Utility Wind Interest Group/Electrotek	\$227,000	Total funding, including Collaboration, is \$267,
Energy Innovation Center	Fosters development of renewable energy and distributed generation technologies	Energy Northwest	\$350,000	Total funding over two
Wind Integration Study	Examines impacts of wind power on daily and hourly power system operation	Eric Hirst	\$50,000	Total funding