

Bonneville Power Administration's Renewable Program

B O N N E V I L L E
P O W E R A D M I N I S T R A T I O N



Project: "Renewable Projects" Renewable Generation (\$ in millions)	FY01	FY02	FY03	FY04	FY05	FY06	FY01-03 Average	FY03-FY06 Average	FY04-FY06 Average	FY03-FY06	FY04-FY06
										Average Above (or Below) FY01	Average Above (or Below) FY01
August 2002 Forecast	\$ 7.9	\$ 16.8	\$ 42.6	\$ 111.1	\$ 137.6	\$ 139.4	\$ 22.4	\$ 107.7	\$ 129.4	\$ 99.8	\$ 121.5
<i>Growth Rate</i>		113.6%	153.2%	160.8%	23.8%	1.3%					
August 28, 2003 Rate Case Forecast	\$ 7.9	\$ 21.7	\$ 20.3	\$ 23.8	\$ 48.7	\$ 58.1	\$ 16.6	\$ 37.7	\$ 43.5	\$ 29.8	\$ 35.6
<i>Growth Rate</i>		175.5%	-6.5%	17.4%	104.2%	19.4%					
Current 2004 Update	\$ 7.9	\$ 21.7	\$ 17.8	\$ 23.8	\$ 48.7	\$ 58.1	\$ 15.8	\$ 37.1	\$ 43.5	\$ 29.2	\$ 35.6
<i>Growth Rate</i>		175.5%	-17.7%	33.4%	104.3%	19.4%					
Current 2004 Update Above (or Below)											
August 2002 Forecast	\$ -	\$ 4.9	\$ (24.8)	\$ (87.3)	\$ (89.0)	\$ (81.3)	\$ (6.6)	\$ (70.6)	\$ (85.9)	\$ (70.6)	\$ (85.9)
Current 2004 Update Above (or Below)											
August 28, 2003 Rate Case Forecast	\$ -	\$ -	\$ (2.4)	\$ (0.0)	\$ -	\$ -	\$ (0.8)	\$ (0.6)	\$ (0.0)	\$ (0.6)	\$ (0.0)

Drivers of Change

FY03: Actual v. Aug. 28, 2003 Forecast

- 1) August 2002 Forecast contains costs associated with 1000 MW RFP. These costs were not included in August 28 Rate Case Forecast.
- 2) Maiden Termination payment (\$250K) pushed out until FY 2004 because permits triggering payment have not been issued.
- 3) "Mission critical" guidance resulted in little travel or training. Unobligated support costs eliminated.
- 4) Timing of invoices and variation in project generation also resulted in FY03 under-runs.
- 5) \$80 K budgeted for BEF support not spent in FY03.

Drivers of Change

FY01-03 v. FY04-06: Actual v. Current 2004 Update

- 1) Maiden Termination payment moved to FY04 because project has not received permits which trigger payment.
- 2) Major change is due to 50 MW Calpine Geothermal forecasted to come on-line in 2005.
- 3) 25aMW generic wind budgeted in 2006.

Drivers of Change

FY04-06: Aug. 28, 2003 Forecast v. Current 2004 Update

- 1) No differences.

Forecast Risk

- 1) 25 aMW "anchor tenant" wind acquisition in FY 2006 may or may not be needed for loads or facilitation role.
- 2) Load growth placed on BPA in FY 07.
- 3) Fourmile Hill (Calpine Geothermal contract), resource may not be viable.

Opportunities for Improvement

- 1) Reduction in 2005 and 2006 acquisition budget.

BPA's Renewable Costs

2004 - 2006 Values Used in SN CRAC ROD.

	FY 2001*	FY 2002 *	FY 2003 *	FY 2004	FY 2005	FY 2006
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
RENEWABLES GENERATION PURCHASE COSTS 1/						
Wind Total 2/	\$ 6,481,810	\$ 17,121,650	\$ 17,573,443	\$ 22,999,174	\$ 22,538,798	\$ 31,236,680
Solar Total	\$ 50,000	\$ 1,975	\$ 11,316	\$ 11,321	\$ 11,321	\$ 11,321
Geothermal	\$ -	\$ -	\$ -	\$ -	\$ 25,444,254	\$ 26,207,582
Endorsed Hydro 3/	\$ -	\$ 3,256,846	\$ -	\$ -	\$ -	\$ -
TOTAL PURCHASE COSTS	\$ 6,531,810	\$ 20,380,471	\$ 17,584,759	\$ 23,010,495	\$ 47,994,373	\$ 57,455,582

SUPPORT COSTS AND CORPORATE COSTS 4/						
Renewables Support Costs - PBL	\$ 1,345,253	\$ 1,292,164	\$ 264,276	\$ 500,000	\$ 500,000	\$ 500,000
Corporate Charges				\$ 310,247	\$ 160,110	\$ 143,462
SUPPORT COSTS + CORPORATE 4/	\$ 1,345,253	\$ 1,292,164	\$ 264,276	\$ 810,247	\$ 660,110	\$ 643,462
TOTAL COST OF RENEWABLES PROGRAM	\$ 7,877,063	\$ 21,672,635	\$ 17,849,035	\$ 23,820,742	\$ 48,654,483	\$ 58,099,044

REVENUE OFFSETS						
Completed + Forecast EPP & Tag Sales 5/	273,861	1,230,891	1,627,863	1,776,926	3,193,009	3,904,762
Energy Value of Power at Flat Mid C 6/	19,509,651	6,704,243	15,253,335	18,302,279	28,928,051	35,970,955
TOTAL REVENUE OFFSETS	\$ 19,783,512	\$ 7,935,134	\$ 16,881,198	\$ 20,079,205	\$ 32,121,060	\$ 39,875,717

NET COST OF RENEWABLES PROGRAM	\$ 11,906,450	\$ (13,737,501)	\$ (967,837)	\$ (3,741,537)	\$ (16,533,424)	\$ (18,223,328)
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* Data for FY 2001 through 2003 are actual amounts.

1/ Transmission and resource integration included in purchases for the Foote Creek wind projects only. Transmission for other projects included in Transmission Cost budget (per PTT staff).

2/ Additional wind project assumed to be 25 aMW in FY 2006. Total PBL cost (including resource integration) is assumed at \$38.12/MWh for FY 2006, with annual escalation of 2.5%.

3/ Idaho Falls Hydro purchase costs charged to the Renewables budget in FY 2002. These are long term acquisition costs and are included elsewhere in later years.

4/ Support costs for FY 2001 - 2003 includes loaded PBL staff costs, which are not included here for FY 2004-06.

5/ Actuals for FY 2002-03; forecast for FY 2004-06 assumes that completed PLUS future sales will equal 65% of green inventory, at an average green attribute sales price of \$5.00 per MWh.

6/ Based on actual/ forecast renewable generation and AURORA price forecast for 1st Quarter Review. NOTE THAT THE PRICES UNDER THIS FORECAST ARE LOWER THAN THE Gas CCCT COST USED TO MEASURE NET COSTS AGAINST THE RENEWABLES SUBSIDY THRESHOLD OF \$15 MILLION.

Renewable Program Cost Reductions

- BPA will continue to be a leader encouraging the development of renewable resources in the PNW. BPA's primary emphases will be to work with regional interests to ensure the rational inclusion of renewables in regional resource plans, and the development of products and policies that incentivize the development of new renewables in the Pacific Northwest.
- BPA's renewable acquisition and supporting budgets have been reduced because of the present lack of need for new resources to meet our firm obligations.
- BPA has cut approximately \$2.0 million from various renewable R&D and support programs for FY2004 -2006.

Renewable Program Cost Reductions

- BPA also substantially reduced its wind resource acquisition program (stemming from its 1,000 MW wind RFP), to about 165 MW as a result of dramatic market price changes, and the lack of need to meet our existing contract obligations. BPA retained the potential for a 25 MW wind acquisition in FY2004, and then shifted this \$8.4 million wind acquisition expense from FY2004 to FY2006 as part of our cost management efforts. This wind addition in 2006 represents a discretionary action, that we are offering for consideration in this process.
- BPA is continuing to deal with legacy renewables contract commitments such as the Calpine 50 MW geothermal purchase power agreement. BPA is presently exploring its options under this contract. The net expense for this acquisition is approximately \$8M to \$9M/year.

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Support Costs Reduction Details

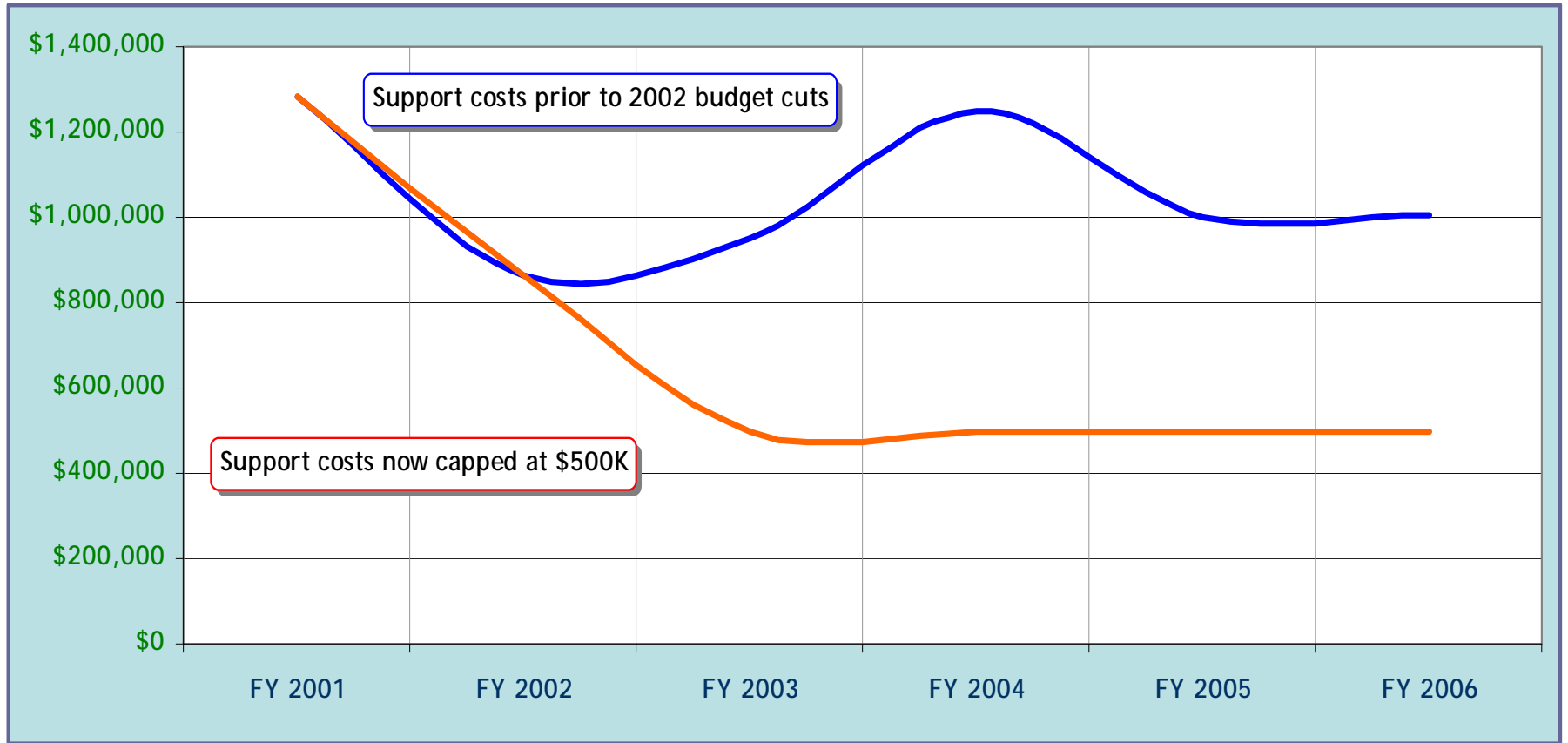
- Reduced or Eliminated from actual and budgeted expenses:
 - ▶ Energy Innovation Center funding terminated in FY2003. Focus was wave energy and fuel cell RD&D.
 - ▶ Site Banking Costs, eliminated in 2002.
 - ▶ Wind Research Cooperative, terminated in FY2003.
 - ▶ UWIG Wind Power Impacts Study, terminated in FY2004.
 - ▶ Wind Data Collection reduced by 30 percent. (est. 1980, reduced from 5 to 4 sites in 2003).
 - ▶ Project Development costs reduced by 50 percent. (place-holder for NEPA in case of BPA acquisition).

Support Costs Reduction Details

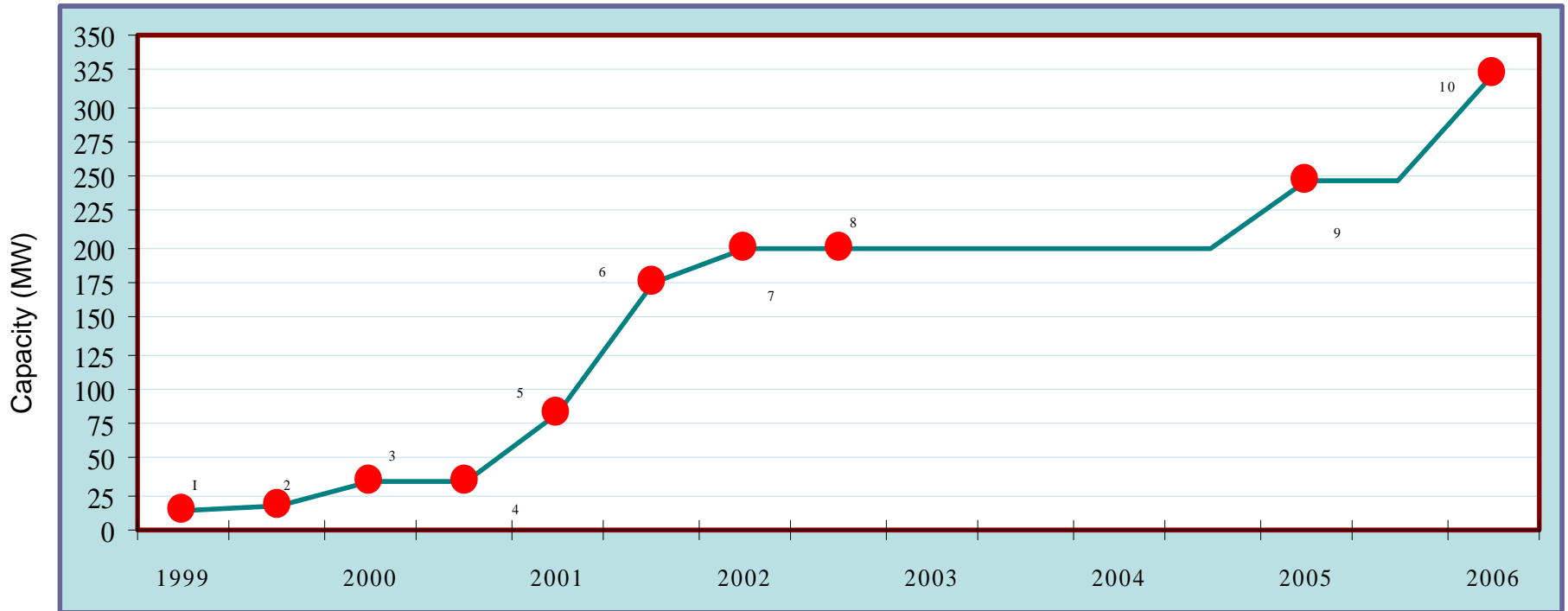
- Remaining in budget:
 - ▶ Solar Data Collection (est. 1977, partnership, 23 monitoring sites).
 - ▶ Maiden Termination (one-time payment budgeted in FY2004).
 - ▶ Wind Forecasting Study (supports storage and shaping service).
 - ▶ Green Power Marketing Support (Marketing Kit, stock advertisements and marketing assistance).

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Cost Reductions: Support Costs



BPA's Renewable Capacity by On-line Date



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|--------------------|------------------------------|
| 1 = Foote Creek I | 6 = Stateline |
| 2 = Foote Creek II | 7 = Klondike |
| 3 = Foote Creek IV | 8 = White Bluff Solar |
| 4 = Ashland Solar | 9 = Fourmile Hill Geothermal |
| 5 = Condon | 10 = Potential 25 aMW Wind |
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BPA's Renewable Portfolio

Year PPA Signed	On-Line Date	Project	BPA Share (MW)	Cumulative Capacity (MW)
1997	April 22, 1999	Foote Creek I Wind	15.32	15.32
1998	June 18, 1999	Foote Creek II Wind	1.8	17.12
1999	October 1, 2000	Foote Creek IV* Wind	16.8	34
2000	June 15, 2000	Ashland Solar	0.015	34
2001	December 31, 2001	Condon Wind	49.8	84
2001	December 18, 2001	Stateline Wind	90.42	174
2001	December 31, 2001	Klondike Wind	24	198
2001	May 30, 2002	White Bluffs Solar * (WA)	0.0387	198
2000	2005 (?)	Fourmile Hill Geothermal (CA)	49.9	248
NA	2006 (?)	Potential Wind	75	323

* Fourmile Hill is scheduled to be on-line 2005.

Cinergy owns the FC IV attributes.

BEF owns the White Bluff attributes.

Potential Additional Renewables Expense Reductions

- In light of BPA's on-going commitment to encouraging the development of renewable resources in the region, and our commitment to fund up to a \$15 million net annual investment in renewables...What is your advice?
- As discussed above, BPA is reviewing its options regarding the Calpine Geothermal contract (This contract results in gross expenses of \$28 million 2005, and \$29 million 2006).
- In addition, BPA has retained an \$8.4 million wind resource acquisition in its budget for 2006. This budget was intended to allow BPA to act as an "anchor tenant" to facilitate larger wind resource developments that BPA anticipated may be developed by our customers.

Potential Additional Renewables Expense Reductions

- Alternatives to these investments include:
 - ▶ retaining this funding capability for currently budgeted projects or for a portfolio of renewable alternatives.
 - ▶ eliminating the wind acquisition, and continuing to explore BPA potential rights to terminate the geothermal project.
 - ▶ reducing this funding (if contractually possible), and replacing it with more cost effective renewable resource development initiatives.