Integrated Program Review

(IPR)

Energy Efficiency

Technical Workshop

Thursday, May 22, 2008

Agenda

1. Purpose and Objectives of Workshop
2. Brief History of BPA's Energy Efficiency Program
3. Key Drivers and Assumptions
4. Actual and Proposed Budgets (FY 2006-2011)
5. Out-Year Capital Projections (FY 2012-2013)
6. Risk and Mitigation
7. Challenges and Uncertainties
8. Questions and Answers
9. Workshop Schedule, Financial Disclosure & Process for Commenting

Purpose and Objectives of Workshop

- Provide background information on BPA's Energy Efficiency Program, including accomplishments and costs.
- Present actual expenditures for FYs 2006 and 2007 for BPA's Energy Efficiency Department.
- Present Energy Efficiency's proposed spending levels for FYs 2009, 2010 and 2011, including assumptions that shaped the projected funding levels.
- Present Energy Efficiency's proposed expenditures for FYs 2012 and 2013.
- Provide an opportunity for stakeholders to review and ask questions regarding the proposed spending levels.

History of BPA's Energy Efficiency Program

- Over the last 26 years (1982-2007), BPA's energy efficiency programs have delivered 1,000 aMW of savings for the region at a cost of about $2.3 billion.

- These savings (on a firm energy basis) are equivalent to the generation from the region's nuclear plant (Energy NW). Furthermore, only two Federal dams produce more power (Grand Coulee and Chief Joseph). Also, energy efficiency reduces T&D costs and power purchase costs.

- Over the last 11 years (FY 1997-2007), BPA's portfolio of energy efficiency acquisition programs has delivered over 400 aMW of savings at a cost that averages about $1.3 million/aMW. This is due, in large part, to the extremely low cost of our CFL programs.

- For the FY 2007-09 rate period, it was assumed that BPA could deliver incremental energy efficiency savings at a cost not to exceed $1.5 million/per aMW across all energy efficiency acquisition programs.

- The energy efficiency acquisition budget of $80 million/year to achieve the 52 aMW/ per year target for the FY 2007-09 rate period was established through an extensive public planning and review process.

Key Drivers

- BPA's energy efficiency target from the 5th Power Plan will increase from 52 aMW in FY 2009 to an average of 64 aMW/ per year for the FY 2010-2014 period (net of any naturally occurring conservation).
- Climate change, public pressure and related federal/state legislative initiatives will increase the demand for more energy efficiency. BPA has been participating in several regional forums regarding energy efficiency and there are expectations that BPA will continue to be an important partner in achieving these higher demands for energy efficiency.
- BPA's proposed tiered rates should reinforce this demand for utilities to achieve more energy efficiency using their own funding mechanisms.
- We anticipate that BPA's 2008 Resource Program will require development of higher levels of energy efficiency. Capacity constraints on the FCRPS and transmission system may require more energy efficiency/load management initiatives. Planning and implementing new load management programs will add costs due to our limited previous experience in this arena and increased demands on existing staff.
- The cost of delivering these higher conservation targets will increase substantially for a number of reasons (e.g., the market for lower cost measures (such as CFLs) has been saturated, penetrating "hard-to-reach" markets (e.g., rental properties, industrial processes, etc.) that are in the current Power Plan will cost more, an increase in the "avoided cost" will move higher cost measures into the target, etc.).
- New technologies and penetrating hard-to-reach commercial and industrial markets will require BPA reimbursement levels to increase.
- Updating severely out-of-date end-user load profiles, engineering estimates for energy conservation measures (ECMs) and building stock data will increase costs.
- The states will be completing their low income weatherization funding cycle under current BPA contracts and, as a result, there will most likely be an uptake in spending in FY 2009.

Key Assumptions

- It is assumed that BPA's and public power's energy efficiency targets will increase when the 6th Power Plan is published (2009).
- It is assumed that these demands will require BPA to accelerate the delivery of energy efficiency by at least 10 percent to 70 aMW/year for the FY 2010-2014 period.
- For planning purposes, it is assumed that conservation rate credit (0.5 mills times the load placed on BPA) will continue to be available in the FY 2010-2014 period. The IOUs will not be eligible for the rate credit and BPA will no longer allow renewable resource activities to be eligible for the rate credit. This results in about $32 million per year being available for energy efficiency related activities under the rate credit.
- It is assumed that the rate credit and bilateral contracts will deliver savings at a cost of $2.0 million/aMW.
- It is assumed that market transformation will deliver 12 aMW/year at a cost of about $1.0 million/aMW.
- It is assumed that utilities will self-fund 20% (or 14 aMW/year) of this higher accelerated conservation target.
- BPA is proposing to increase its energy efficiency acquisition capital program by $24 million per year for the FY 2010 to 2014 period.
- In addition, BPA is proposing to enhance its acquisition expense program by $7 million per year for the FY 2010-2011 period.
- After taking into consideration the cost of market transformation and an assumed 20% utility self-funded conservation, it is estimated that BPA's overall cost will increase to an average of $1.6 million/aMW (see Table 1).
- Table 2 provides a detailed breakdown of BPA's entire proposed program levels for the Energy Efficiency Department.

Accelerating the Acquisition of Energy Efficiency

Table 1: Accelerating the Acquisition of Energy Efficiency
(average annual acquisition program budget for the 2010-2014 period)

Funding Mechanism	aMW	Budget	Cost/aMW
Rate Credit (at 0.5 mills = $32M/year)	16	$32M Expense	$2.0M
Utility & Fed. Agency Bilateral Contracts	14	$28M Capital	$2.0M
Third Party Contracts	14	$28M Capital	$2.0M
Regional Acquisition Support and Evaluation*	---	$10M Expense	---
BPA Program and Support Sub-total	**44**	**$98M**	**$2.2M**
Market Transformation (via NEEA)	12	$12M (E)	$1.0M
BPA $ Sub-total	**56**	**$110M**	**$2.0M**
Utility Self-funded (assumes 20% of total)	14	---	---
ECM Development and Support*	---	$4M (E)	---
Total	**70**	**$114M**	**$1.6M**

* Additional funds will be required to support regional initiatives to help ensure the savings are achieved (e.g., trade ally network, training for vendors and utility staff, marketing information and related outreach, M&V for new measures, program evaluations, oversight of utility conservation, developing new energy conservation measures (ECMs), etc.).

Assumptions for the FY 2010-14 planning horizon:

- BPA is accelerating its share of the average annual regional energy efficiency target by about 10% (or 6 aMW/year) beyond the average base level established in the 5th Power Plan (from 64 aMW/year to 70 aMW/year).
- BPA's cost of delivered savings will increase from about $1.2 million/aMW in the FY 2007-09 period to $1.6 million/aMW for the FY 2010-14 period (i.e., inflation, fewer low cost measures (CFLs) available, etc.).
- Rate credit continues at 0.5 mills times load placed on BPA; conservation will get $32 million/year and no funds will go to renewables; the IOUs are not eligible for the rate credit.
- 20% of the annual regional energy efficiency target will be achieved by utility self-funded programs (i.e., drivers include I-937, avoiding Tier 2 prices, etc.).

Actual (FY 2006-08) Proposed (FY 2009-11) Conservation Spending Levels

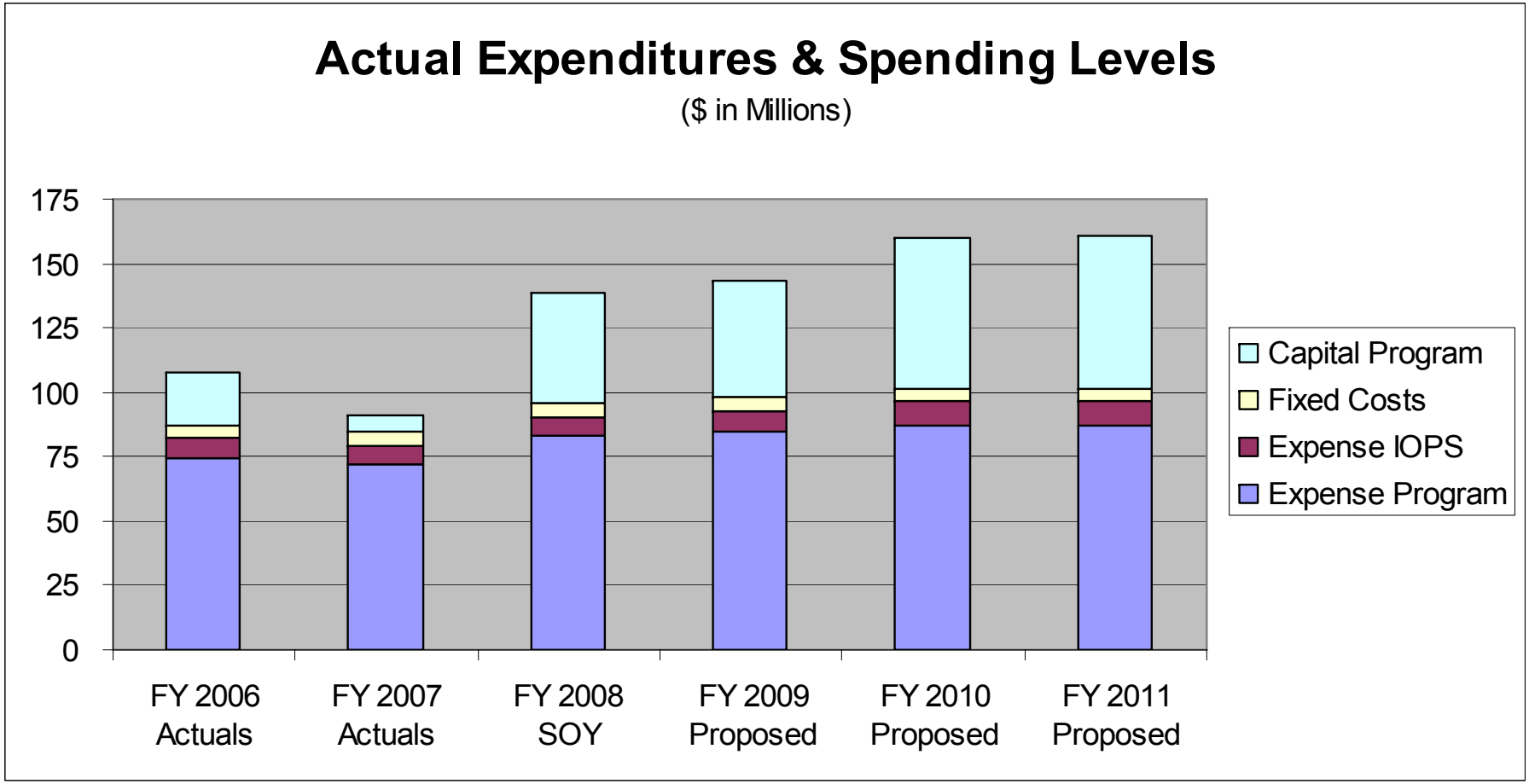
Table 2: Actual (2006-08) and Projected (2009-11) Conservation Budgets

	2006		2007		2008		2009		2010	2011
	Rates	Actuals	Rates	Actuals	Rates	SOY(+)	Rates	Plan	Plan	Plan
aMW Target/*Achieved*	44.0	*48.5*	52.0	*58.1*	52.0	52.0	52.0	52.0	70.0	70.0
Budget Line Items (in millions of $)										
Capital										
Bilateral	20.0	19.9	32.0	7.0	32.0	42.0	32.0	42.0	56.0	56.0
Non-Wires Solutions (in Trans $)			1.0		3.0	0.5	3.0	3.0	3.0	3.0
Expense										
Rate Credit (Conservation Only)	37.0	36.0	36.0	33.6	36.0	36.0	36.0	36.0	32.0	32.0
Reimbursable	9.3	17.2	12.9	17.2	12.9	22.0	12.9	22.0	20.5	20.5
Market Transformation (re/NEEA)	10.0	10.1	10.0	10.8	10.0	10.0	10.0	10.0	12.0	12.0
Acquisition Expense		0.5	2.6	1.6	2.0	6.7	2.0	7.0	14.0	14.0
*Support for Acquiring aMW**						*2.2*			*5.0*	*5.0*
Load Management								*2.0*	*2.0*	*2.0*
Planning/Evaluation				*0.6*		*1.4*		*1.4*	*2.0*	*2.0*
Marketing		*0.2*		*0.2*		*0.7*		*0.8*	*1.5*	*1.5*
Tracking/Reporting/RTF		*0.3*		*0.6*		*0.7*		*0.8*	*1.0*	*1.0*
Sector Support				*0.6*		*1.7*		*2.0*	*2.5*	*2.5*
Low Income Weatherization	3.7	5.9	5.0	4.2	5.0	5.0	5.0	5.8	5.0	5.0
Legacy	4.2	4.3	3.7	4.5	2.6	2.6	2.1	2.1	2.0	1.6
DSM Technologies	1.8	0.5	1.7	0.2	2.3	0.6	2.3	1.6	1.6	1.6
Program Level Spending	66.0	74.5	71.9	72.1	70.8	83.0	70.3	84.5	87.1	86.7
Internal Operations	6.5	6.6	6.4	7.1	6.7	7.6	7.0	8.5	9.5	10.1
Fixed Cost	5.3	5.3	5.2	5.3	5.2	5.2	5.2	5.2	5.0	4.9
Total	97.7	106.3	116.6	91.4	117.7	138.3	117.5	143.2	160.6	160.7
BFTE *Burn*/Allocation		*61.8*		*55.4*		60.0		62.0	62.0	62.0

\+ - Subsequent mid-year reduction from SOY of $29M (Capital reduction of $22M Bi-Lateral Contracts and $.25M Non-Wires Solutions plus Expense Forecast $5M Reimbursable Program and $1.5M Acquisition Expense reduction).

* - $2 million in unspent acquisition expense funds was carried over from FY 2007 to FY 2008.

Graphic: Energy Efficiency Programs



Energy Efficiency Programs

Expense Acquisition (000's)	Actuals		SOY	Rate Case Average	Rate Case	Forecasted		
	FY 2006	FY 2007	FY 2008	FY 2007-09*	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	$74,500	$72,113	$82,983	$71,035	$70,347	$84,526	$87,088	$86,722
Less Reimbursable Expense	($17,233)	($17,172)	($22,000)	($12,909)	($12,933)	($22,000)	($20,500)	($20,500)
Plus Related Internal Operations	$6,595	$7,053	$7,606	$6,695	$6,953	$8,535	$9,519	$10,115
Net	$63,862	$61,994	$68,589	$64,821	$64,367	$71,061	$76,107	$76,337
Increase/Decrease*		($1,868)	$6,595		($4,222)	$6,694	$5,046	$230

*FY 2006-08: Rate Case FY 2009, 2010 and 2011, change from prior year. FY 2009 Forecast: change calculated from "Rate Case".

Capital Acquisition (000's)	Actuals		SOY	Rate Case		Forecasted		
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	$ 19,920	$ 6,955	$ 42,500	$ 135,000	$ 35,000	$ 45,000	$ 59,000	$ 59,000
Total Increase/Decrease						$ 10,000	$ 14,000	$ -

(Non-Wires Solutions included)

BPA is accelerating its share of the average annual regional energy efficiency target by about 10% (or 6 aMW/year) beyond the average base level established in the 5th Power Plan (from 64 aMW/year to 70 aMW/year). This is in anticipation of the 6th Power Plan increasing the Region's conservation target.

BPA's average cost of delivered savings will increase from about $1.3 million/aMW in the 1997-2007 period to $1.6 million/aMW for the 2010-14 period.

Out-Year Capital Projections (FY 2012-2013)

- BPA proposes to continue the energy efficiency capital program at the same level as projected for FY 2010-11 (i.e., $56 million/year for energy efficiency acquisition and $3 million/year for non-wires solutions).

- BPA views the capital budget as fungible over the five year period (FY 2010-2014) and will manage the capital funding to match the pace of delivery by the participating utilities.

- We anticipate that bilateral umbrella contracts will be put in place for a six year period (FY 2010-15) with participating utilities. These agreements will allow customers to access BPA's energy efficiency funds across rate periods (currently scheduled on a 2-year cycle).

Risk and Mitigation

- After nearly 30 years of experience in operating and evaluating energy efficiency programs across all sectors, BPA and the energy efficiency community have developed a level of understanding that allows us to build-in up front controls to mitigate risks that can occur in our programs. These include items such as:
  - *Pay-for-delivered-savings* provisions in our bilateral contracts that help ensure ECMs have been installed and verified before BPA pays anything.
  - *Deemed savings* for routine ECMs are based on a long-standing familiarity and a strong engineering understanding of the energy savings.
  - *Measurement and verification or impact evaluation* plans are required for all non-deemed projects.
  - *BPA's reimbursement amount* for any given ECM is established at a level that will "move the market," however, BPA rarely pays the full cost of any measure so others have a vested interest in measure reliability.
  - *Ongoing evaluation ensures* we are reviewing and adjusting our programs to reflect the best information regarding the market and ECM performance.
- If BPA's 2008 Resource Program determines that energy efficiency is the least cost resource solution and we have not budgeted sufficient funds to develop and deliver the savings required.
- Although this proposed spending level anticipates an acceleration of energy efficiency, the required levels may be higher (or lower) and needed sooner (or later) than planned.
- The cost of delivering the energy efficiency savings in the future is significantly higher (or lower) than we currently anticipate.

Challenges and Uncertainties

- Regional coordination (e.g., trade ally networks, training, marketing, research, education and outreach, program evaluations, etc.) will be critical to help drive costs down.

- Economies of scale re/bulk purchases, leveraging with manufacturers and distributors, etc. will help in managing costs.

- There are future uncertainties (e.g., changes in the "avoided cost" that could move higher cost measures into future targets, how will customers respond to a tiered rate environment, public pressure to achieve more energy efficiency, how much utility self-funding will occur, what future federal/state requirements will be imposed on utilities, etc.).

- The commitment was made in the Long Term Regional Dialogue Policy Record of Decision (ROD) and is re-enforced in BPA's Strategic Objective S8 ("*BPA and public power cooperatively accomplish public power's share of the regionally cost-effective energy efficiency/demand management…"*

Upcoming Workshops

Workshop	Date	Time
Executive Welcome & Overview	Thurs. 05/15/2008	9:00am-3:00pm
FY 2009 Power Cost Overview, Misc.	Thurs. 05/15/2008	3:00pm-4:00pm
Asset Management Overview, Agency Service Costs	Tues. 05/20/2008	9:00am-9:30am 9:30am-12:30am
Power's Internal Operating Costs, Power's Transmission Acquisition & Residential Exchange	Tues. 05/20/2008	1:00pm-4:00pm
Fish & Wildlife Capital/Expense with emphasis on MOA costs overall and FY 2009 F&W Program Costs, and FY 2009 Columbia River Fish Mitigation Investment	Wed. 05/21/2008	9:00am-12:00pm
Corps/Reclamation – Capital/Expense Part 1 of 2	Wed. 05/21/2008	1:00pm-4:00pm
Conservation & Energy Efficiency – (Capital/Expense), Renewable Resources Program	Thurs. 05/22/2008	9:00am-12:00pm
Columbia Generating Station	Thurs. 05/22/2008	1:00pm-4:00pm
General Manager Meeting on 2009 Costs	Thurs. 06/11/2008	9:00am-12:00pm 1:00pm-2:00pm
Fish & Wildlife Capital/Expense with an emphasis on FY2010-2011 F&W Program Costs, Hydro Ops, Lower Snake River Comp. Program & Columbia River Fish Mitigation Investment & NWPCC	Thurs. 06/12/2008	9:00am-12:00pm
Corps/Reclamation – Capital/Expense Part 2 of 2	Thurs. 06/12/2008	1:00pm-4:00pm
Transmission Capital/Expenses	Thurs. 06/19/2008	9:00am-12:00pm
Depreciation, Amortization and Interest, and Debt Management	Thurs. 06/19/2008	1:00pm-4:00pm
General Manager Meeting	Thurs. 06/26/2008	9:00am-12:00pm
IPR Concluding Workshop	Thurs. 06/26/2008	1:00pm-4:00pm

Ways to Participate

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- All forums are open to the public and will be noticed on the IBR external Web site at: http://www.bpa.gov/corporate/Finance/IBR/IPR/.
- All Technical and Managerial workshops will be held at BPA Headquarters.
- The comment period for the IPR opens Thursday, May 15, 2008. Close of comment period for FY 2009 Power Costs is June 16, 2008. Close of comment period for all other costs is August 15, 2008.
- You have several options to provide comments to BPA:
    1. Attend one or more of the meetings listed above and give BPA your comments.
    2. Discuss your input with your Customer Account Executive, Constituent Account Executive, or Tribal Liaison.
    3. Submit written comments to Bonneville Power Administration, P.O. Box 14428, Portland OR 97293-4428.
    4. Submit comments via e-mail to: comment@bpa.gov or submitted on-line at: http://www.bpa.gov/comment
    5. Comments can also be sent via fax to (503) 230-3285.

BPA's Financial Disclosure Information

1. All FY 2008-2013 information was provided in May 2008 and cannot be found in BPA-approved Agency Financial Information, but is provided for discussion or exploratory purposes only as projections of program activity levels, etc. This information is a derived estimate for presentation purposes and cannot be found in BPA-approved Agency Financial Information but is provided for discussion or exploratory purposes only as "*projections of program activity levels, etc*."

2. All FY 2007 and earlier information was provided in May 2008 and is consistent with audited actuals that contain BPA-approved Agency Financial Information.