

# **Energy Efficiency Bonneville Power Administration**

## **Energy Efficiency Plan FY 2008-2009**

**September 30, 2007**

### **Energy Efficiency Vision**

To ensure a more sustainable environment in the Pacific Northwest, the BPA Energy Efficiency organization is and will remain a premier provider and facilitator, catalyst and deliverer of electric energy savings and demand-side management.



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## Overview

This Energy Efficiency Plan provides a comprehensive overview of the work that BPA's Energy Efficiency Group (EE) has accomplished to date, ongoing efforts and additional programmatic and regional infrastructure activities that will be implemented to achieve BPA's share of the targets identified in the Northwest Power and Conservation Council's 5<sup>th</sup> Power Plan. Based on BPA's share of the cost-effective and achievable conservation in the region, BPA's target is 56 average megawatts (aMW) per year (including 4 aMW of assumed naturally occurring conservation).

While the timeframe for the Council Plan is the five-year period of 2005-2009, EE's Energy Efficiency Plan focuses on a shorter timeframe consisting of the three-year rate period, BPA Fiscal Year\* 2007–2009, although EE expects many initiatives and the funding framework to extend beyond the rate period. This Energy Efficiency Plan identifies initiatives, contractual and reporting improvements, marketing and infrastructure strategies necessary to achieve the targets. EE Planning, Marketing and Sector teams will develop details of the programs and initiatives identified in this plan. EE has an annual budget of \$80 million allocated among the various acquisition and regional infrastructure efforts identified in this Energy Efficiency Plan, which means conservation must be achieved at an average cost of no more than \$1.5 million/aMW of first year energy savings.

This version of the Energy Efficiency Plan focuses on the remaining two years in the current rate period (FY 2007-2009) with specific strategies to be implemented in FY 2008. The components of this Energy Efficiency Plan are:

- Strategic Objectives, Targets and Strategic Themes
- Sector Strategies, Programs, and Initiatives
- Marketing Strategy
- Reporting and Tracking
- Evaluation Strategy
- Conclusion

The Energy Efficiency Plan will be reviewed, updated and revised annually to keep conservation achievements on track. If BPA determines through the review process that an initiative is at risk of not producing the level of cost-effective energy savings needed, it may be modified, terminated or replaced by a new initiative.

EE must be prepared to respond to contingencies to meet its conservation goals. Contingency planning may include accelerating successful acquisition efforts and/or launching new initiatives in lieu of continuing those that are not producing the desired results. Hence, the Energy Efficiency Plan should be considered a "living" strategic document, subject to periodic revisions, if necessary, to achieve EE's annual targets.

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\* BPA's fiscal year runs from October 1 through September 30

## Background

This Energy Efficiency Plan is aligned with the following strategic objectives:

- Agency Strategic Objective (S8): BPA and public power cooperatively accomplish public power's share of regionally cost-effective energy efficiency/demand management and renewable resources. BPA deploys cost-effective non-construction alternatives to transmission expansion.
- Key Agency Target for EE: Deliver 47 to 57 aMW of new conservation from all of BPA's energy efficiency programs at a cost of \$1.4 million to \$1.5 million per aMW.
- Agency Strategic Objective (S9): BPA encourages and implements integrated, cost-effective policies which lead to greenhouse gas emission reductions.

*Towards meeting this objective, the agency will continue its active support of energy efficiency.*

- Key Agency Target for FY 2008: BPA will complete development and begin the implementation of a Climate Change Action Plan.

## FY 2007 Accomplishments

When this Energy Efficiency Plan was published, final FY 2007 savings were not available. Based on invoices and mid-year reports, BPA's conservation savings are projected to be approximately 53 aMW for FY 2007. Figure 1 shows the savings broken out by funding source. The majority of the energy savings were funded through the rate credit (CRC) and from BPA direct acquisition (Northwest Energy Efficiency Alliance and Low-Income Weatherization).

**Figure 1: FY 2007 Savings by Funding Source\***

Source	aMW
Conservation Augmentation	0.6
Conservation Acquisition Agreements	6.7
Conservation & Renewables Discount	2.1
Conservation Rate Credit	22.2
BPA Direct	18.0
Utility (High Water Mark)	4.0
<b>Total</b>	<b>53.6</b>

\*Figures are preliminary, not final

Figure 2 shows the savings broken out by sector and measure categories. Lighting at 27 aMW comprises approximately 50 percent of the total savings, and can be further broken out as 12.6 aMW from NEEA and 14.4 aMW from the residential, commercial and industrial sectors. The NEEA lighting savings were higher than expected.

**Figure 2: FY 2007 Savings by Sector and Measure Category\***

<b>Residential</b>	<b>aMW</b>
Lighting	7.4
Weatherization	1.1
HVAC	0.4
Appliances	1.5
LiWx	0.3
NEEA	16.1
<b>Residential Total</b>	<b>26.8</b>
<b>Commercial</b>	
Lighting (C&IL/deemed)	5.0
Energy Smart Grocer Program	0.2
New Construction Program	0.0
Federal <sup>1</sup>	3.0
Other Retrofit	1.3
Targeted Initiatives/Misc	0.0
NEEA	1.0
<b>Commercial Total</b>	<b>10.3</b>
<b>Industrial</b>	
Process	6.0
Compressed Air	0.5
Lighting	2.0
Wastewater/Municipal Water	0.1
Other	1.0
NEEA	0.6
<b>Industrial Total</b>	<b>10.2</b>
<b>Agricultural</b>	
SIS	2.1
Fittings/Hardware	1.7
Transformer De-energization	0.3
Pumps and Motors	0.6
Other	1.5
NEEA	0.0
<b>Agricultural Total</b>	<b>6.1</b>
<b>TOTAL</b>	<b>53.6</b>

\*Figures are preliminary, not final.

Additional information about historical accomplishments is provided in the Appendix.

## FY 2008 Goals

Based on BPA's approximate share of the region's load, the agency's portion of the Council's regional conservation target is 40 percent, or 56 aMW/year. This target includes naturally occurring conservation. BPA, working with the Council, assessed which measures are likely to be naturally occurring. Measures for which there are significant non-energy benefits and a well-developed market are those most likely to be naturally occurring. As a result of this assessment, BPA estimates that 4 aMW of BPA's 56 aMW/year target will be naturally occurring. Thus, BPA's annual program target is 52 aMW/year (which includes 10 aMW of Market Transformation over the three-year period, FY 2007–2009). This target represents cost-effective, achievable energy efficiency measures.

The breakout by sector, based on the Council Plan, is shown in table 1. These sector targets are fungible, in the sense that the individual sector results may vary as long as the overall target is met. Also shown in this table are estimated sector breakouts of the 10 aMW savings achieved through market transformation. The market transformation (MT) estimates are based on the Council Plan and BPA's projections of NEEA savings. While shown as annual MW, the savings from MT by nature are not usually achieved at a steady rate over time. Net of MT, BPA's annual target is 42 aMW/year, which will be funded by BPA through various programs and initiatives. The appendix to this document provides a further breakout by measure type within each sector, based on the Council Plan and EE analysis.

**Table 1: BPA's Share of Council Plan Targets, FY 2007-2009 (aMW/year)\***

Sector	With MT		MT	Without MT	
	aMW	%	aMW	aMW	%
Residential	17	33	6	11	27
Commercial	16	31	3	13	31
Industrial	14	27	1	13	31
Irrigation	4	8		4	9
Misc.	1	1		1	2
<b>Total</b>	52	100%	10	42	100%

\*Based on Council Plan

Beginning in FY 2007, BPA will rely primarily on Conservation Rate Credit (CRC) and Conservation Acquisition Agreement (CAA) funding mechanisms. Table 2 shows the annual programmatic funding goals.



**Table 2: Programmatic Savings Goals<sup>1</sup>**

Programmatic Savings Goals (aMW)	Target	Target	Target
	FY07	FY08	FY09
Conservation Rate Credit	20	20	20
Conservation Acquisition Agreement	17	17	17
Low Income Weatherization	0.3	0.3	0.3
Third Party Contracts	4.7	4.7	4.7
NEEA Market Transformation	10	10	10
<b>Total Goal (with Market Transformation)</b>	<b>52</b>	<b>52</b>	<b>52</b>
Total Goal (without Market Transformation)	42	42	42
Note: An additional naturally occurring 4 aMW are expected.			

Program Budgets - EE's \$80 million/year budget (averaging \$1.5M/aMW) will be allocated as follows:

- Rate Credit - \$36 million (equivalent to 0.5 mills/kWh)
- Conservation Acquisition Agreements (bilateral contracts) - \$26 million
- Third party contracts - \$7 million
- Market Transformation - \$10 million
- Infrastructure Support and Evaluations - \$1 million

Reimbursement levels - For greater detail, see the Conservation Rate Credit and Conservation Acquisition Agreement Implementation Manual -- CRC & CAA (10/1/07). Generally, measures will be reimbursed as follows (although there will be cost-share caps on many projects):

- Residential: 20-35 cents/kWh (first year savings)
- Commercial: 13 cents/kWh
- Industrial: 12 or 15 cents/kWh (depending on whether a utility elects to receive BPA engineering support); and
- Irrigation: 15 cents/kWh

In contrast to the previous rate period (FY 2001–2006), BPA has shifted its implementation focus from funding mechanisms to market sectors and technologies. By assessing historical accomplishments, talking with utility customers, and assessing the cost-effective conservation potential identified in the Council Plan, EE's Planning and Market Sector Teams (residential, commercial, industrial and agricultural) will continue in FY 2008 to identify and target specific technologies and market segments necessary to capture the available conservation potential.

<sup>1</sup> See the Conservation Rate Credit and Conservation Acquisition Agreement Implementation Manual -- CRC & CAA (10/1/07) for details about the CRC and CAA.

## General Strategy

Achieving BPA's target of 52 aMW/year requires greater regional collaboration and participation by a wide range of market players. BPA will continue to build the regional infrastructure for accomplishing conservation and will focus on facilitating the efforts of customer utilities, trade allies, consultants and other energy service providers to acquire conservation. Both incentive-based approaches targeted at end-users and market transformation efforts to change manufacturer, retail and trade ally practices are essential.

More specifically, EE will focus its efforts in five major areas for FY 2008:

- Improve energy efficiency marketing to increase market penetration of existing programs/technologies and enhance effectiveness of new initiatives
- Streamline and Simplify to increase relative proportion of time spent on program delivery vs. administrative activities
- Increase number of “boots on the ground” - leverage limited BPA and utility staff resources
- Align internally to ensure success of our delivery partners
- Expand regional energy efficiency infrastructure and portfolio of existing programs and measures

Each of these areas is described further in the next section. Because of the success of CFL MT efforts and utility CFL acquisition efforts, NEEA and BPA expect to acquire a significant amount of the FY 2008 targets (~23 aMW) and possibly FY 2009 targets through CFLs. Achieving over 40 percent of the targets with low cost CFLs (at an average \$0.6 M/aMW) provides a window of opportunity for EE to build BPA, utility and other market player capabilities for achieving conservation in the commercial and industrial sectors and to identify and build the strategy for achieving conservation in the residential sector after the CFL market is transformed. To do this, EE will focus an increasing percentage of its funding in FY 2008 on building the data necessary to better target program marketing efforts, to build effective program strategies and on regional infrastructure support activities. EE will significantly enhance its marketing efforts, both at the program level and the general public awareness level. Key regional infrastructure needs include building trade ally networks, facilitating regional coordination and providing third party program implementation. Regional coordination needs include synchronizing program requirements for trade allies, aligning, cost-sharing and/or sharing marketing, market research, technology RD&D, and evaluation activities.

## Strategic Themes for FY 2008

The five major areas of focus for FY 2008 are further described below:

1. Improve energy efficiency marketing to increase market penetration of existing programs/technologies and enhance effectiveness of new initiatives
  - Improve awareness of energy efficiency opportunities; leverage the “green wave”
  - Enhance BPA, trade ally and utility program marketing
  - Facilitate customer peer sharing (brown bags, networking, etc.)
  - Improve linkage between market data, program design and implementation

2. Streamline and Simplify - Increase relative proportion of time spent on program delivery vs. administrative activities
  - Simplify requirements and procedures
  - Develop turnkey programs that can be used/customized by multiple utilities
  - Streamline RTF new measure and M&V approval process
  - Improve flexibility of BPA programs
  - Develop direct acquisition approaches that customers support
  - Delegate decision-making when appropriate
  - Keep the focus on getting aMW – limit time spent on administrative activities
3. Increase number of “boots on the ground” - Leverage limited BPA and utility staff resources
  - Expand trade ally networks
  - Build trade ally knowledge of energy efficiency technical and business opportunities
  - Expand the number of third party program offerings
  - Increase pool and use of qualified energy efficiency professionals
4. Align internally to ensure success of our delivery partners
  - Use a customer and trade ally orientation in decision making for programs and contracts
  - Build strong alignment between EE Plan, sector strategies and marketing plan
  - Maximize value of Utility Sounding Board
5. Expand regional energy efficiency infrastructure and portfolio of programs and measures ready to roll out
  - Expand regional M&V infrastructure
  - Increase utility and trade ally energy efficiency knowledge and capabilities
  - Explore and facilitate creation of regional utility coalitions starting with the Puget Sound area
  - Increase regional consistency - more deemed measures, standardized measure savings/incentives, programs and marketing across region
  - Fill the pipeline and expedite introduction of new energy efficiency measures
  - Leverage past and future NEEA efforts by better transition planning between acquisition and market transformation
  - Continue and expand coordination with regional players (e.g., NEEA, ETO)
  - Expand use of manufacturer buy-downs and/or bulk purchases
  - Launch new regional initiatives targeted at hard-to-reach markets

## Sector Strategies

Targets by market sector and/or technology within each sector are shown in table 3. BPA is committed to achieving an average 52 aMW/year over the three-year rate period, although actual aMW achieved in a given year may vary. The targets identified in table 3 are intended to provide guidance to BPA and utility staff regarding relative priorities and allocation of efforts. BPA and utility staff will allocate a larger portion of their efforts to where the energy savings potential and acquisition targets are significant. Every six months, after the CRC and CAA contract delivery reports are submitted by BPA customer utilities, targets for specific technologies and initiatives may be adjusted.

**Table 3: Initiatives and Technology Targets**

	Target	Actual	Target	Target	3-Yr Avg
	FY07	FY07	FY08 <sup>1</sup>	FY09 <sup>2</sup>	FY07-09
<b>Residential Sector</b>					
Change A Light (CAL)	4.0	3.0	4.5	1.5	3.0
Utility CFL Programs	2.4	1.4	0.5	1.0	1.0
Savings with a Twist (SWAT)	4.0	3.0	6.0	1.5	3.5
HVAC	1.2	0.4	1.2	1.0	0.9
Appliances, weatherization & misc.	1.4	2.6	2.5	2.5	2.5
Low Income Weatherization (LiWx)	0.3	0.3	0.3	0.3	0.3
Market Transformation	8.0	16.1	13.0	10.0	13.0
<b>Subtotal Residential Sector</b>	<b>21.3</b>	<b>26.8</b>	<b>28.0</b>	<b>17.8</b>	<b>24.2</b>
<b>Commercial Sector</b>					
Lighting	6.0	5.0	5.2	5.0	5.1
Energy Smart Grocer	1.0	0.2	1.0	1.0	0.7
Energy Smart Design New Construction Rx			0.3	1.0	0.7
Other New Construction	1.0	0.0	1.0	1.3	0.8
Federal	3.0	3.0	4.0	4.0	3.7
Other Retrofit	2.0	1.3	1.0	2.0	1.4
Targeted Initiatives/Misc. <sup>3</sup>	3.5	0.0	0.0		0.0
Market Transformation	0.5	1.0	0.5	0.5	0.7
<b>Subtotal Commercial Sector</b>	<b>17.0</b>	<b>10.5</b>	<b>13.0</b>	<b>14.8</b>	<b>12.8</b>
<b>Industrial Sector</b>					
Process Improvements	3.0	6.0	3.0	3.0	4.0
Compressed Air	2.0	0.5	2.6	2.6	1.9
Lighting	2.0	2.0	2.6	2.6	2.4
Wastewater Treatment Efficiency	0.3	0.1	0.3	0.3	0.2
Other	1.2	1.0		3.0	2.0
Market Transformation	1.5	0.6	1.5	1.5	1.2
<b>Subtotal Industrial Sector</b>	<b>10.0</b>	<b>10.2</b>	<b>10.0</b>	<b>13.0</b>	<b>11.1</b>

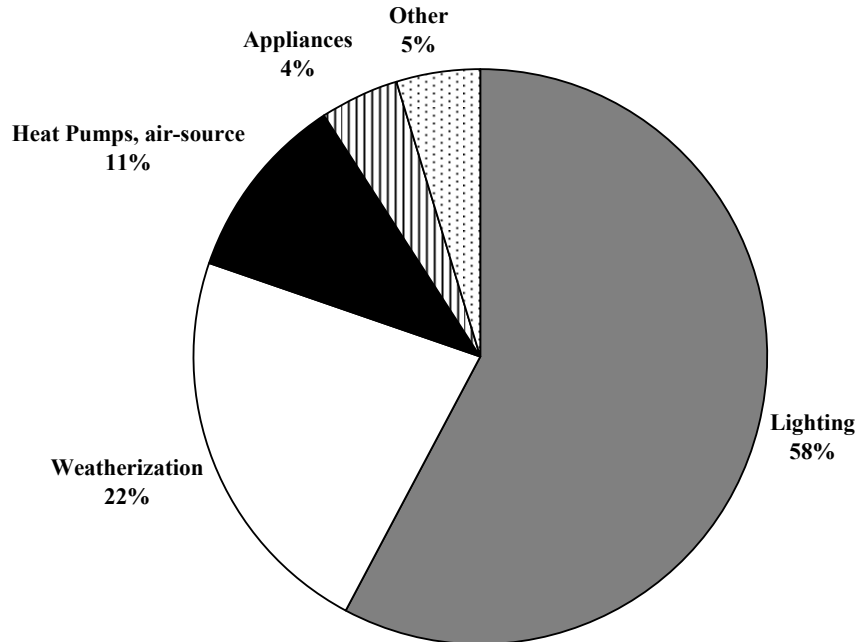
<b>Agriculture Sector</b>					
Scientific Irrigation Scheduling (SIS)	1.0	2.1	2.5	2.5	2.4
Irrigation Hardware Upgrade	0.8	1.7	0.8	1.0	1.2
Pump and Motor Upgrades	1.0	0.6	1.0	1.0	0.9
Transformer De-Energization	0.8	0.3	0.3	0.3	0.3
Other (Dairy, IRMP, nurseries, etc)	0.4	1.5	0.4	0.5	0.8
District Initiative			1.0	1.0	1.0
<b>Subtotal Agriculture Sector</b>	<b>4.0</b>	<b>6.1</b>	<b>6.0</b>	<b>6.3</b>	<b>6.1</b>
<b>Total Sector Goals<sup>4</sup></b>	<b>52.3</b>	<b>53.6</b>	<b>57.0</b>	<b>51.9</b>	<b>54.2</b>
Market Transformation (included in above total):	10.0	17.7	15.0	12.0	14.9
<sup>1</sup> The FY08 Total exceeds 52 aMW to reflect BPA's pursuit of opportunities in 2008 that may not be as readily available in subsequent years.					
<sup>2</sup> For FY09, the gap between the 52-aMW annual goal and Total Sector Goal is to be determined (TBD).					
<sup>3</sup> Individual targets will be established as new initiatives are developed and implemented for FY08 and beyond.					
<sup>4</sup> An additional 4 aMW of Naturally Occurring conservation is expected each year.					

### Residential Sector Strategy

In the Council's Fifth Power Plan, the Residential target is 20 percent lost opportunity and 80 percent retrofit. Residential savings achieved through MT will primarily come from clothes washers and CFL lighting. Figure 3 shows that lighting will comprise the largest share of total residential savings, followed by weatherization.

**Figure 3: Residential Mix of Measures**

**FY 2007-2009 Residential Savings Targets**  
(Source: Council's Fifth Power Plan)



The key areas of focus for the residential sector during FY 2008 will be:

Increase market penetration of existing programs

- **Lighting.** Continue manufacture buy downs of CFLs through both the Change a Light Program (CAL) for big box stores such as Home Depot, Lowes, etc. and through NEEA's Savings with a Twist (SWAT) program which targets smaller stores in more rural areas. CAL will run from October 2007 through April 2008. During the fall months, the program will focus on specialty CFL bulbs such as high-heat reflector CFL bulbs, encapsulated CFL bulbs, dimmable CFL bulbs, and candelabra CFL bulbs. The winter CAL promotion will also include CFL twistlers, as the FY 2007 evaluation showed incremental savings can be achieved through this promotion. SWAT focuses only on twistlers.
- **HVAC.** Continue offering PTCS marketing and training and certification along with heat pump and duct sealing and commissioning incentives. Assess and implement strategies to improve the effectiveness of the program, targeting a higher percentage of lost opportunities. Ductless heat pumps are a promising technology and would provide a cost-effective alternative for houses with existing baseboard electric heat so BPA will

conduct ductless heat pump demonstrations to gain knowledge of costs, savings and consumer acceptance of the technology.

- Weatherization. Continue ENERGY STAR® New Homes and Low-Income Weatherization.

#### New initiatives

- Trade Allies. Develop a residential trade ally network. The term Trade Allies is being used here a broad sense. Some utilities need help setting up and running entire conservation programs. Other utilities are looking for discrete, easy to implement, cost effective measures. For the purpose of this strategy, BPA will explore a range of possible scenarios that would help utilities implement more residential conservation measures.

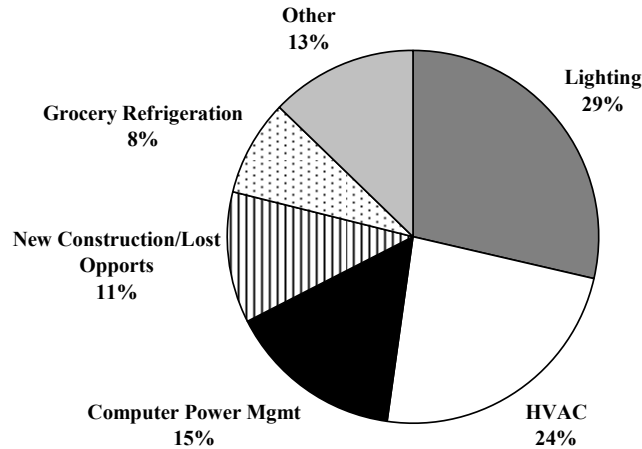
A more detailed Residential Sector Strategy is provided in the Appendix.

#### **Commercial Sector Strategy**

In the Council's Fifth Power Plan, the commercial target is 25 percent lost opportunity and 75 percent retrofit. Commercial savings achieved through MT will primarily come from AC/DC power converters, integrated building design, packaged refrigeration, day-lighting, small HVAC optimization/repair, and municipal sewage treatment and water supply. Figure 4 shows overall commercial savings will come mostly from lighting, HVAC and other cost-effective technologies.

**Figure 4: Commercial Mix of Measures**

**FY 2007-2009 Commercial Savings Targets**  
(Source: Council's Fifth Power Plan)



The commercial sector program initiated in FY 2007 will continue to expand its scope in FY 2008. Lighting will continue to be the major focus in FY 2008. Regional collaboration on commercial new construction activities will be important to the success of the sector strategy. Now that the regional infrastructure is in place, and aggressive marketing is underway, the Energy Smart Grocer Program will begin to deliver savings in FY 2008. Several new, targeted or pilot initiatives are planned around rooftop HVAC, lodging, and multifamily structures. The federal program is expected to hold steady as agencies start new projects with Energy Efficiency at a comparable pace to FY 2007.

The following focus areas are critical to the achievement of the FY 2008 Commercial Sector energy savings (13 aMW):

Increase market penetration of existing initiatives

- Commercial and Industrial Lighting (C/IL) will continue to be the highest priority. In FY 2008, EE will establish a lighting trade ally network (TAN), help utilities develop and launch lighting programs and provide more training for utility staff and trade allies.
- Implement Energy Smart Program at the full-scale regional level.



## New initiatives

- Launch three new offerings to the commercial program portfolio – Energy Smart Design™ - Office Prescriptive Package (for new small offices), 80+ Power Supply for Desktops and a pilot Lodging Initiative.
- Expand the number of third parties offering commercial programs related to Energy Smart Grocer, C/IL TAN, and Lodging Initiative.

Development work for future initiatives. Analyze potential and/or develop initiatives for FY 2009 and beyond in the following areas:

- Commercial new construction prescriptive packages for retail, schools and warehouses
- Office servers and plug loads
- Rooftop HVAC (new/retrofit)
- Food service equipment measures
- ENERGY STAR vending machines

A more detailed Commercial Sector Strategy is provided in the Appendix.

## **Industrial Sector Strategy**

The Industrial Sector implements focused measure actions:

- Compressed Air, C/I Lighting TAN, process improvements, wastewater treatment, etc.

Through services and marketing:

- TSP, metering, Cowlitz PUD large industrial support, marketing plan, etc.
- Trade allies: TSP, Small CA Systems, Green Motors, C/I TAN, etc.
- Collaborations: NEEA/Industrial Efficiency Alliance (IEA), Compressed Air Challenge, Motor Decisions Matter, Consortium for Energy Efficiency, etc., to achieve energy savings through CRC, CAA or utility self-funding.

During FY 2008, the Industrial Sector Strategy will be increasing the penetration for existing initiatives, implementing new initiatives, and developing initiatives for FY 2009 and beyond.

Increase market penetration of existing programs:

- Lighting. Continue and enhance commercial and industrial lighting. Develop and use the Commercial and Industrial Lighting Trade Ally Network.
- On-site engineering support. Continue to provide on-site BPA engineering support at targeted large industrial facilities to help move projects forward. Also, continue to rely on TSP engineers to market and provide technical assistance to industries.
- Engage in regional and national collaborations for technical training, demonstrations, workshops and joint marketing, with a continued focus on food processing and pulp and paper.

#### New initiatives

- Deploy the Compressed Air Roadmap, consisting of compressed air training, utility incentives and TSP technical assistance, to two or more targeted utilities with significant compressed air savings potential.
- Enhance the Technical Service Provider (TSP) approach to provide more effective technical services to utilities choosing the 12 cents/kWh incentive payment option.
- Collaborate with IEA to develop a Small Compressed Air Systems approach in the Region.

#### Development work for future initiatives in FY 2009 and beyond:

- Implement a Small Compressed Air Systems collaborative approach in the region.
- Develop an approach for Green Motors. The approach might be a direct acquisition or using a third party administrator and a trade ally.

A detailed Industrial Sector Strategy is provided in the Appendix.

#### **Agricultural Sector Strategy**

BPA has been delivering verifiable, low-cost energy efficiency in the agricultural sector since 1983. In February 2006, BPA formally established an Agricultural Sector to meet the targets identified by the Council. The EE Plan is used as the platform for meeting the Council targets with continued focus on all sectors. Agricultural Sector efforts in FY 2008 will focus on:

#### Existing initiatives

- Continue the deployment of Scientific Irrigation Scheduling (SIS), Pump Testing, Hardware Upgrades, Transformer De-energization and technical support
- Continue to market IrAg to all utility customers
- Co-sponsor agricultural workshops and demonstrations

#### New initiatives:

- Add master agreements and new projects with irrigation districts and expand district participation beyond southern Idaho
- Collaborate with the U.S. Department of Agriculture to provide training in irrigation control and to market programs in non-traditional areas such as nurseries and greenhouses
- Use Technical Service Providers to perform technical field work

#### Future initiatives for FY 2009 and beyond:

- Work with Districts to develop an SIS case study
- Develop an Agricultural Sector Irrigation Sounding Board

A detailed Agricultural Sector Strategy is provided in the Appendix.

## **Market Transformation**

BPA provides support to the NEEA for market transformation (MT). MT changes markets to accelerate the adoption of energy-efficient products and services. The appendix provides a more general overview of regional MT for the FY 2007-2009 period.

## **Marketing Strategy**

EE hired Summit Blue Consulting to develop a high-level Strategic Marketing Plan in FY 2007. EE's review of the recommended strategies and a marketing action plan will be completed in early FY 2008. The goal is to improve overall EE marketing in order to increase market penetration of existing programs and technologies, enhance the effectiveness of new initiatives, and make the EE sector plans successful.

## **Proposals for New Programs/Initiatives**

This section describes EE's internal process for bringing new programs and initiatives on line.

Proposals for new programs/initiatives will be submitted to the EE Planning function in a two-phase process. The first phase will be a preliminary look at the new initiative idea. After a proposal passes this preliminary screening, a more detailed phase 2 begins. The Appendix has more information about the elements of this new program screening process, including a template format to guide proposals through these elements.

Once a program/initiative has been approved, a program leader and cross-function team will be assigned to the program. This team, working with the appropriate sector lead, will develop the initiative plan that will include a description of the target market, the initiative strategy and the marketing strategy. The team will describe their plan in the program template format and submit the plan to Planning and Evaluation for review.

## **Engineering Services**

BPA's engineering group will focus on the following activities in FY 2008 (in addition to their day-to-day program and project support).

1. Continue monthly custom project meetings for continuous improvement of custom projects
2. Develop and publish M&V plans for specific measures, such as strip curtains and gaskets for walk-in freezers
3. Support M&V training efforts in the region
4. Continue field tests of new measures
5. Continue training and support for kW sub-metering for savings identification and verification
6. Work closely with evaluation staff to coordinate short term M&V results with longer term evaluation efforts, as well as giving input to evaluation plans
7. Continue to work with RTF on identifying measure savings and M&V protocols
8. Work with RTF and BPA staff to streamline new measure review and approval process

## Contract Administration

Contract Administration provides a range of services including back office administration of the CAA/CRC, coordination with EE Programs on development of new initiatives, with EE Planning on development of policy, and with Programs, Engineering and Marketing on implementation of EE initiatives. Contract Administration staff are involved in negotiations of non-standard purchases. For FY 2008 and beyond, Contract Administration efforts will be aimed at:

1. Administration and oversight of BPA-funded and utility-funded conservation creditable towards the high water mark
2. Updates to the Implementation Manual
3. Simplification of procedures and documentation requirements
4. Assurance of compliance with established standards and procedures

## BPA's Greenhouse Gas Initiative

BPA has created a new strategic objective that *encourages and implements integrated, cost-effective policies which lead to greenhouse gas (GHG) emission reductions*. As part of this objective, BPA will create a Climate Change Action Plan to ensure the agency is prepared for a carbon-constrained future. During FY 2008, EE will develop its portion of the Action Plan. Once the Action Plan is finalized, EE will implement any additional necessary pieces of the plan beyond existing activities.

## Research, Development and Demonstration (RD&D)

BPA is expanding its funding for RD&D over the next several years. In FY 2006, EE staff developed a technology roadmap to guide BPA RD&D efforts. The roadmap included both short and long-term RD&D efforts and covered both energy efficiency and demand response technologies. BPA RD&D activities will help “fill the pipeline” of cost-effective energy efficiency technologies in the near future (such as cold climate heat pumps) and will focus on demonstration of innovative technologies and control systems that can provide both energy efficiency and demand response benefits. For further details, see BPA's Energy Efficiency Technology Roadmap, which is posted on BPA's Web site at <http://www.bpa.gov/corporate/business/innovation/>.

Following are the R&D projects that have been funded for FY 2008.

**Table 4: FY 2008 R&D Portfolio**

<b>BPA Project Manager</b>	<b>Proposal Name</b>	<b>Ongoing or New Proposal</b>	<b>Focus Area</b>
Steele, Tim	Automated Diagnostic for Packaged HVAC	On-going	Max. Trans. Asset Value
Weedall Mike	EPRI Program 170 – Dynamic Energy Management	On-going	Interactability
Weedall/Oliver	Interactability Demonstration Project	New	Interactability
Hadley, Adam	Low-Temperature Heat Pump	On-going	Interactability
Hadley, Adam	Mini-Split Heat Pump Demonstration and Monitoring	On-going	Interactability

## **Load Management**

In anticipation of, and preparation for, dealing with the forecasted system capacity limitation in the near future, EE plans to study the potential of load management as a resource to manage peak load and to affect system capacity constraints. A key step towards this goal is to develop a set of guiding principles through a collaborative regional effort that will result in an action plan for BPA to implement with customers. The guiding principles are targeted to be complete by June 30, 2008, and the subsequent action plan by September 30, 2008.

## **Reporting and Tracking**

EE relies on two primary systems for reporting and tracking conservation costs and achievements. The Planning, Tracking and Reporting (PTR) system is a regionwide system provided by the Council's Regional Technical Forum (RTF)<sup>2</sup> with financial support from BPA and other entities. The EE Database is an internal BPA system that receives data from the PTR as well as from other sources.

The PTR is used by utilities to report their conservation activities for various funding sources, including BPA's CAA and CRC initiatives. Utilities have the option to submit PTR reports (invoices) on a monthly basis for reimbursement for CAA-funded conservation measures/projects. They are required to submit PTR reports twice a year (October and April) for CRC-funded conservation measures/projects and for "self-funded" measures/projects for which utilities wish to receive High Water Mark (HWM) credit under the Long-Term Regional Dialogue Policy. Only those conservation measures/projects with actual completion dates entered into the PTR are included in these reports. After the reports are reviewed and determined to be acceptable by EE Contract Administration staff, data in each report is extracted from the PTR and loaded into BPA's internal EE Database.

The EE Database is BPA's official repository for its conservation achievements. In addition to the data it receives from the PTR, the EE Database collects data for BPA-funded state low-income weatherization programs and federal conservation projects. The EE Database contains decades of achievement data from measures/projects such as Conservation Augmentation (ConAug), Conservation and Renewables Discount (C&RD) and other historical or legacy programs.

Reports and data queries from either the PTR or the EE Database provide various means of tracking progress toward meeting BPA targets, as well as reporting results. The PTR provides a variety of standardized reports and data queries (see below). The EE Database is used for a wide range of summary reports and customized reporting by way of specified criteria from within its broad range of historical attributes. The annual Conservation Resource Energy Data Report (RED Book) is an example of an important summary report derived entirely from the EE Database.

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<sup>2</sup> The RTF also maintains the C&RD System. This system was used by utilities to track and report on C&RD-funded conservation measures/projects completed from February 2001 to September 2006. Utilities who participated in the C&RD program were required to submit annual reports for each fiscal year of the program. Data from these reports has been extracted from the C&RD system and loaded into BPA's internal EE Database.

## Standardized Reports and Data Queries Available for PTR System Users:

1. CRC/HWM Biannual Reports
2. CRC/HWM Annual Reports
3. Reported/Invoiced Data (measures/projects by fiscal year and funding source)
4. Detail Report (sectors & measure categories) by funding source (all years)
5. Detail Report (sectors & measure categories) by fiscal year (all funding sources)
6. Summary Report (dollars & energy savings) by funding source (all years)
7. Summary Report (dollars & energy savings) by fiscal year (all funding sources)
8. Data queries of reported measures by sector
9. Custom Projects Status Report by fiscal year and funding source

During FY 2008, EE will explore with the Council ways to improve the usability of the PTR and the feasibility of integrating the Council's Pro-Cost Model with the PTR system. The EE Database will continue to be the point of reference for summary, analysis, and impromptu reporting.

The Appendix describes the various internal reports to be produced periodically for tracking purposes.

### **Evaluation Strategy**

BPA recognizes the importance of planning and evaluating its initiatives in order to develop successful acquisition strategies, improve operations, discover barriers to success, and to provide a rigorous accounting to policymakers about the actual accomplishments of the initiatives. Planning and Evaluation supports the energy efficiency acquisition process in various ways, including:

1. Savings Targets: During the development of energy savings targets and cost effectiveness, Planning and Evaluation supports the Council and RTF with review of measures and costs, as well as supporting coordinated market research of baseline characteristics and estimation of naturally occurring conservation.
2. Acquisition Plans: As acquisition plans are developed by BPA sector teams, Planning and Evaluation supports this process with calculation of reimbursement levels and market research, including best practices. Additionally, Planning and Evaluation facilitates the Utility Sounding Board.
3. Implementation: Planning and Evaluation manages data tracking, including energy efficiency databases and RED Book development. Early in the implementation process, Planning and Evaluation develops an evaluation plan, including a review of data tracking methods and reporting to ensure ease of future verification.
4. Measurement & Verification: During the M&V process, Evaluation should conduct or sub-contract process or impact evaluations, ensuring that results provide actionable recommendations which are incorporated into future acquisition plans.
5. Long-range Policy Development: On an ongoing basis, Planning and Evaluation coordinates with customers and other regional stakeholders to develop long-range

regional policy, including participating in the Long-term Regional Dialogue and the high water mark (HWM) determination processes and rate cases, and provides support for the RTF and load management policies.

The evaluation strategy is detailed in the appendix.

### **Conclusion**

The Energy Efficiency Plan is a roadmap to reach an ambitious conservation goal of an average 42 aMW/year (plus 10 aMW/year from market transformation) during FY 2007-2009. The conservation targets at the sector and sub-sector levels are the guideposts to help BPA reach that goal. Adjustments to EE strategies and programmatic initiatives will be made based on experience and increased knowledge. This Energy Efficiency Plan is, therefore, a living document that will be reviewed and revised annually. Future versions will take into account evaluation reports and apply the lessons learned.

The appendices to the FY 2008 Energy Efficiency Plan are in a separate volume covering the following topics.

- A. Sector Strategies – FY 2008
- B. Market Transformation
- C. Conservation Targets FY 2007-2009
- D. Conservation Technologies - Residential and Commercial
- E. Historical Accomplishments and Future Targets
- F. Process for Proposed New Programs and Initiatives
- G. Conservation Reports
- H. Evaluation and Planning: An Overview
- I. Energy Efficiency Initiative Plan Template