

**Conservation  
Resource Energy Data  
[The RED Book]  
Fiscal Year 2009**





# Table of Contents

<b>INTRODUCTION .....</b>	<b>i</b>
<b>PURPOSE.....</b>	<b>i</b>
<b>ORGANIZATION .....</b>	<b>i</b>
<b>IMPORTANT NOTE FOR THE USER: .....</b>	<b>ii</b>
<b>OVERVIEW .....</b>	<b>3</b>
<b>BPA’S TOTAL HISTORICAL CONSERVATION SAVINGS.....</b>	<b>4</b>
<b>CARBON DIOXIDE REDUCTION FROM CONSERVATION .....</b>	<b>5</b>
<b>NONPROGRAMMATIC CONSERVATION SAVINGS .....</b>	<b>6</b>
<b>CURRENT CONSERVATION PROGRAMS.....</b>	<b>6</b>
<b>BPA’S HISTORICAL CONSERVATION SAVINGS FY 1982 - FY 2000.....</b>	<b>12</b>
<b>TOTAL BPA CONSERVATION COSTS.....</b>	<b>16</b>
<b>SPECIAL NOTE: .....</b>	<b>22</b>
<b>GLOSSARY .....</b>	<b>23</b>

## List of Figures

<b>FIGURE 1: BPA’s Cumulative Total Conservation Savings (aMW) by Sector, FY 1982-2009</b> .....	<b>3</b>
<b>FIGURE 2: BPA’s Cumulative Conservation Savings (aMW) by Sector, FY 1982-2009</b> .....	<b>4</b>
<b>FIGURE 3: Current Conservation Programs – Cumulative Savings (aMW), FY 2001-2009</b> .....	<b>7</b>
<b>FIGURE 4: Current Conservation Programs – Annual Incremental Savings (aMW), FY 2001-2009</b> .....	<b>8</b>
<b>FIGURE 5: Current Conservation by Sector – Annual Incremental Savings (aMW), FY 2001-2009</b> .....	<b>8</b>
<b>FIGURE 6: Historical Conservation Savings (aMW), FY 1982-2000</b> .....	<b>12</b>
<b>FIGURE 7: Expired Historical Conservation Savings, Shown by Year of Installation</b> .....	<b>13</b>

## List of Tables

<b>TABLE A: BPA’s Total Conservation Savings (FY 1982-2009)</b> .....	<b>5</b>
<b>TABLE B: BPA’s Annual Conservation Savings (aMW) By Program, FY 2001-2009</b> .....	<b>10</b>
<b>TABLE C: BPA’s Historical Conservation Savings (aMW), FY 1982-2000</b> .....	<b>14</b>
<b>TABLE D: BPA’s Total Conservation Costs)</b> .....	<b>17</b>
<b>TABLE E: BPA’s Historical Conservation Costs, FY 1982-2000</b> .....	<b>19</b>

**Bonneville Power Administration**  
**Conservation**  
**RESOURCE ENERGY DATA**  
**(The RED Book)**

## **INTRODUCTION**

On Dec. 5, 1980, the 96<sup>th</sup> Congress passed the Pacific Northwest Electric Power Planning and Conservation Act (Act), Public Law 96-501. The overall purpose of the Act is to

- assist the electrical consumers of the Pacific Northwest through use of the Federal Columbia River Power System to achieve cost-effective energy conservation,
- encourage the development of renewable energy resources,
- establish a representative regional power planning process and
- assure the region of an efficient and adequate power supply.

The Bonneville Power Administration (BPA), in compliance with the Act, has sponsored and funded various energy conservation programs for the benefit of Pacific Northwest consumers for the past quarter of a century. These programs have been successful due to the cooperation and assistance of BPA's electric utility customers.

## **PURPOSE**

The Resource Energy Data (RED) Book summarizes data on cost and savings pertaining to the BPA energy conservation acquisition programs. The document provides information and references for general audiences and for use in preparing general publications.

## **ORGANIZATION**

The RED Book is organized as follows:

- Overview of total conservation savings from fiscal year (FY) 1982 through FY 2009.\*
- Information on current conservation programs from FY 2001 through FY 2009.
- Information on the historical conservation achievements for the period FY 1982 through FY 2000.
- Savings acquisition costs.
- Glossary of the terms used within the text and tables of the document.

---

\* BPA's fiscal year runs from Oct. 1 through Sept. 30

## **IMPORTANT NOTE FOR THE USER**

The data contained in the RED Book are sensitive to changes in the assumptions surrounding them. *Use data with care* to ensure that the correct characterizations of the monetary and energy figures are communicated.

The RED Book information is presented to the nearest tenth of an average megawatt (aMW) in most of the tables. Information in the charts and graphs *may be rounded to the nearest 5 aMW*. When presenting this information to the public, BPA recommends using rounded numbers because the agency recognizes that these data are not precise and are subject to adjustment over time.

The reported aMW savings *are first year savings only* and not the measure-life or program-life savings. Measure life is the estimated median time a measure will remain in place or the time until the structure in which a measure is installed ceases to exist.

Reported savings include transmission and distribution line-loss credit savings of 7.5 percent for all acquisition programs (2.5 percent for Conservation Modernization). This adjustment is made to account for transmission and distribution line losses avoided through the acquisition of conservation. The line loss credit has been adjusted to 7.625 percent for FY 2006-FY2009. During the transmission and distribution of electricity, a certain amount of electricity is lost due to electrical resistance inherent in conductors. Since conservation causes less electricity to be consumed by the end uses, less electricity is generated and transmitted and, therefore, less electricity is lost. BPA credits its conservation with the line-loss savings. This adjustment allows conservation and generation savings to be compared from the same point in the electrical system often referred to as the “busbar.”

Data in the RED Book are as reported by April 2010 for BPA’s FY 2009. These data should be used as “official data” until the FY 2010 RED Book is published. Adjustments to the data are captured annually in the RED Book if information from evaluations or other sources indicate savings estimates should be changed. Also, dollar amounts may change from one year to the next due to revised utility reports.

If you have any questions about how to represent or use this information, please contact –

Kevin O’Sullivan 503-230-3693

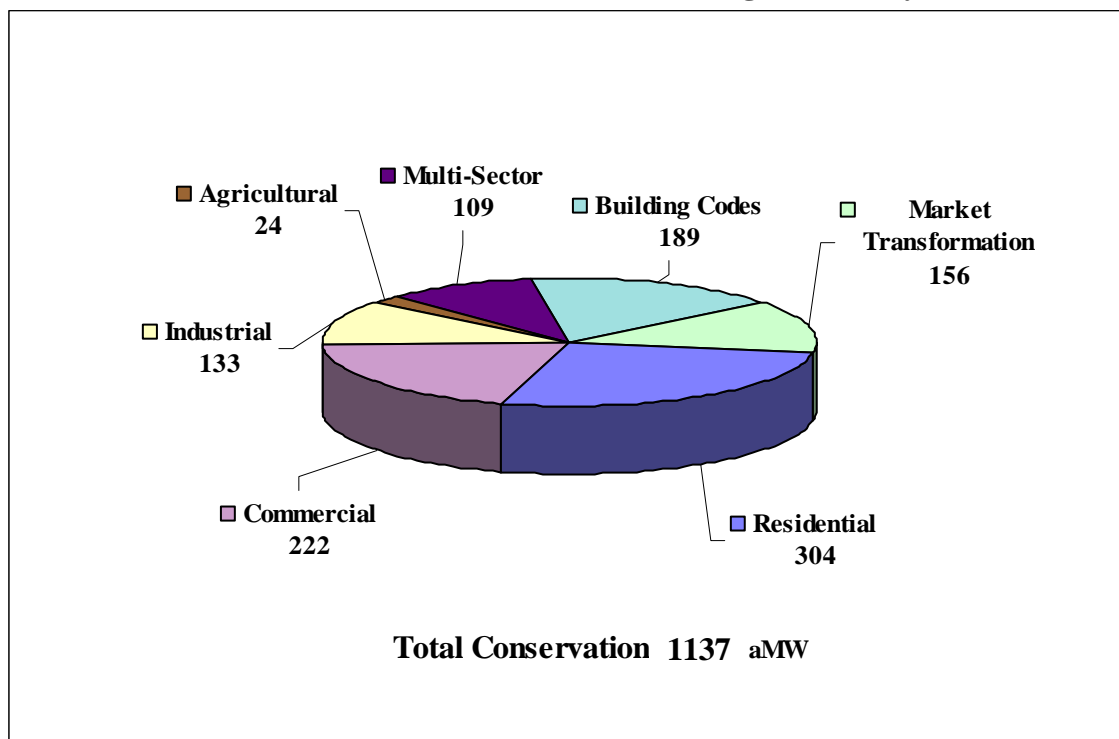
kposullivan@bpa.gov

## OVERVIEW

BPA estimates a cumulative total of 1,136 aMW of energy savings is currently being delivered to the Pacific Northwest region from BPA conservation programs operated during the past 28 years (FY 1982-2009).<sup>1</sup> This cumulative total includes adjustments to some of the incremental energy savings reported in previous editions of the RED Book. These adjustments account for changes in the reported number of installed conservation measures in previous fiscal years, changes in estimated energy savings for certain measures based on subsequent program evaluations and installed measures that have “expired” or are no longer delivering energy savings. For example, energy savings from the Conservation Modernization (ConMod) legacy program (see glossary) are not included in the current total due to the closing of the aluminum industry plants where conservation projects were implemented.

Figure 1 illustrates the relative contributions from various sector and program categories toward BPA’s cumulative energy savings.

**FIGURE 1: BPA’s Cumulative Conservation Savings (aMW) by Sector,<sup>2</sup> FY 1982-2009**



<sup>1</sup> Beginning in FY 2007, utility funded conservation savings, for which the utility is claiming credit towards its Contract High Water Mark, will be included in the RED Book (in addition to BPA-funded conservation savings).

<sup>2</sup> Prior to the April 2004 edition of the RED Book, this graph also included savings from the ConMod program.

The sector-specific contributions to BPA’s cumulative total adjusted conservation savings are listed below.

- Residential sector ..... 433 aMW  
(includes 129 aMW from residential building codes)
- Commercial sector ..... 282 aMW  
(includes 60 aMW from commercial building codes)
- Industrial sector ..... 135 aMW
- Agricultural sector ..... 25 aMW
- Multisector<sup>3</sup> ..... 110 aMW  
(for example, billing credits, competitive acquisitions and flex agreements)
- Market transformation ..... 155 aMW

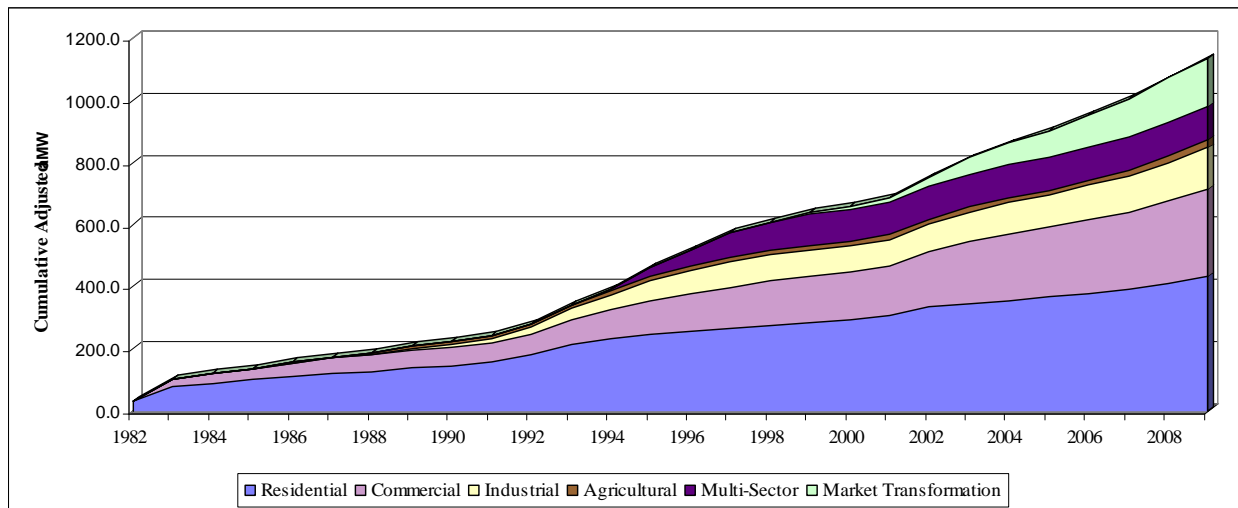
Building code savings are a result of new building codes that were passed in 1985 and model conservation standards (or codes close to MCS) that were implemented in Washington in 1991 and in Oregon, Idaho and Montana in 1992. Commercial MCS were implemented in Washington in 1994 and in Oregon in 1996. Savings from building codes and MCS are estimated through a backward-looking methodology in the load forecast and, therefore, are only approximate.

Residential code savings from 2003 forward are no longer counted. Commercial code savings are not counted as of 2005 because it is likely that codes would have reached current standards by now. In 2003, Idaho adopted a code equivalent to the 1988 MCS. Oregon and Washington codes have gone beyond MCS at this point, and current practice in Montana appears to be equivalent to the MCS. Although the national energy codes and international energy codes on which Idaho codes were finally based may have been influenced by MCS efforts in the Pacific Northwest, it is appropriate to stop counting additional new benefits due to BPA’s efforts in the 1980s and 1990s.

## BPA’S TOTAL HISTORICAL CONSERVATION SAVINGS

Figure 2 illustrates the yearly contributions from each sector toward BPA’s total savings over the 28-year history of BPA’s conservation programs (FY 1982-2009).

**FIGURE 2: BPA's Cumulative Conservation Savings (aMW) by Sector, FY 1982-2009**



<sup>3</sup> Multi-Sector is a “pseudo sector” that makes no sector distinction for the savings achieved.



Table A summarizes the cumulative energy savings for FY 1982-2000 and the incremental energy savings for each fiscal year from FY 2001 through 2009.

**TABLE A: BPA's Total Conservation Savings<sup>4-5</sup> (FY 1982-2009)  
Incremental aMW**

	FY 82-00	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Total FY 82-09
Residential	179.6	6.0	19.0	11.9	11.0	10.5	10.7	12.5	22.8	20.2	304.2
Commercial	111.5	2.0	13.6	16.7	10.9	9.5	14.6	9.5	13.7	20.3	222.2
Industrial	84.9	0.5	4.0	6.7	3.8	3.4	8.2	6.8	7.1	7.6	132.9
Agricultural	14.8	0.3	0.4	0.4	0.2	0.1	0.5	3.0	2.0	2.1	23.7
Multi-Sector	104.2	0.0	0.4	0.4	0.2	1.9	0.2	0.1	0.4	1.0	108.9
<b>Incremental Subtotal</b>	<b>495.0</b>	<b>8.8</b>	<b>37.5</b>	<b>36.0</b>	<b>26.1</b>	<b>25.3</b>	<b>34.2</b>	<b>31.8</b>	<b>46.0</b>	<b>51.1</b>	<b>792.0</b>
<b>Load Reductions from Improved Building Codes:</b>											
Residential	111.6	8.3	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.6
Commercial	43.4	4.1	4.3	4.2	3.9	0.0	0.0	0.0	0.0	0.0	59.9
<b>Incremental Subtotal</b>	<b>155.0</b>	<b>12.4</b>	<b>13.0</b>	<b>4.2</b>	<b>3.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>188.5</b>
Market Transformation	9.0	7.5	15.5	20.8	16.6	15.4	15.9	21.0	21.1	12.6	155.6
<b>Incremental Total with Load Reductions and Market Transformation</b>	<b>659.0</b>	<b>28.8</b>	<b>66.0</b>	<b>61.1</b>	<b>46.6</b>	<b>40.7</b>	<b>50.2</b>	<b>52.8</b>	<b>67.2</b>	<b>63.7</b>	<b>1136.1</b>
<b>CO<sub>2</sub> Reduction (tonnes)</b>	<b>2,375,511</b>		<b>237,868</b>	<b>220,147</b>	<b>167,957</b>	<b>146,825</b>	<b>180,922</b>	<b>190,413</b>	<b>242,119</b>	<b>229,660</b>	<b>4,095,063</b>

## CARBON DIOXIDE REDUCTION FROM CONSERVATION

For any given amount of conservation, there is a reduction in CO<sub>2</sub> (carbon dioxide) emissions corresponding to the generation resource mix in the region.<sup>6</sup> For FY 2009, the conservation savings of 63.7 aMW reduces annual CO<sub>2</sub> emissions by nearly 230,000 tonnes (metric tons). This is equivalent to having approximately 44,000 fewer automobiles on the road. For the period FY 1982-2009, the cumulative conservation savings of 1,136 aMW reduces annual CO<sub>2</sub>

<sup>4</sup> Expired measures are not included as they are no longer delivering savings.

<sup>5</sup> The market transformation savings contained in Table A reflects the approximately 50 percent level of funding that BPA provided to the Northwest Energy Efficiency Alliance (NEEA). A small amount of the market transformation savings funded by BPA (associated with building codes and other market transformation efforts) may have occurred outside of BPA's service territory.

<sup>6</sup> 3,604 tonnes of CO<sub>2</sub> emissions are avoided for every 1 aMW of conservation savings.

emissions by over 4 million tonnes. This is equivalent to having approximately 792,000 fewer automobiles on the road.

## NONPROGRAMMATIC CONSERVATION SAVINGS

The RED Book documents programmatic conservation savings. However, savings can also occur in another category known as nonprogrammatic (formerly referred to as naturally occurring) conservation. Nonprogrammatic savings can occur as a result of state/federal tax credits, state/national codes and appliance standards, unmeasured effects of programmatic conservation and/or the adoption of efficient technologies by nonparticipants for reasons beyond energy efficiency, such as aesthetics, productivity and special features.

A recent analysis examined BPA’s share of the Northwest region’s nonprogrammatic savings for the 2005-2009 planning period. The analysis focused on the savings from conservation measures in three categories: compact florescent lighting (CFL), nonresidential lighting, and codes and standards. These measures were selected because corresponding energy savings were significant and reliable data were available to estimate the savings. The results of the analysis, indicating BPA’s shares of nonprogrammatic savings from these measures, are summarized below.

<b>BPA's Non-Programmatic Savings (aMW)</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>Total FY 05-09</b>
CFLs	0.0	0.9	5.4	11.5	8.5	26.3
Non-Res Lighting	2.5	2.5	2.5	2.5	2.5	12.6
Standards (Clothes Washers)	1.0	1.3	1.4	1.7	2.0	7.4
Building Codes	0.7	0.9	0.9	0.9	1.0	4.4
<b>Total Non-Programmatic Conservation</b>	<b>4.2</b>	<b>5.6</b>	<b>10.2</b>	<b>16.6</b>	<b>14.1</b>	<b>50.7</b>

## CURRENT CONSERVATION PROGRAMS

In FY 2001 BPA offered new conservation programs to utility customers under the Conservation Augmentation (ConAug) and the Conservation & Renewables Discount (C&RD) programs. Early acceptance by a few utilities provided energy savings for those programs in the summer of 2001 prior to the program official start in FY 2002. The State Low-Income Weatherization Program is funded by BPA for the states of Oregon, Washington, Idaho and Montana. Market transformation continues to be a viable energy savings opportunity for the region. There are building code savings through FY 2004 that account for savings within the region. BPA only reports savings that are achieved primarily within its service territory.

In FY 2006 BPA began the transition from ConAug and C&RD to new conservation opportunities under Conservation Acquisition Agreements (CAA) and Conservation Rate Credit (CRC) initiatives. Also included in the FY 2002-2009 data are the conservation savings results of the Irrigation Rate Mitigation Product (IRMP).

In FY 2007, utility self-funding for credit toward the conservation adjustment to the Contract High Water Mark credit began as a new funding category of savings. Credit toward the conservation adjustment is scheduled to end in FY 2010; however, utility funding of savings is expected to continue.

Figure 3 illustrates the cumulative effect of the current post-2000 conservation programs.

- ConAug ..... 95.0 aMW
- C&RD ..... 75.0 aMW
- State low-income weatherization program ..... 2.8 aMW
- Market transformation ..... 128.0 aMW
- Building codes ..... 33.5 aMW
- CAA ..... 11.0 aMW
- CRC ..... 65.0 aMW
- Savings with a Twist (SWAT) ..... 10.5 aMW
- IRMP ..... 3.6 aMW
- Federal ..... 10.0 aMW
- BPA direct acquisition ..... 2.8 aMW
- Utility self-funded for High Water Mark credit . 41.0 aMW

The total cumulative savings for the period FY 2001 through 2009 are 477 aMW.

**FIGURE 3: Current Conservation Programs – Cumulative Savings (aMW), FY 2001-2009**

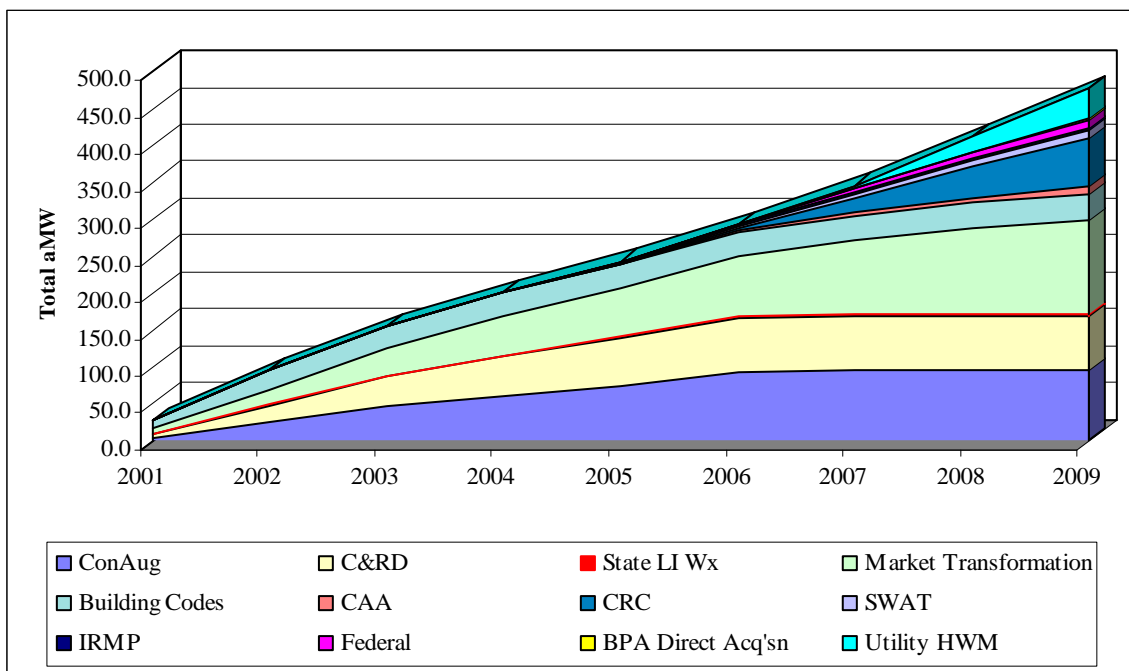


Figure 4 depicts annual energy savings attained by the current conservation programs for FY 2001 through 2009.

**FIGURE 4: Current Conservation Programs – Annual Incremental Savings (aMW), FY 2001-2009**

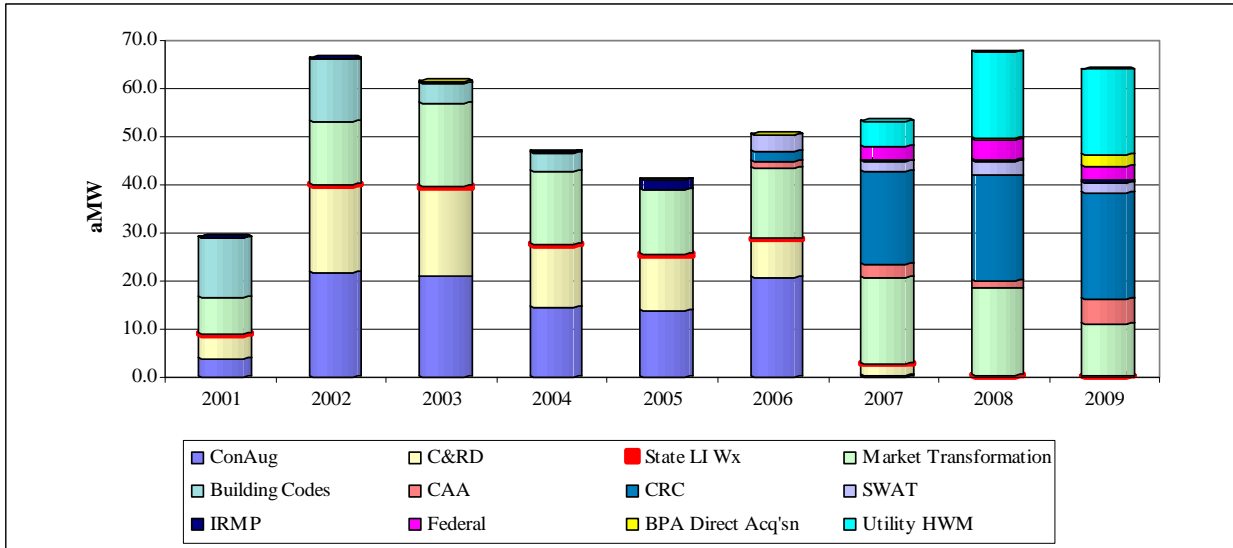


Figure 5 shows the annual acquisitions within each market sector for the current programs.

**FIGURE 5: Current Conservation by Sector – Annual Incremental Savings (aMW), FY 2001-2009**

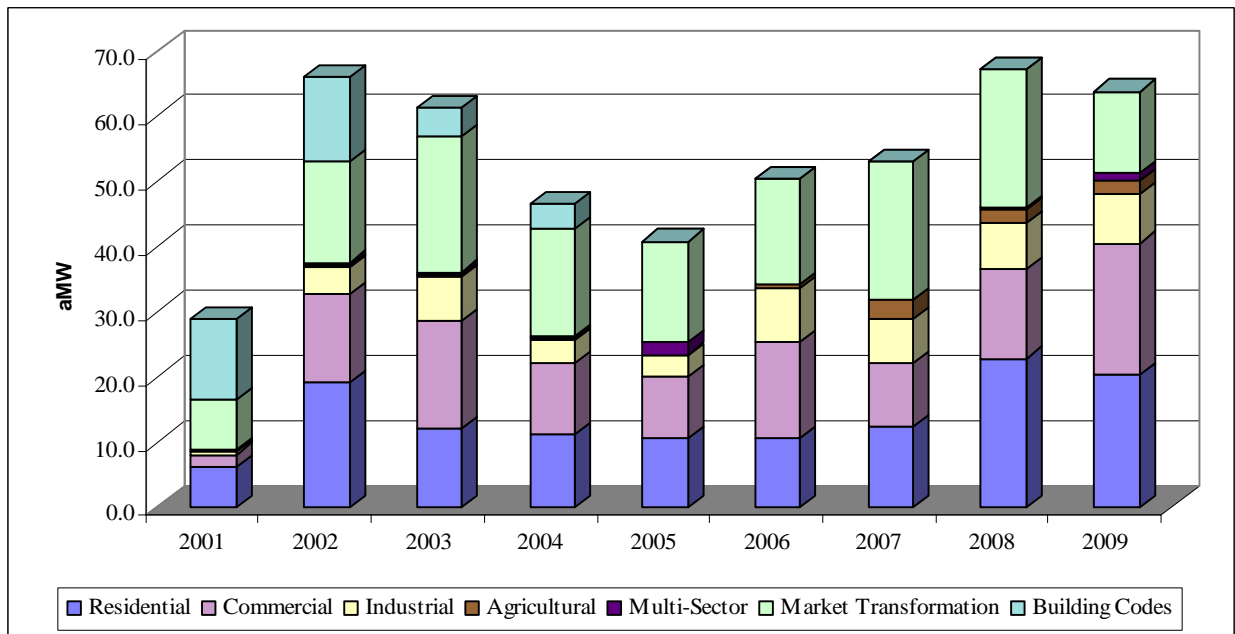


Table B provides information on total incremental energy savings for FY 2001 through 2009. Beginning with the 2007 edition of the RED book, Table B has a new format that no longer shows an adjustment column. All adjustments are now reflected in the data for the years to which they apply. Revisions to the savings occur on an annual basis and are a result of evaluations performed, expired measures or revised reports submitted by utilities for previous years.

**TABLE B: BPA's Annual Conservation Savings (aMW) By Program, FY 2001-2009**

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	TOTAL FY 01-09
<b>RESIDENTIAL</b>										
Low Income Residential Weatherization (States)	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.1	2.8
C&RD Low Income Weatherization	0.0	0.2	0.2	0.2	0.2	0.1				0.8
CRC Low Income Weatherization						0.3	0.0	0.4	0.3	1.0
<i>Conservation Augmentation (ConAug)</i>										
CFL Program	1.4	3.1								4.5
IRLC	0.6	2.7	2.4	1.8	1.7	1.9	0.0			11.1
<b><i>SUBTOTAL RESIDENTIAL CONAUG</i></b>	<b>2.0</b>	<b>5.8</b>	<b>2.4</b>	<b>1.8</b>	<b>1.7</b>	<b>1.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>15.6</b>
Conservation Renewable Discount (C&RD)	3.6	12.8	9.0	8.7	8.3	3.9				46.2
Conservation Acquisition (CAA)						0.2	0.3	0.2	1.9	2.6
Conservation Rate Credit (CRC)						0.7	7.0	10.4	8.2	26.4
Savings with a Twist (SWAT)						3.4	2.1	2.9	2.1	10.5
Utility Self-Funded (High Water Mark)							2.7	8.6	7.6	18.9
<b>RESIDENTIAL TOTAL</b>	<b>6.0</b>	<b>19.0</b>	<b>11.9</b>	<b>11.0</b>	<b>10.5</b>	<b>10.7</b>	<b>12.5</b>	<b>22.8</b>	<b>20.2</b>	<b>124.6</b>
<b>COMMERCIAL</b>										
<i>Conservation Augmentation</i>										
Federal	1.2	3.1	2.5	1.9	1.9	3.7				14.2
LSO & ESO	0.2	2.3	2.5	1.1	1.2	2.0	0.1			9.4
Vending Miser	0.2	1.0	0.3							1.5
C&I	0.0	0.1	0.6	0.2	0.7	1.0	0.1			2.7
IRLC	0.0	5.9	7.4	7.1	5.3	6.6				32.2
<b><i>SUBTOTAL COMMERCIAL CONAUG</i></b>	<b>1.7</b>	<b>12.5</b>	<b>13.3</b>	<b>10.2</b>	<b>9.0</b>	<b>13.2</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>60.1</b>
Conservation Renewable Discount (C&RD)	0.3	1.1	3.3	0.6	0.4	0.6				6.4
Conservation Acquisition (CAA)						0.6	1.8	0.6	1.2	4.2
<i>Conservation Rate Credit (CRC)</i>										
Energy Smart Grocer Program							0.2	0.6	1.3	2.1
All Other CRC (Non-Program Specific)						0.2	3.1	4.1	5.2	12.6
<b><i>SUBTOTAL COMMERCIAL CRC</i></b>						<b>0.2</b>	<b>3.3</b>	<b>4.7</b>	<b>6.5</b>	<b>14.7</b>
<i>BPA Direct Funded Initiatives</i>										
Energy Smart Grocer							0.0	0.3	1.8	2.1
Other Initiatives			0.1	0.0				0.0	0.6	0.7
<b><i>SUBTOTAL COMMERCIAL BPA DIRECT FUNDED</i></b>			<b>0.1</b>	<b>0.0</b>			<b>0.0</b>	<b>0.3</b>	<b>2.3</b>	<b>2.8</b>
Federal							3.0	4.1	3.0	10.0
Utility Self-Funded (High Water Mark)							1.3	4.0	7.2	12.5
<b>COMMERCIAL TOTAL</b>	<b>2.0</b>	<b>13.6</b>	<b>16.7</b>	<b>10.9</b>	<b>9.5</b>	<b>14.6</b>	<b>9.5</b>	<b>13.7</b>	<b>20.3</b>	<b>110.7</b>
<b>INDUSTRIAL</b>										
<i>Conservation Augmentation</i>										
Water/Wastewater		0.3	0.2	0.2						0.7
C&I			0.5	0.1	0.8	1.3	0.0			2.7
ESO					0.0	0.2	-			0.2
IRLC	0.0	2.9	4.3	1.9	2.0	3.8	0.0			15.0
<b><i>SUBTOTAL INDUSTRIAL CONAUG</i></b>	<b>0.0</b>	<b>3.2</b>	<b>5.0</b>	<b>2.2</b>	<b>2.8</b>	<b>5.3</b>	<b>0.0</b>	<b>0.0</b>		<b>18.6</b>
Conservation Renewable Discount (C&RD)	0.4	0.8	1.7	1.6	0.6	2.6	2.2			9.9
Conservation Acquisition (CAA)						0.3	0.6	0.5	0.7	2.2
Conservation Rate Credit (CRC)							3.2	3.3	5.1	11.6
Utility Self-Funded (High Water Mark)							0.7	3.3	1.7	5.8
<b>INDUSTRIAL TOTAL</b>	<b>0.5</b>	<b>4.0</b>	<b>6.7</b>	<b>3.8</b>	<b>3.4</b>	<b>8.2</b>	<b>6.8</b>	<b>7.1</b>	<b>7.6</b>	<b>48.0</b>

**TABLE B (aMW), continued**

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	TOTAL FY 01-09
<b>Agricultural</b>										
Conservation Augmentation		0.0	0.0			0.1	0.1			0.2
Conservation Renewable Discount (C&RD)	0.3	0.4	0.3	0.2	0.1	0.0				1.3
Conservation Acquisition Agreements (CAA)						0.2	0.1	0.1	1.4	1.8
Conservation Rate Credit (CRC)						0.1	2.9	1.7	0.6	5.3
BPA Direct Funded Initiatives										0.0
Utility Self-Funded (High Water Mark)							0.0	0.2	0.0	0.2
<b>AGRICULTURAL TOTAL</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	<b>0.5</b>	<b>3.0</b>	<b>2.0</b>	<b>2.1</b>	<b>8.9</b>
<b>Multi-Sector</b>										
Conservation Augmentation										0.0
Conservation Renewable Discount (C&RD)	0.0	0.2	0.2	0.1	0.0	0.0				0.5
Conservation Rate Credit (CRC)							0.0	0.0	0.4	0.4
Irrigation Rate Mitigation Product (IRMP)		0.3	0.2	0.2	1.9	0.2	0.1	0.4	0.4	3.6
Utility Self-Funded (High Water Mark)									0.1	0.1
<b>MULTI-SECTOR SUBTOTAL</b>	<b>0.0</b>	<b>0.4</b>	<b>0.4</b>	<b>0.2</b>	<b>1.9</b>	<b>0.2</b>	<b>0.1</b>	<b>0.4</b>	<b>1.0</b>	<b>4.7</b>
<b>Market Transformation</b>										
BPA Direct-Funded	7.5	12.9	17.2	15.1	13.6	14.6	17.8	18.0	10.8	127.6
Conservation Renewable Discount (C&RD)	0.0	2.6	3.6	1.5	1.8	0.6				10.1
Conservation Rate Credit (CRC)						0.8	2.8	1.4	0.8	5.8
Utility Self-Funded (High Water Mark)							0.4	1.7	1.1	3.1
<b>MARKET TRANSFORMATION SUBTOTAL</b>	<b>7.6</b>	<b>15.5</b>	<b>20.8</b>	<b>16.6</b>	<b>15.4</b>	<b>15.9</b>	<b>21.0</b>	<b>21.1</b>	<b>12.6</b>	<b>146.6</b>
<b>TOTAL CONAUG</b>	<b>3.7</b>	<b>21.5</b>	<b>20.7</b>	<b>14.2</b>	<b>13.5</b>	<b>20.5</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>94.5</b>
<b>TOTAL C&amp;RD</b>	<b>4.7</b>	<b>18.0</b>	<b>18.2</b>	<b>12.9</b>	<b>11.3</b>	<b>7.7</b>	<b>2.2</b>	<b>0.0</b>	<b>0.0</b>	<b>75.1</b>
<b>TOTAL CAA</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.3</b>	<b>2.8</b>	<b>1.4</b>	<b>5.3</b>	<b>10.8</b>
<b>TOTAL CRC</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.1</b>	<b>19.2</b>	<b>21.9</b>	<b>22.0</b>	<b>65.2</b>
<b>TOTAL UTILITY SELF-FUNDED (HIGH WATER MARK)</b>							<b>5.1</b>	<b>17.8</b>	<b>17.8</b>	<b>40.7</b>
<b>BUILDING CODES</b>										
Residential	8.3	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0
Commercial	4.1	4.3	4.2	3.9	0.0	0.0	0.0	0.0	0.0	16.5
<b>BUILDING CODES TOTAL</b>	<b>12.4</b>	<b>13.0</b>	<b>4.2</b>	<b>3.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>33.5</b>
<b>TOTAL POST LEGACY CONSERVATION</b>	<b>28.8</b>	<b>66.0</b>	<b>61.1</b>	<b>46.6</b>	<b>40.7</b>	<b>50.2</b>	<b>52.8</b>	<b>67.2</b>	<b>63.7</b>	<b>477.1</b>

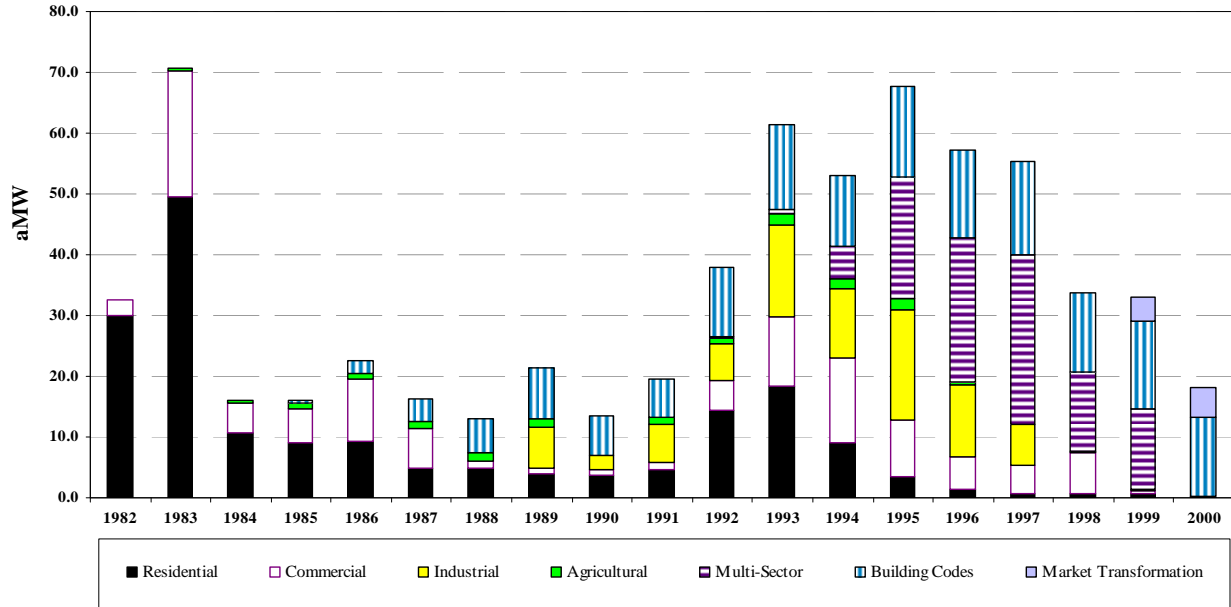
**NOTES FOR TABLE B**

- In FY 2007, a new funding category began – utility self-funded.
- Beginning with FY 2007, federal is a separate program with a separate line within the commercial sector.
- The Energy Smart Grocer initiative can be funded through CRC, CAA, BPA direct funded, or utility self-funded.
- Beginning with the 2007 RED Book, IRMP is located under multisector, whereas prior editions of the RED Book placed it under agricultural. The relocation recognizes that many of the measures are not necessarily agricultural in nature.
- The C&RD savings shown in FY 2007 for the industrial sector were for the completion of a single, large industrial project funded in FY 2006, the final year of the C&RD program.
- Under the commercial sector's BPA direct funded initiatives, the other initiatives include the Institutional Building Program, computer savings (Energy Star 4, Energy Star 5, 80 Plus), rooftop unit HVAC and turnkey lighting.
- Multisector is a “pseudo sector” that makes no sector distinction for the savings achieved.

# BPA'S HISTORICAL CONSERVATION SAVINGS FY 1982-FY 2000

Figure 6 shows the annual acquisitions within each market sector for the historical period of FY 1982-2000.

**FIGURE 6: Historical Conservation Savings (aMW), FY 1982-2000**



## NOTES FOR FIGURE 6

- Beginning with the 2007 edition of the RED Book, the savings from expired measures are excluded from Figure 6, whereas they were included in previous editions of the RED Book.
- Multisector is a “pseudo sector” that makes no sector distinction for the savings achieved.



Figure 7 shows those measures that have expired and that are not included in the preceding figures and tables.

**FIGURE 7: Expired Historical Conservation Savings, Shown by Year of Installation**  
**Cumulative Total Expired Savings = 121.8 aMW**

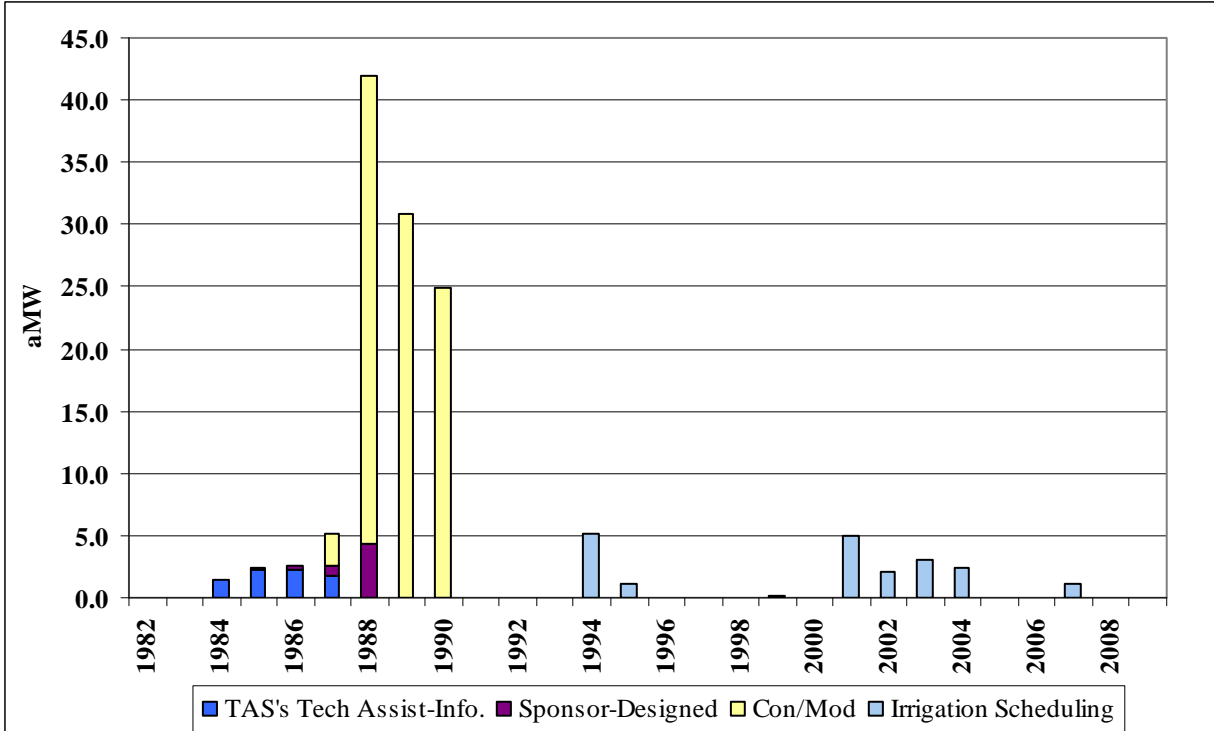


Table C provides information on historical programs for the period FY 1982 through 2000. Total cumulative energy savings achieved during this time period are 660 aMW.

**TABLE C: BPA's Historical Conservation Savings (aMW), FY 1982-2000**

	Total FY 82-94	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	SubTotal FY 82-00	Adjustment FY 82-00	Total FY 82-00
<b>RESIDENTIAL</b>										
EXISTING:										
Weatherization-SF&MF	99.4	1.4	0.0	0.0	0.0	0.0	0.0	100.8	0.0	100.8
Weatherization-MH	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
Low-Income Wx	0.0	0.0	0.5	0.3	0.4	0.6	0.3	2.1	0.0	2.1
NEW										
Super Good Cents	4.8	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	4.8
New Manuf. Homes	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.9
L/T Super Good Cents	1.9	0.5	0.4	0.2	0.2	0.0	0.0	3.2	0.0	3.2
Manuf. Hsg. Acq.(MAP)	6.3	1.1	0.4	0.0	0.0	0.0	0.0	7.8	0.0	7.8
Water Heater Wraps	30.4	0.0	0.0	0.0	0.0	0.0	0.0	30.4	0.0	30.4
Shower Flow Restrictors	9.1	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	9.1
Waterheat/sh-hds/aerators	18.7	0.4	0.1	0.1	0.1	0.0	0.0	19.4	0.0	19.4
<b>RES. SUBTOTAL</b>	<b>172.6</b>	<b>3.4</b>	<b>1.4</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.3</b>	<b>179.7</b>	<b>0.0</b>	<b>179.7</b>
<b>COMMERCIAL</b>										
LTNG. & WTR. HTNG.:										
Water Heater Wraps	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0
Shower Flow Restrictors	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Lamps	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7
Street & Area Lighting	16.9	0.0	0.0	0.0	0.0	0.0	0.0	16.9	0.0	16.9
INSTITUTIONAL BLDG.										
TAS's Tech Assist-Info.	7.6	0.0	0.0	0.0	0.0	0.0	0.0	7.6	(7.6)	0.0
ECM's	26.7	0.0	0.0	0.0	0.0	0.0	0.0	26.7	0.0	26.7
ACQUISITION SUPPORT										
Purch. of Energy Svngs.	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.3
Finance (CIPP)	3.2	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.2
PSP&L	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
PECI - Comm/Ind Ltng.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4
CREUS End-use Study	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Energy Smart Design	28.5	8.0	4.6	2.1	2.2	0.1	0	45.5	0.0	45.5
Targeted Acq. (TAP)	3.0	0.5	0.5	2.7	4.6	0.4	0	11.7	0.0	11.7
ODOE - Schools	0.1	0.8	0.2	0.0	0.0	0.0	0.0	1.1	0.0	1.1
<b>COM. SUBTOTAL</b>	<b>92.5</b>	<b>9.3</b>	<b>5.3</b>	<b>4.8</b>	<b>6.8</b>	<b>0.5</b>	<b>0.0</b>	<b>119.2</b>	<b>(7.6)</b>	<b>111.6</b>
<b>INDUSTRIAL</b>										
Sponsor-Designed	9.7	0.0	0.0	0.0	0.0	0.0	0.0	9.7	(5.6)	4.1
Energy Savings Plan	31.3	16.9	9.8	3.6	0.2	0.0	0.0	61.8	0.0	61.8
Major Plants	12.4	1.3	2.0	3.1	0.0	0.2	0.0	19.0	0.0	19.0
<b>IND. SUBTOTAL</b>	<b>53.4</b>	<b>18.2</b>	<b>11.8</b>	<b>6.7</b>	<b>0.2</b>	<b>0.2</b>	<b>0.0</b>	<b>90.5</b>	<b>(5.6)</b>	<b>84.9</b>
<b>AGRICULTURAL</b>										
Irrigation Hardware	12.4	1.8	0.6	0.0	0.0	0.0	0.0	14.8	0.0	14.8
Irrigation Scheduling	5.2	1.2	0.0	0.0	0.0	0.2	0.0	6.6	(6.6)	0.0
<b>AG. SUBTOTAL</b>	<b>17.6</b>	<b>3.0</b>	<b>0.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>0.0</b>	<b>21.4</b>	<b>(6.6)</b>	<b>14.8</b>

**TABLE C (aMW), continued**

	Total FY 82-94	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	TOTAL FY 82-00	Adjustment FY 82-00	Total FY 82-00
<b>MULTI-SECTOR</b>										
Billing Credits	1.0	0.5	0.6	0.3	0.0	0.0	0.0	2.4	0.0	2.4
Competitive Acquisition	0.1	0.6	0.0	0.1	0.1	1.1	0.0	2.0	0.0	2.0
BPA Sys Efficiencies	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.7
Third-Party Financing	4.9	10.3	12.4	18.1	6.8	4.8	0.0	57.3	0.0	57.3
Flex Agreements	0.0	8.3	10.6	9.4	6.0	7.5	0.0	41.8	0.0	41.8
<b>MULTI-S. SUBTOTAL</b>	<b>6.3</b>	<b>20.1</b>	<b>23.6</b>	<b>27.9</b>	<b>12.9</b>	<b>13.4</b>	<b>0.0</b>	<b>104.2</b>	<b>0.0</b>	<b>104.2</b>
<b>SECTOR</b>										
<b>SUBTOTALS</b>	<b>342.4</b>	<b>54.0</b>	<b>42.7</b>	<b>40.0</b>	<b>20.6</b>	<b>14.9</b>	<b>0.3</b>	<b>515.0</b>	<b>(19.8)</b>	<b>495.2</b>
Con/Mod	95.9	-	-	-	-	-	-	95.9	(95.9)	0.0
<b>SUBTOTAL</b>	<b>438.3</b>	<b>54.0</b>	<b>42.7</b>	<b>40.0</b>	<b>20.6</b>	<b>14.9</b>	<b>0.3</b>	<b>610.9</b>	<b>(115.7)</b>	<b>495.2</b>
<b>LOAD REDUCTION FROM BLDG. CODES</b>										
Residential	59.0	10.3	8.7	8.8	8.2	8.2	8.4	111.6	0.0	111.6
Commercial	10.8	4.6	5.9	6.5	4.9	6.2	4.5	43.4	0.0	43.4
<b>Improved Bld Codes</b>	<b>69.8</b>	<b>14.9</b>	<b>14.6</b>	<b>15.3</b>	<b>13.1</b>	<b>14.4</b>	<b>12.9</b>	<b>155.0</b>	<b>0.0</b>	<b>155.0</b>
<b>Market Transformation</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>4.0</b>	<b>5.0</b>	<b>9.0</b>	<b>0.0</b>	<b>9.0</b>
<b>TOTAL HISTORICAL</b>										
<b>CONSERVATION</b>	<b>508.1</b>	<b>68.9</b>	<b>57.3</b>	<b>55.3</b>	<b>33.7</b>	<b>33.3</b>	<b>18.2</b>	<b>774.9</b>	<b>(115.7)</b>	<b>659.2</b>

**NOTES ON TABLE C**

- **ADJUSTED SAVINGS:** The adjusted savings reflect, in some cases, the end of a measure’s life when BPA assumes the measures are no longer producing savings. In addition, the adjusted savings may reflect findings from evaluations that show savings are more or less than expected when the program was initiated or reflect revised reports submitted by utilities.
- **FUEL CHOICE:**<sup>7</sup> In 1993, BPA analyzed the following programs for possible fuel switching effects: Residential Weatherization, Manufactured Housing Acquisition Program (MAP), New Residential, Energy Smart Design (ESD) and Water Heating. These analyses concluded that the Residential Weatherization program had no fuel choice effect and only a modest effect on the Water Heating program. However, a fuel choice effect was found in the New Residential sector and MAP. This analysis concluded that the 1993 new residential program incentives from Long-Term Super Good Cents (LTSGC), Super Good Cents (SGC), Washington State Energy Code and/or Northwest Energy Code, and the MAP program do affect fuel choice. The report states that the incentives paid to build energy efficient electrically heated homes throughout the region appear to be causing approximately 8 percent of the certified LTSGC homes and 6 percent of the new manufactured homes to be built using electricity when, absent the incentives, natural gas would have been the preferred fuel. The fuel choice impacts noted in the report are the result of builders responding to the available incentives from all the programs in their area.

In the commercial sector, a similar fuel choice impact was found in the ESD program when analysis concluded that incentives did affect fuel choice decisions for HVAC equipment and water heating units. The incentives resulted in unintended fuel choice effects that accounted for 3 percent of the program savings occurring because the participants selected electricity instead of natural gas. The above fuel choice effects are incorporated into the program savings for LTSGC, MAP and ESD.

<sup>7</sup> Fuel choice effects occur when a consumer decides to change fuel sources from what would have been done absent the program. Of concern here is a decision to stay with electricity due to the increased efficiency when the consumer may have decided to use natural gas or another fuel instead.

## **TOTAL BPA CONSERVATION COSTS**

### **TABLES D & E – Conservation Costs**

From FY 1982-2009, BPA spent approximately \$2.366 billion on conservation measures that are still producing savings.

- Residential: \$1.198 billion
- Commercial: \$462 million
- Industrial: \$152 million (excludes \$48 million for ConMod measures now expired)
- Agricultural: \$40 million
- Multisector acquisitions: \$159 million
- Market transformation, conservation support, other costs and federal reimbursable revenues: \$455 million

**TABLE D-1: BPA's Total Conservation Costs, FY 1982-2009 (\$ 000)**

	1982-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Totals											
<b>RESIDENTIAL:</b>																						
State Low Income Weatherization	\$	3,103	\$	2,429	\$	3,745	\$	2,475	\$	3,817	\$	4,029	\$	4,188	\$	4,135	\$	6,569	\$	34,490		
C&RD Low Income Weatherization	\$	70	\$	1,379	\$	1,321	\$	1,197	\$	990	\$	254								\$	5,211	
CRC Low Income Weatherization										411		1,735		2,100		1,675				\$	5,921	
Conservation Augmentation	\$	42	\$	8,713	\$	2,931	\$	2,927	\$	2,350	\$	2,036	\$	536							\$	19,535
Conservation & Renewables Discount	\$	6,237	\$	24,063	\$	18,990	\$	16,577	\$	14,902	\$	5,966									\$	86,735
Conservation Acquisition										\$	195		520		249						\$	4,620
Conservation Rate Credit												1,467	11,772		10,756						\$	31,696
Savings with a Twist (Big Box)										\$	731		885		1,201						\$	3,860
<b>Residential Total</b>	<b>\$</b>	<b>1,006,407</b>	<b>\$</b>	<b>9,452</b>	<b>\$</b>	<b>36,584</b>	<b>\$</b>	<b>26,987</b>	<b>\$</b>	<b>23,176</b>	<b>\$</b>	<b>22,059</b>	<b>\$</b>	<b>15,089</b>	<b>\$</b>	<b>19,636</b>	<b>\$</b>	<b>18,441</b>	<b>\$</b>	<b>20,644</b>	<b>\$</b>	<b>1,198,475</b>
<b>COMMERCIAL:</b>																						
Conservation Augmentation	\$	11	\$	14,620	\$	14,573	\$	13,493	\$	9,422	\$	7,459	\$	3,077							\$	62,655
Conservation & Renewables Discount	\$	695	\$	2,534	\$	5,850	\$	1,565	\$	920	\$	1,435									\$	12,999
Conservation Acquisition										\$	692		1,880		468						\$	4,669
Conservation Rate Credit										\$	272		4,651		4,070						\$	14,595
New Initiatives				\$	95		7						\$	1,366		3,889					\$	11,181
Federal													\$	2,044		6,353					\$	17,500
<b>Commercial Total</b>	<b>\$</b>	<b>338,550</b>	<b>\$</b>	<b>706</b>	<b>\$</b>	<b>17,154</b>	<b>\$</b>	<b>20,518</b>	<b>\$</b>	<b>15,065</b>	<b>\$</b>	<b>10,342</b>	<b>\$</b>	<b>9,858</b>	<b>\$</b>	<b>13,018</b>	<b>\$</b>	<b>14,780</b>	<b>\$</b>	<b>22,158</b>	<b>\$</b>	<b>462,149</b>
<b>INDUSTRIAL:</b>																						
Conservation Augmentation	\$	4	\$	4,875	\$	5,362	\$	2,955	\$	2,885	\$	3,149	\$	137							\$	19,367
Conservation & Renewables Discount	\$	106	\$	1,676	\$	3,014	\$	1,822	\$	941	\$	4,053									\$	11,612
Conservation Acquisition										\$	233		710		376						\$	1,696
Conservation Rate Credit													\$	3,942		2,869					\$	10,669
<b>Industrial Total</b>	<b>\$</b>	<b>108,691</b>	<b>\$</b>	<b>110</b>	<b>\$</b>	<b>6,551</b>	<b>\$</b>	<b>8,376</b>	<b>\$</b>	<b>4,777</b>	<b>\$</b>	<b>3,826</b>	<b>\$</b>	<b>7,435</b>	<b>\$</b>	<b>4,789</b>	<b>\$</b>	<b>3,245</b>	<b>\$</b>	<b>4,235</b>	<b>\$</b>	<b>152,035</b>
<b>AGRICULTURAL:</b>																						
Conservation Augmentation			\$	16	\$	34	\$	-	\$	-	\$	81	\$	836							\$	967
Conservation & Renewables Discount	\$	1,452	\$	953	\$	697	\$	518	\$	119	\$	85									\$	3,824
Conservation Acquisition												\$	172	\$	100	\$	116	\$	982		\$	1,370
Conservation Rate Credit												\$	163	\$	1,538	\$	1,709	\$	947		\$	4,357
BPA Direct Funded												\$	222								\$	222
<b>Agricultural Total</b>	<b>\$</b>	<b>28,946</b>	<b>\$</b>	<b>1,452</b>	<b>\$</b>	<b>969</b>	<b>\$</b>	<b>731</b>	<b>\$</b>	<b>518</b>	<b>\$</b>	<b>119</b>	<b>\$</b>	<b>723</b>	<b>\$</b>	<b>2,474</b>	<b>\$</b>	<b>1,825</b>	<b>\$</b>	<b>1,929</b>	<b>\$</b>	<b>39,686</b>
<b>MULTI-SECTOR:</b>																						
Conservation Augmentation			\$	3	\$		\$	57	\$	93											\$	153
Conservation & Renewables Discount			\$	290	\$	511	\$	175	\$	140											\$	1,116
Conservation Acquisition																					\$	-
Conservation Rate Credit																					\$	225
Irrigation Rate Mitigation Product			\$	121	\$	166	\$	92	\$	547	\$	267	\$	119	\$	436	\$	448	\$		\$	2,196
<b>Multi-Sector Total</b>	<b>\$</b>	<b>155,565</b>	<b>\$</b>	<b>414</b>	<b>\$</b>	<b>677</b>	<b>\$</b>	<b>324</b>	<b>\$</b>	<b>780</b>	<b>\$</b>	<b>267</b>	<b>\$</b>	<b>119</b>	<b>\$</b>	<b>446</b>	<b>\$</b>	<b>663</b>	<b>\$</b>	<b>663</b>	<b>\$</b>	<b>159,255</b>
<b>SUBTOTAL</b>	<b>\$</b>	<b>1,638,159</b>	<b>\$</b>	<b>11,720</b>	<b>\$</b>	<b>61,672</b>	<b>\$</b>	<b>57,289</b>	<b>\$</b>	<b>43,860</b>	<b>\$</b>	<b>37,126</b>	<b>\$</b>	<b>33,372</b>	<b>\$</b>	<b>40,036</b>	<b>\$</b>	<b>38,737</b>	<b>\$</b>	<b>49,629</b>	<b>\$</b>	<b>2,011,600</b>

**TABLE D-1, continued**

	1982-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Totals
Market Transformation	\$ 9,603	\$ 7,798	\$ 9,321	\$ 9,709	\$ 7,956	\$ 10,140	\$ 10,771	\$ 9,353	\$ 9,631	\$ 84,282	
C&RD Expense (Includes Donations/Admin/IT Development)	\$ 1,040	\$ 7,969	\$ 9,109	\$ 7,988	\$ 6,597	\$ 4,433				\$ 37,136	
CRC Expense (Includes Donations/Admin)						\$ 1,182	\$ 6,287	\$ 4,812	\$ 3,497	\$ 15,778	
Energy Web	\$ 1,229	\$ 1,445	\$ 4,284	\$ 830	\$ 602	\$ 969	\$ 277	\$ 287	\$ 651	\$ 10,574	
<b>SUBTOTAL</b>	<b>\$ 11,872</b>	<b>\$ 17,212</b>	<b>\$ 22,714</b>	<b>\$ 18,527</b>	<b>\$ 15,155</b>	<b>\$ 16,724</b>	<b>\$ 17,335</b>	<b>\$ 14,452</b>	<b>\$ 13,779</b>	<b>\$ 147,770</b>	
<b>CONSERVATION SUPPORT COSTS:</b>											
PBL Conservation Sales Support	\$ 4,517	\$ 787	\$ 360	\$ 794	\$ 831	\$ 669				\$ 7,958	
Conservation Staff Expense	\$ 4,874	\$ 5,570	\$ 5,742	\$ 5,921	\$ 6,456	\$ 6,840	\$ 6,388	\$ 7,059	\$ 7,845		
Conservation Support Expense	\$ 178,113	\$ 753	\$ 3,778	\$ 1,808	\$ 1,756	\$ 902	\$ 68	\$ 1,024	\$ 980	\$ 1,616	
<b>SUBTOTAL</b>	<b>\$ 178,113</b>	<b>\$ 10,144</b>	<b>\$ 10,135</b>	<b>\$ 7,910</b>	<b>\$ 8,471</b>	<b>\$ 8,189</b>	<b>\$ 7,577</b>	<b>\$ 7,412</b>	<b>\$ 8,039</b>	<b>\$ 9,461</b>	<b>\$ 255,451</b>
<b>OTHER COSTS:</b>											
Third Party Financing Costs	\$ 79,519									\$ 79,519	
Debt Service Payment Adjustment	\$ (71,508)	\$ (5,574)	\$ (4,081)	\$ (4,236)	\$ (5,275)					\$ (90,674)	
Various Costs Adjustment	\$ (31,748)		\$ (3,371)							\$ (35,119)	
Federal Reimbursable Program Costs <sup>1</sup>	\$ 6,979	\$ 10,053	\$ 9,074	\$ 8,266	\$ 14,093	\$ 17,233	\$ 17,172	\$ 11,205	\$ 10,212	\$ 104,287	
<b>SUBTOTAL</b>	<b>\$ (23,737)</b>	<b>\$ 1,405</b>	<b>\$ 5,972</b>	<b>\$ 1,467</b>	<b>\$ 2,991</b>	<b>\$ 14,093</b>	<b>\$ 17,233</b>	<b>\$ 17,172</b>	<b>\$ 11,205</b>	<b>\$ 10,212</b>	<b>\$ 58,013</b>
<b>Total Incremental Costs<sup>2</sup></b>	<b>\$ 35,141</b>	<b>\$ 94,991</b>	<b>\$ 89,380</b>	<b>\$ 73,849</b>	<b>\$ 74,563</b>	<b>\$ 74,906</b>	<b>\$ 81,955</b>	<b>\$ 72,433</b>	<b>\$ 83,081</b>		
<b>Federal Reimbursable (Revenues)<sup>1</sup></b>	<b>\$ (7,034)</b>	<b>\$ (12,278)</b>	<b>\$ (7,728)</b>	<b>\$ (8,131)</b>	<b>\$ (15,355)</b>	<b>\$ (17,709)</b>	<b>\$ (16,293)</b>	<b>\$ (11,326)</b>	<b>\$ (10,818)</b>		
<b>Net Incremental Costs</b>	<b>\$ 28,107</b>	<b>\$ 82,713</b>	<b>\$ 81,652</b>	<b>\$ 65,718</b>	<b>\$ 59,208</b>	<b>\$ 57,197</b>	<b>\$ 65,662</b>	<b>\$ 61,107</b>	<b>\$ 72,263</b>		
<b>With Carryover from Table E</b>	<b>\$ 1,792,535</b>	<b>\$ 1,820,642</b>	<b>\$ 1,903,355</b>	<b>\$ 1,985,007</b>	<b>\$ 2,050,725</b>	<b>\$ 2,109,933</b>	<b>\$ 2,167,130</b>	<b>\$ 2,232,792</b>	<b>\$ 2,293,899</b>		
<b>Total Cumulative Net Costs</b>	<b>\$ 1,792,535</b>	<b>\$ 1,820,642</b>	<b>\$ 1,903,355</b>	<b>\$ 1,985,007</b>	<b>\$ 2,050,725</b>	<b>\$ 2,109,933</b>	<b>\$ 2,167,130</b>	<b>\$ 2,232,792</b>	<b>\$ 2,293,899</b>	<b>\$ 2,366,162</b>	

<sup>1</sup> Federal reimbursable costs and reimbursements for these costs are excluded from the costs for FY 1982-2000. These costs and reimbursements netted out close to zero.

<sup>2</sup> Incremental costs exclude the cost of financing the current year's conservation efforts or the interest expense associated with prior year expenditures that were capitalized and debt financed.

Additional footnotes for Table D

- Beginning with FY 2007, federal is a separate program with a separate line within the commercial sector.
- Conservation costs do not include an allocation of general and administrative overhead costs.
- Conservation Modernization (ConMod) expenditures totaling \$48,140,000 incurred during FY 1988-1999 are omitted from this table, as the ConMod conservation savings have expired and are, therefore, not included in Table A.

**TABLE D-2: BPA's Annual Conservation Expenditures by Major Categories, FY 2001-2009 (\$ 000)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b><u>Direct Program Costs:</u></b>									
Market Transformation Expense	\$9,603	\$7,798	\$9,321	\$9,709	\$7,956	\$10,140	\$10,771	\$9,353	\$9,631
Grant Expense	\$3,103	\$2,429	\$3,745	\$2,475	\$3,817	\$4,029	\$4,188	\$4,135	\$6,569
Conservation & Renewables Discount Expense	\$9,600	\$38,864	\$39,492	\$29,842	\$24,609	\$16,226	\$0	\$0	\$0
Conservation Rate Credit Expense	\$0	\$0	\$0	\$0	\$0	\$3,495	\$29,925	\$26,326	\$23,495
Subtotals	\$22,306	\$49,091	\$52,558	\$42,026	\$36,382	\$33,890	\$44,884	\$39,814	\$39,695
Infrastructure Support, New Initiatives, & Evaluation Costs	\$1,229	\$1,445	\$4,379	\$837	\$602	\$969	\$1,643	\$4,176	\$6,475
Direct Acquisition/Capitalized Costs	\$57	\$28,227	\$22,900	\$19,432	\$14,750	\$14,970	\$10,725	\$8,763	\$16,790
<b>Subtotal Direct Program Costs</b>	<b>\$23,592</b>	<b>\$78,763</b>	<b>\$79,837</b>	<b>\$62,295</b>	<b>\$51,734</b>	<b>\$49,829</b>	<b>\$57,252</b>	<b>\$52,753</b>	<b>\$62,960</b>
<b><u>Staffing and Indirect Costs:</u></b>									
Staffing Costs	\$4,874	\$5,570	\$5,742	\$5,921	\$6,456	\$6,840	\$6,388	\$7,059	\$7,845
Indirect Costs and Sales Support Expense	\$5,270	\$4,686	\$2,334	\$2,642	\$2,280	\$1,004	\$1,143	\$1,416	\$2,064
<b>Subtotal</b>	<b>\$10,144</b>	<b>\$10,256</b>	<b>\$8,076</b>	<b>\$8,563</b>	<b>\$8,736</b>	<b>\$7,844</b>	<b>\$7,531</b>	<b>\$8,475</b>	<b>\$9,909</b>
<b><u>Other and Reimbursable Costs:</u></b>									
Other Costs / Adjustments	(\$5,574)	(\$4,081)	(\$7,607)	(\$5,275)	\$0	\$0	\$0	\$0	\$0
Federal Reimbursable Program Costs	\$6,979	\$10,053	\$9,074	\$8,266	\$14,093	\$17,233	\$17,172	\$11,205	\$10,212
<b>Subtotal</b>	<b>\$1,405</b>	<b>\$5,972</b>	<b>\$1,467</b>	<b>\$2,991</b>	<b>\$14,093</b>	<b>\$17,233</b>	<b>\$17,172</b>	<b>\$11,205</b>	<b>\$10,212</b>
<b>Gross Annual Conservation Expenditures</b>	<b>\$35,141</b>	<b>\$94,991</b>	<b>\$89,380</b>	<b>\$73,849</b>	<b>\$74,563</b>	<b>\$74,906</b>	<b>\$81,955</b>	<b>\$72,433</b>	<b>\$83,081</b>
<b>Federal Cost Reimbursements</b>	<b>(\$7,034)</b>	<b>(\$12,278)</b>	<b>(\$7,728)</b>	<b>(\$8,131)</b>	<b>(\$15,355)</b>	<b>(\$17,709)</b>	<b>(\$16,293)</b>	<b>(\$11,326)</b>	<b>(\$10,818)</b>
<b>Net Annual Conservation Expenditures</b>	<b>\$28,107</b>	<b>\$82,713</b>	<b>\$81,652</b>	<b>\$65,718</b>	<b>\$59,208</b>	<b>\$57,197</b>	<b>\$65,662</b>	<b>\$61,107</b>	<b>\$72,263</b>

**TABLE E: BPA's Historical Conservation Costs, FY 1982-2000 (\$ 000) <sup>8</sup>**

<b>Fiscal Year</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Con/Mod</b>	<b>Agricultural</b>	<b>Multi-Sector Acq.</b>	<b>Program &amp; Support Costs</b>	<b>Third Party Financing Costs</b>	<b>Debt Service Payments Adjustment</b>	<b>Various Costs Adjustment (e.g. Bond Transaction Costs)</b>	<b>Total Incremental Costs</b>	<b>Total Cumulative Costs</b>
1982	\$50,346	\$11,247	\$0	\$0	\$0	\$0	\$5,321	\$0	\$0	\$0	\$66,914	\$66,914
1983	\$162,114	\$39,892	\$1,409	\$0	\$895	\$0	\$2,689	\$0	\$0	\$0	\$206,999	\$273,913
1984	\$57,374	\$8,656	\$513	\$0	\$1,309	\$0	\$7,242	\$0	\$0	\$0	\$75,094	\$349,007
1985	\$77,907	\$26,553	\$957	\$0	\$2,098	\$0	\$20,232	\$0	\$0	\$0	\$127,747	\$476,754
1986	\$79,898	\$13,007	\$1,013	\$0	\$3,546	\$0	\$7,458	\$2,125	(\$2,048)	\$0	\$104,999	\$581,753
1987	\$60,651	\$7,546	\$2,233	\$0	\$1,918	\$0	\$11,008	\$4,250	(\$2,047)	(\$10,000)	\$75,559	\$657,312
1988	\$40,979	\$14,144	\$3,297	\$1,881	\$2,166	\$3,950	\$8,483	\$4,250	(\$2,045)	(\$10,000)	\$67,105	\$724,417
1989	\$37,269	\$15,467	\$5,889	\$4,726	\$1,428	\$3,000	\$5,479	\$4,250	(\$2,048)	(\$11,748)	\$63,712	\$788,129
1990	\$40,016	\$18,062	\$5,681	\$6,063	\$1,428	\$3,232	\$3,515	\$2,125	(\$2,043)	\$0	\$78,079	\$866,208
1991	\$49,808	\$19,554	\$6,181	\$6,254	\$3,257	\$2,959	\$3,495	\$0	(\$1,983)	\$0	\$89,525	\$955,733
1992	\$80,949	\$25,334	\$8,397	\$4,553	\$2,593	\$6,673	\$4,134	\$0	(\$1,986)	\$0	\$130,647	\$1,086,380
1993	\$89,241	\$32,485	\$13,899	\$4,179	\$2,187	\$7,944	\$8,119	\$0	(\$1,905)	\$0	\$156,149	\$1,242,529
1994	\$77,726	\$45,764	\$22,383	\$6,462	\$2,617	\$17,133	\$8,210	\$6,212	(\$6,453)	\$0	\$180,054	\$1,422,583
1995	\$49,783	\$23,061	\$17,346	\$4,045	\$1,712	\$26,676	\$7,915	\$12,824	(\$7,408)	\$0	\$135,954	\$1,558,537
1996	\$29,071	\$13,540	\$9,839	\$4,595	\$1,227	\$34,330	\$7,863	\$12,824	(\$7,483)	\$0	\$105,806	\$1,664,343
1997	\$10,744	\$7,770	\$3,988	\$2,744	\$338	\$16,373	\$13,700	\$12,624	(\$7,305)	\$0	\$60,976	\$1,725,319
1998	\$5,767	\$10,495	\$3,764	\$2,358	\$173	\$12,857	\$19,200	\$12,023	(\$7,670)	\$0	\$58,967	\$1,784,286
1999	\$4,233	\$5,888	\$1,902	\$280	\$49	\$20,438	\$13,500	\$6,012	(\$11,637)	\$0	\$40,665	\$1,824,951
2000	\$2,531	\$85	\$0	\$0	\$5	\$0	\$20,550	\$0	(\$7,447)	\$0	\$15,724	\$1,840,675
<b>Total</b>	<b>\$1,006,407</b>	<b>\$338,550</b>	<b>\$108,691</b>	<b>\$48,140</b>	<b>\$28,946</b>	<b>\$155,565</b>	<b>\$178,113</b>	<b>\$79,519</b>	<b>(\$71,508)</b>	<b>(\$31,748)</b>	<b>\$1,840,675</b>	

<sup>8</sup> Program and program support costs include the overhead costs of the Energy Efficiency Group and other conservation support costs.



## **NOTES ON TABLES D & E**

The costs in the tables are “accrued” expenditures – the amount invoiced in a given year. The expenditures reported have been “loaded” to include all direct costs (measure, installation, administrative and program evaluation costs) related to conservation, indirect costs associated with BPA’s Energy Efficiency Program (load forecasting, planning and economic analysis) and a share of other corporate overhead. The costs reported in the table do not include interest expense on conservation borrowing.

BPA’s historical conservation costs have not always been reported consistently from year to year. Prior to 1988, costs were allocated to specific sectors and to resource planning. Starting in 1988, some resource planning costs were allocated to specific sectors. In addition, two new cost categories were created: multisector acquisitions and miscellaneous costs. (Miscellaneous costs have been replaced with other support cost categories.)

Although this change in categories makes it difficult to do a year-by-year comparison of sector costs, the change more accurately reflects expenditures. Multisector acquisitions cover more than one sector and include costs for billing credits, competitive acquisitions, and financial and technical assistance programs. Program and support costs are not sector specific and consist of resource planning costs and various overhead costs associated with conservation activity through FY 1986. In FY 1995, BPA was reorganized and also implemented a new accounting system. This resulted in some changes in how costs were accounted for and reported. Program and support costs shown in FY 1996 are costs related to the new Energy Efficiency organization. Every attempt was made to allocate costs to the correct categories.

BPA has performed a thorough review of conservation costs. Third party costs have been realigned to show them consistent with federal Treasury borrowing (capital costs) that are tracked as the money is spent. Third party financing costs have been reassigned to the first five years after the bond proceeds were made available.

---

## **SPECIAL NOTE**

Dividing the dollars in tables D and E by the energy savings in tables A, B or C does not take into consideration the varying lifetimes and characteristics of energy resources and is, therefore, not an appropriate calculation. For example, 1 aMW of energy savings from a new residential building code program with an expected lifetime of 70 years cannot be equated with 1 aMW of savings from a program having a much shorter life.

The simple division method also is inappropriate.

- Some savings were achieved in pay for performance or competitive acquisition contracts. These savings are reported as first year savings while the cost is paid from year-to-year expense budgets over a number of years.
  - Most savings were paid for from the capital budget and costs were amortized through federal borrowing. BPA's cost for these projects shows up as the capital cost and not the year-to-year amortization payments. Therefore, the way savings are treated is consistent year-to-year, while the costs are a mixture of predominantly capital with a substantial expense component.
  - The cost tables make no distinction between capital and expense payments. This means not all year-to-year costs can be directly compared to any single year savings reported.
  - Certain individual projects may receive funding in one year, but the savings may not be achieved until the following year.
-

## GLOSSARY

Average megawatt (aMW)	aMW refers to a unit of energy output over a year, equivalent to the energy produced by the continuous operation of one megawatt of capacity over a period of time. It is also an average of one million watts transferred over a period of time (often a year, thus average annual megawatts). One aMW is the equivalent of 8,760,000 kilowatt-hours (1,000 watts for 24 hours per day for 365 days).
Billing credit	Adjustment to the BPA customer's electric power bill, or the equivalent cash payment, for a reduction in the customer's net requirement of capacity and energy purchased from BPA resulting from a conservation activity independently undertaken.
BPA direct funded	Various savings fall under this category of funding and include BPA contributions for market transformation, one-time grants for pilot projects (agricultural) and direct installations of measures during BPA-funded audits under the Energy Smart Grocer program.
C&I	This refers to the commercial and industrial sectors and programs that serve both sectors.
Commercial Incentives Pilot Program (CIPP)	CIPP was a payment-for-performance endeavor under BPA sponsorship that provided financial reimbursement to utilities for energy conservation measures installed by commercial customers.
Commercial and Residential End Use Study (CREUS)	CREUS provided electric energy usage information on various types of loads typically found in either commercial or residential buildings. Businesses and homes were randomly selected throughout the region and various end-use loads were monitored for several months. The data were collected and analyzed. A few businesses installed some measures during 1989 based on the energy use data.
Compact fluorescent light (CFL)	A CFL is an energy efficient electric light used primarily in residential applications. The CFL is a fluorescent bulb that normally can be screwed into any standard lighting fixture. Some models can only be used with special fixtures designed to insure the lights are not replaced with inefficient incandescent light bulbs.
Competitive acquisition	BPA's process of soliciting and selecting, by means of systematic criteria, conservation and generating resources from customers and noncustomers for long-term use.

Conservation	Conservation means any reduction in electric energy consumption resulting from an increase in the efficiency of electric energy use, production or distribution; the direct application of a renewable resource; or modifications in consumer behavior that decrease energy consumption.
Conservation Acquisition Agreement (CAA)	CAA is a resource acquisition contract with utility customers intended to reduce BPA's load obligation through mechanisms for delivering energy savings.
Conservation activity	A project or program deemed as a conservation effort.
Conservation and Renewable Discount (C&RD)	C&RD was a component of BPA's 2002 wholesale power rates. C&RD was a credit available to BPA's regional wholesale power customers that took action to further conservation and renewable resource development.
Conservation Augmentation (ConAug)	ConAug was a resource acquisition component of BPA's system augmentation effort intended to reduce BPA's load obligation through mechanisms for delivering energy savings.
Conservation Modernization (ConMod)	ConMod was a legacy conservation program designed to save energy in the Northwest aluminum industry. The program was designed to save energy by offering a 5-mill (0.5 cent) incentive for every kWh of energy saved while producing one pound of aluminum.
Conservation Rate Credit (CRC)	CRC is a component of BPA's wholesale power rates. CRC is a credit that is available to BPA's regional wholesale power customers that take action to further conservation development.
Consumer-owned utility	Consumer-owned utility can be a municipal electric utility, a public utility district, an irrigation district, a cooperative, a mutual corporation or an association that is engaged in the business of distributing electricity to one or more retail electric customers.
Direct acquisition	Programs that pay for energy efficiency measures that result directly from actions taken, such as installing measures, rather than from paying someone for activities, such as code enforcement, or employing other programs that indirectly cause conservation to occur. Acquisition is a term from the Regional Act used when conservation activity is equivalent to, and as reliable as, acquiring actual generation-produced energy. Under the Regional Act, acquisition of energy, whether through conservation or through generation, must be done under contracts that allow for rigorous verification.

Directly served customer	Direct-service industries and federal agencies that buy electricity directly from BPA for their own use.
Direct-service industries (DSI)	Industrial customers, primarily aluminum smelters, that purchase power directly from BPA.
Energy conservation measures (ECMs)	Materials or equipment installed or activities implemented to produce electric energy savings. A specific action or installed device that saves energy. Also referred to as a conservation measure.
Energy Savings Plan (ESP)	A conservation program that acquired energy savings specifically from conservation projects in the industrial sector. ESP was a legacy conservation program that provided incentives for improvements in energy efficiency in industrial processes (other than in the aluminum industry). This program served both new and existing industries. The program depended on good audits or design reviews to identify potential cost effective savings. Actual savings and the amount of incentive paid were determined through pre and post metering for existing industrial processes or between estimated use and actual metered use in new industrial plants.
Energy Smart Design (ESD)	ESD was a conservation program initially designed to reward builders for significant savings features in new commercial buildings. It eventually became a standard design program to increase efficiency above codes and to change building practices to bring about codes enforcing higher building efficiency standards.
Energy Smart Grocer (ESG)	ESG is a regionwide refrigeration program for the region's public utilities that is delivered by a third-party contractor, PECL, and directly funded by BPA. This program provides refrigeration energy audits, installs marketing measures and facilitates retrofits in hard-to-reach markets such as supermarkets, grocery stores, convenience stores, schools and other end-use refrigeration in the commercial market sector.
Expanded Standard Offer (ESO)	The ESO for commercial and industrial lighting under ConAug was based on set payments for specific lighting measures that save energy above standard lighting practices.
Federal	A key principle in federal projects is that BPA funds must produce incremental conservation that would otherwise not be delivered. In late January 2001, BPA began to develop load reduction projects at federal properties in Pacific Northwest load following service areas.

First-year savings	Most BPA programs are reported in terms of the savings that occur in one year, although the cost effectiveness of measures is based on the expected life of the measure. Measures often last 10, 20 or more years. Therefore, total savings are calculated by multiplying the first year savings times the measure life.
Flex agreements	Contracts with utilities to use money “flexibly” from one program or sector to another without seeking approval on each change. This provided utilities with the opportunity to move BPA funds from one sector to another without going through an approval process when there were cost-effective opportunities to achieve.. The program required that the average cost per kWh saved would be equal to or less than the average cost for conservation were it allocated out into the various individual programs that were available to the utilities. For example, residential weatherization costs more than industrial, so, if the utility increased expenditures on residential above the allocated budget, it had to find other less costly kWh savings or repay the difference to BPA.
Fuel choice	A possible unintended result that a consumer might choose to use electrical energy rather than gas or another fuel due to incentives for energy efficiency measures for electrically heated homes or electrical industrial and commercial uses.
High Water Mark	See utility funded.
HVAC	Heating, ventilation and air conditioning systems include furnaces, ducts, air control system filters, baffles, motors, vents, sensors and chillers. These systems present many efficiency improvement opportunities. HVAC systems are found in houses and industrial facilities, but the primary use of the term is associated with cooling, heating and venting of air within large commercial structures.
Investor-owned utility (IOU)	An IOU is a corporation owned by investors that meets the definition of an electrical company that is engaged in distributing electricity to more than one retail electric customer.
Invitation to Reduce Load through Conservation (IRLC)	IRLC refers to ConAug contracts that utility customers began signing in FY 2001. Various energy conservation measures are authorized for installation through the IRLC portion of contracts. The umbrella contract for each utility is a Purchase of Conservation Agreement (PCA).
Irrigation hardware	Equipment that includes items such as sprinklers, pumping plants, fittings and mainlines used to reduce operating pressure.
Irrigation Rate Mitigation Product (IRMP)	The Irrigation Rate Mitigation Product is a rate reduction provided to utilities with large irrigation loads during May through August of the irrigation season.
Irrigation Scheduling	By careful measurement of soils for water content as well as evaluation of air temperature, wind speed and other weather information, irrigation can be planned (scheduled) in such a way that crop growth is optimized and water use reduced.

	Using less water saves electricity because less water must be pumped up to the fields and forced through irrigation systems.
Legacy	Legacy refers to the conservation activities started prior to FY 2000 that are still operating. These include low-income weatherization, the Energy Northwest pay-for-performance contract, the Tacoma Fort Lewis program and some others with minor savings impacts.
Limited Standard Offer (LSO)	The LSO was the first standard offer made to utilities within the ConAug program. It provided incentives for commercial buildings based on set payments for specific lighting measures that saved energy above standard lighting practices.
Line loss	The electric energy lost (dissipated) during transmission and distribution of electricity.
Load following	Load following generally refers to automatic adjustments in generation that follow changes in customer load in order to maintain a continuous balance between loads and generation.
Long-Term Super Good Cents	The final version of the new residential construction program that was designed to save energy and to influence code development. Long term refers to the fact that this program was increased above the existing code standards and was to be available for some years after codes were achieved.
Low income	Low income means household income that is at or below 125 percent of the federal poverty level.
Low-Income Residential Weatherization (states):	This program mitigates the rising energy costs that make it difficult for low-income citizens to adequately heat their homes. The program helps conserve energy resources in state programs (for example, Community Action Partnership) and thereby reduces the need to obtain energy from more costly conventional energy resources.
Major plants	Energy conservation projects that involved industrial plants with significant electric loads. The top 100 industrial energy users were targeted for this program.
Manufactured Home Acquisition Program (MAP)	MAP required Super Good Cents building standards certification at the manufactured home factory. A site “set-up” inspection followed factory certification in many instances..

Market transformation	<p>A program designed to cause new technologies to be built or accepted as standard practice. Super Good Cents is an example of a program designed to change the home building standards and the market.</p> <p>Market transformation now refers to a specific programmatic effort operated through the Northwest Energy Efficiency Alliance (NEEA) that receives funding directly from BPA, additional funding from CRC and direct contributions from utilities.</p>
Model Conservation Standards (MCS)	MCS were called for in the Northwest Power Act. The Northwest Power and Conservation Council, a policy group authorized through the Act to set standards and plan for future conservation and power acquisition, and BPA worked together to set the Model Conservation Standards and to encourage utilities to create programs to begin promoting such standards. MCS was designed as an early step in Energy Efficiency Code Standards, which three of the four Northwest states served by BPA eventually adopted.
Multisector	Multisector is a catchall term for savings that don't fit into a single sector.
ODOE – Schools	BPA's support of the Oregon Department of Energy (ODOE) program for conservation assistance for schools.
Payment for performance	Mechanism through which payments were made over time as energy savings were verified. This mechanism gave utilities the autonomy they wanted and built their capability to be a reliable source of conservation.
PECI	PECI is a company that consults with clients to develop and implement custom, cost-effective energy efficiency programs.
PSP&L	Former name of Puget Sound Energy, an IOU that serves some of the load in the Puget Sound region of Washington.
Savings with a Twist™ (SWAT)	SWAT is designed to help transform markets by encouraging consumers to buy compact fluorescent lights. SWAT is a buy-down program that involves manufacturers. SWAT-discounted CFLs are sold at retail stores throughout the Pacific Northwest through seasonal campaigns, typically fall and winter.
Sector	Sector in the energy world refers to a segment of a market, such as residential, commercial, industrial and agricultural end users. Each sector employs a different approach and program design specific to its contents.
Super Good Cents	See listing for Long-Term Super Good Cents.



System efficiencies	System efficiencies refers to improvements in transmission, distribution and transformers that save energy. Examples include lower-loss transformers (silicon core), reconducted distribution lines with higher voltage and conservation voltage reduction, which lowers the voltage on distribution lines and saves energy during low load time periods.
Targeted Acquisition Program (TAP)	Under this legacy program, local utilities created and offered commercial conservation programs for their customers, and BPA verified energy savings. The contract provided flexibility to determine the pace of a utility's delivery of conservation and to select the type of conservation produced.
Technical assistance information	In this legacy program, technical assistance information was provided by the various state energy offices for the Institutional Program (primary and secondary schools). This was a DOE-sponsored effort with support from BPA and the states.
Third-party financing	A financial arrangement between BPA and other entities to use sources of capital other than BPA's borrowing authority from the U.S. Treasury or congressional appropriations to fund new capital assets.
Utility	In this document, "utility" refers to an electric utility that is either consumer owned or investor owned.
Utility self-funded	Beginning in FY 2007 and continuing through FY 2010, utilities can choose to self-fund conservation and achieve credit towards the conservation adjustment as described in the Tiered Rates Methodology, which will go into effect in FY 2012. To be eligible, conservation activities must meet the same requirements as BPA-funded activities.
VendingMi\$er®	A program to install energy savings controllers that cycle vending machines off and on during times in which usage has been minimal. The on/off cycle maintains the quality of the products sold.
Water/waste water	BPA began this program in March 2001 to make the water/wastewater treatment process more energy efficient. Plants in locations served by load following customers were eligible. These facilities are one of the largest energy users in a community.
Weatherization	Modifying a building envelope to reduce energy consumption for heating or cooling. Weatherization measures can include adding insulation, installing storm windows and doors, caulking cracks and adding weather stripping.

