Conservation Resource Energy Data

FISCAL YEAR 2014 The RED Book

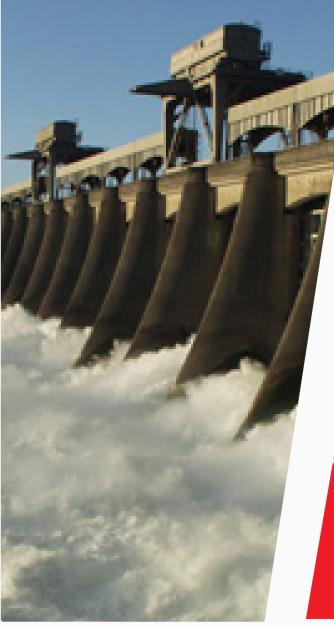




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Introduction

On Dec. 5, 1980, the 96th Congress passed the Pacific Northwest Electric Power Planning and Conservation Act (Act), Public Law 96-501. The overall purpose of the Act was 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
- Assure the region of an efficient and adequate power supply

Since then, 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. These programs have been successful due to the work of BPA's utility customers.

Purpose

The Resource Energy Data (RED) Book summarizes data on the 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.

IMPORTANT NOTE ON USING THE DATA

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 data are accurately used and communicated.

The RED Book information is presented to the nearest tenth of an average megawatt (aMW) in most of the tables. The reported aMW savings are first year savings only and not the measure-life or programlife 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 credits to account for transmission and distribution line loss savings resulting from the acquisition of conservation. 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, there is a corresponding reduction in line losses. The inclusion of line-loss savings allows conservation savings and generation to be compared at the same point in the electrical system often referred to as the "busbar." The line-loss savings factor has varied over time. Through FY 2005, all conservation savings include a line-loss factor of 7.5 percent (2.5 percent for the aluminum Direct Service Industry Conservation Modernization program). For FY 2006 - FY 2009, the line loss credit was 7.625 percent. Beginning in FY 2010, the line loss credit was revised to 9.056 percent.

The data in this edition of the RED Book are as reported by December 2015. These data should be used as "official data" until the next annual publication of the RED Book. Adjustments to the data are captured annually in the RED Book if information from evaluations or other sources indicate savings should be revised.

If you have any questions about how to represent or use this information, please contact – Allie Mace, 503-230-5871, arrobbins@bpa.gov.

Overview

BPA estimates a cumulative total of 1,757 aMW of energy have been achieved from BPA and BPA's utility customers' conservation programs since FY 1982.¹ 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 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 some 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.

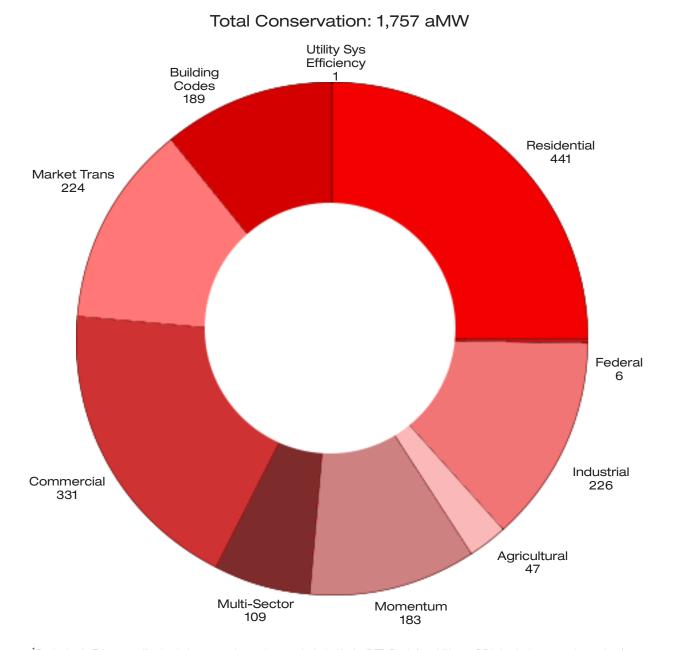


FIGURE 1: BPA's Cumulative Conservation Savings (aMW) by Sector, FY 1982-2014

¹Beginning in FY 2007, utility-funded conservation savings are included in the RED Book (in addition to BPA-funded conservation savings).

The Multi-Sector² savings include, for example, billing credits, competitive acquisitions and flex agreements. The 189 aMW of building codes consist of 129 aMW for residential building codes and 60 aMW for commercial building codes. 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 backward-looking methodology in the load forecast and, therefore, are only approximate.

Residential code savings from 2003 forward are no longer counted and Commercial code savings are not counted as of 2005 because it is estimated that these codes would have reached current standards by those dates. In 2003, Idaho adopted a code equivalent to the 1988 MCS. Oregon and Washington codes had gone beyond MCS by this time, and current practice in Montana was 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 was appropriate to stop counting additional new benefits due to BPA's and the region's conservation efforts in the 1980s and 1990s.

² Multi-Sector is a "pseudo sector" that makes no sector distinction for the savings achieved.

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BPA's Historical Conservation Savings

Table A summarizes the cumulative energy savings for FY 1982-2000 and the incremental energy savings for each fiscal year through 2014.

	Total	FY	FY	FY	FY	FY	FY	Subtotal	FY	FY	FY	FY	FY	Subtotal	FY	FY	FY	Total
	FY 82-00	2001	2002	2003	2004	2005	2006	FY 01-06	2007	2008	2009	2010		FY 07-11	2012	2013	2014	FY 82-14
Residential	179.6	6.0	19.0	11.9	11.0	10.5	10.7	69.2	11.9	20.8	18.9	30.6	40.9	123.1	21.3	22.7	25.1	441.1
Commercial	111.5	2.0	13.6	16.7	10.9	9.5	14.6	67.3	9.3	13.3	19.4	26.6	30.2	98.8	14.9	21.8	17.3	331.5
Industrial	84.9	0.5	4.0	6.7	3.8	3.4	8.2	26.6	6.7	7.0	7.4	11.8	31.1	64.0	15.8	19.4	15.6	226.3
Agricultural	14.8	0.3	0.4	0.4	0.2	0.1	0.5	1.8	3.0	2.0	2.1	6.9	8.7	22.6	1.8	1.9	4.5	47.4
Multi-Sector	104.2	0.0	0.4	0.4	0.2	1.9	0.2	3.2	0.1	0.4	0.4	0.2	0.2	1.4	0.0	0.0	0.0	108.9
Federal															0.0	4.2	1.6	5.8
Utility System Efficiency															0.0	0.0	0.8	0.9
Sectors Sub- total	495.0	8.8	37.5	36.0	26.1	25.3	34.3	168.1	31.0	43.5	48.1	76.1	111.1	309.9	53.7	70.0	65.0	1,161.8
Residential Building Codes	111.6	8.3	8.7	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.6
Commercial Building Codes	43.4	4.1	4.3	4.2	3.9	0.0	0.0	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.9
Building Codes Subtotal	155.0	12.4	13.0	4.2	3.9	0.0	0.0	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	188.5
Market Trans- formation	9.0	7.5	15.5	20.8	16.6	15.4	15.9	91.8	23.0	22.6	13.0	12.7	11.4	82.8	11.6	12.2	16.3	223.7
Momentum Savings							9.8	9.8	10.2	16.6	14.1	17.4	27.4	85.6	41.6	20.3	25.2	182.6
Total Savings	659.0	28.8	66.0	61.1	46.6	40.7	60.0	303.2	64.3	82.8	75.2	106.2	149.9	478.4	106.9	102.6	106.5	1,756.6
CO ₂ Reduction (tonnes)	2,261,341		226,436	209,567	159,885	139,768	205,898	1,040,335	220,486	284,086	258,162	364,490	514,379	1,641,603	366,857	352,057	365,386	6,027,579

TABLE A: BPA's Total Conservation Savings³⁻⁴ (FY 1982-2014) Incremental aMW

³Expired measures are not included as they are no longer delivering savings.

.4The market transformation savings contained in Table A reflects the approximate level of funding that BPA and utilities provided to the Northwest Energy Efficiency Alliance (NEEA).

Carbon Dioxide Reduction From Conservation

For any given amount of conservation, there is a reduction in CO2 (carbon dioxide) emissions relative to the average generation resource mix in the region⁵. For FY 2014, the conservation savings of 107.1 aMW reduces annual CO2 emissions by over 353,000 tonnes (metric tons). This is equivalent to having approximately 68,000 fewer automobiles on the road. For the period FY 1982-2014, the cumulative conservation savings of 1,757 aMW reduces annual CO2 emissions by over 5.8 million tonnes. This is equivalent to having approximately 1.1 million fewer automobiles on the road.

BPA'S Total Historical Conservation Savings

Figure 2 illustrates the annual conservation achievements, FY 1982-2014.

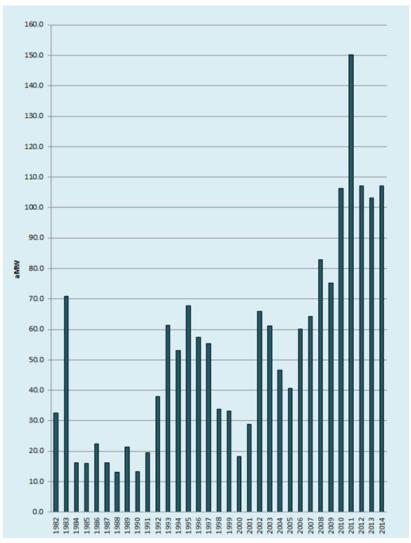


FIGURE 2: BPA's Annual Conservation Savings (aMW), FY 1982-2014

⁵ 3,431 tonnes of CO2 emissions are avoided for every 1 aMW of conservation savings.

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Figure 3 illustrates the yearly contributions from each sector toward BPA's total savings for FY 1982-2014. $^{\rm 6}$

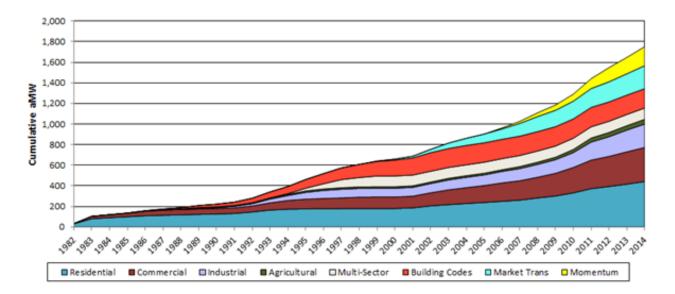


FIGURE 3: BPA's Cumulative Conservation Savings (aMW) by Sector, FY 1982-2014

Conservation, FY 2012-2014

The savings for 2012 onward will be considered separately from prior years due to post-2011 policy shifts and the associated change in the funding model. From 2012 onward, funds are distributed to utilities based on each utility's share of the BPA's Tier One power. Funds are fully allocated to utilities at the start of each rate period, and additional funds are not available except under specific conditions. Under this new funding mechanism, the available funds from BPA are known as the Energy Efficiency Incentive, or EEI. Within this new policy framework, BPA has continued to offer third party programs that provide program delivery directly to customers, using either EEI or the utility's own funding. Table B below provides additional information on conservation savings beginning with FY 2012.

⁶ Building code savings are included in the Residential and Commercial savings.

	FY	FY	FY	FY
Residential	2012	2013	2014	2012-2014
Low Income Weatherization, State Implemented	0.3	0.4	0.1	0.8
Low Income Weatherization, Utility Self-Funded	0.2	0.3	0.1	0.6
Low Income Weatherization, Utility Implemented	0.5	0.3	0.4	1.1
Utility Self-Funded	4.9	10.2	6.4	21.4
Utility Implemented	15.5	11.6	18.2	45.2
Residential Subtotal	21.3	22.7	25.1	69.2
Commercial				
Utility Self-Funded	3.6	7.5	5.6	16.7
Utility Implemented	11.3	14.3	11.7	37.3
Commercial Subtotal	14.9	21.8	17.3	54.0
Industrial				
Utility Self-Funded	2.1	8.3	4.5	14.9
Utility Implemented	13.7	11.1	11.1	35.9
Industrial Subtotal	15.8	19.4	15.6	50.8
Agricultural				
Utility Self-Funded	1.1	1.2	1.4	3.7
Utility Implemented (with SIS Adjustment)	0.6	0.6	3.1	4.3
Agricultural Subtotal	1.7	1.8	4.5	8.0
Utility Systems Efficiency				
Utility Self-Funded	-	0.0	0.4	0.4
Utility Implemented	-	0.0	0.4	0.5
Utility Systems Efficiency Subtotal	-	0.0	0.8	0.9
TOTAL FEDERAL	0.0	4.2	1.6	5.8
MOMENTUM SAVINGS	41.6	20.3	25.2	87.2
MARKET TRANSFORMATION	11.6	12.2	16.3	40.1
TOTAL SAVINGS	106.9	102.5	106.4	315.8

TABLE B: BPA's Annual Conservation Savings (aMW), FY 2012-2014

Momentum Savings

Momentum Savings result when an end-user chooses an efficient option without receiving a financial incentive directly from an energy-efficiency program. Many factors may drive such choices, including the "momentum" generated by past efficiency programs, new codes and standards, corporate sustainability policies, and technology trends. Momentum Savings are energy savings that are:

- Cost-effective
- Not directly paid for by utilities •
- Not part of the Northwest Energy Efficiency Alliance's (NEEA) Net Market Effects ۰
- Above the Northwest Power and Conservation Council's Power Plan baseline (Council baseline)

Momentum savings require a fundamentally different quantification approach than programmatic savings, because there is no centralized record of them. A rich body of work exists documenting the approaches to, limitations of, and results of quantifying programmatic savings. Evaluators have sought to refine these approaches and results over 30 years, and continue to seek to advance the methodologies. The methodologies for calculating Momentum Savings build upon these approaches.

During the 2010-2014 timeframe, BPA performed market research and analysis to quantify Momentum Savings for non-residential lighting, and codes and standards. The results of these analyses provided BPA's share of the regional Momentum Savings (summarized below). NEEA market research and analysis also provided a large number of Momentum Savings, particularly in the television market. Research is ongoing, and savings are expected to be larger when these projects complete.

	2010	2011	2012	2013	2014
Quantified Analysis	2010				2011
Total Quantified Momentum	17.38	27.36	41.60	20.31	25.24
Total NEEA-reported Momentum	12.99	13.70	16.03	16.44	21.54
Total BPA-reported Standards Momentum	3.85	3.78	3.67	3.87	3.70
Total BPA reported Market Momentum	0.54	9.88	21.90	-	-

TABLE C: Momentum Savings 2010 – 2014*

Note: Savings are adjusted for a 1.0956 busbar, reported on calendar year and against the Sixth Plan baseline. Savings will change once new results are included from residential lighting, agriculture, HVAC, and non-residential liahtina.

* Results as of January 18th, 2016

Glossary

Term	Definition
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 mega- watt 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 therefore equiva- lent to one megawatt produced continuously for 8,760 hours (the number of hours in a year) for a total of 8,760 megawatt- hours.
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 result- ing from an independently undertaken conservation activity.
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 mea- sures during BPA-funded audits under the Energy Smart Grocer program.
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 custom- ers.
Commercial and Residential End Use Study (CREUS)	CREUS provided electric energy usage information on various types of loads typically found in either commercial or residen- tial buildings. Businesses and homes were randomly selected throughout the region and various end-use loads were moni- tored 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 resi- dential 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 systemat- ic criteria, conservation and generating resources from custom- ers and non-customers for long-term use.
Conservation	Conservation means any reduction in electric energy consump- tion resulting from an increase in the efficiency of electric energy use, production or distribution; the direct application of a re- newable resource; or modifications in consumer behavior that decrease energy consumption.

Term	Definition
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. This contract was the successor to the expired ConAug contract.
Conservation and Renewable Discount (C&RD)	C&RD was a component of BPA's 2002 - 2006 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 sys- tem augmentation effort intended to reduce BPA's load obliga- tion 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 was 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.
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 enforce- ment, or employing other programs that indirectly cause conser- vation to occur. Acquisition is a term from the Northwest Power Act used when conservation activity is equivalent to, and as reliable as, acquiring actual generation-produced energy. Under the Power Act, acquisition of energy, whether through conserva- tion or through generation, must be done under contracts that allow for rigorous verification.
Directly served customer	Direct-service industries (DSI), primarily aluminum smelters, and federal agencies that buy electricity directly from BPA for their own use.
Energy Conservation Agree- ment (ECA)	ECA is a resource acquisition contract with utility customers intended to reduce BPA's load obligation through mechanisms for delivering energy savings. This contract was the successor to the expired CAA contracts.
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.

Term	Definition
Energy Savings Plan (ESP)	A conservation program that acquired energy savings specifi- cally 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 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 indus- trial 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 prac- tices 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 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	In late January 2001, BPA began to develop load reduction projects at federal properties in the Pacific Northwest load- following service areas. A key principle in federal projects is that BPA funds must produce incremental conservation that would otherwise not be delivered.
First-year savings	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 can last 10, 20 or more years. Therefore, total savings are calculated by multi- plying the first-year savings by the measure life.

Term	Definition
Flex agreements	These were contracts with utilities to use money "flexibly" from one program or sector to another without seeking approval on each change. From FY 1995-1999, 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 utili- ties. 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 fur- naces, 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 associ- ated with cooling, heating and venting of air within large com- mercial 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 Conserva- tion Agreement (PCA).
Irrigation hardware	Equipment that includes items such as sprinklers, pumping plants, fittings and mainlines used to reduce operating pressure.
Irrigation Rate Mitigation Prod- uct (IRMP)	The Irrigation Rate Mitigation Product was 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 weather- ization, the Energy Northwest pay-for-performance contract, the Tacoma Fort Lewis program and some others with minor sav- ings impacts.
Limited Standard Offer (LSO)	The LSO was the first standard offer made to utilities within the ConAug program. It provided incentives for commercial build- ings 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 gen- eration 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 de- velopment. 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 Residential Weatherization (states)	This program mitigates the rising energy costs that make it diffi- cult 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. Low income means household income that is at or below 125 percent of the federal poverty level.
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 Acquisi- tion Program (MAP)	MAP required Super Good Cents building standards certification at the manufactured home factory. A site "set-up" inspection fol- lowed factory certification in many instances.
Market transformation	A program designed to cause new technologies to be built or accepted as standard practice. Super Good Cents is an exam- ple of a program designed to change the home building stan- dards and the market. Market transformation now refers to a specific programmatic effort operated through the Northwest Energy Efficiency Alliance (NEEA) that receives funding directly from BPA and additional funding from utilities.
Model Conservation Standards (MCS)	MCS were called for in the Northwest Power Act. The North- west Power and Conservation Council, authorized through the NW Power Act to set standards and plan for future conserva- tion and power acquisition, and BPA worked together to set the MCS 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.

Term	Definition
Momentum Savings	Momentum Savings are energy savings that are cost-effective, not directly paid for by utilities, not part of the Northwest Energy Efficiency Alliance's (NEEA) Net Market Effects, and above the Northwest Power and Conservation Council's Power Plan base- line (Council baseline).
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 autonomy to utilities and built their capability to acquire conservation savings.
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 was designed to help transform markets by encouraging consumers to buy compact fluorescent lights. SWAT was a buy- down program that involved manufacturers. SWAT-discounted CFLs were sold at retail stores throughout the Pacific Northwest through seasonal campaigns, typically fall and winter.
Sector	Sector 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.
Sponsor- Designed	Implemented during the 1980's, this was BPA's first regular industrial sector conservation acquisition program. Industries submitted proposals for conservation and BPA contracted di- rectly with the industries whose proposals were accepted.
Super Good Cents	See listing for Long-Term Super Good Cents.
System efficiencies	System efficiencies refer to improvements in transmission, dis- tribution and transformers that save energy. Examples include lower-loss transformers (silicon core), reconductored 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 informa- tion	During the 1980's, this was a Technical Assistance Studies (TAS) program whereby technical assistance information was provided by the various state energy offices for the Institutional Program (primary and secondary schools). This was a Department of Energy sponsored effort with support from BPA and the states.

Term	Definition
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	Utility refers to an electric utility that is either consumer-owned or investor-owned. A consumer-owned utility can be a mu- nicipal 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.
Utility self-funded	Beginning in FY 2007 and continuing through FY 2010, utili- ties can choose to self-fund conservation and achieve credit towards the conservation adjustment as described in the Tiered Rates Methodology, which went into effect in FY 2012. To be eli- gible, conservation activities must meet the same requirements as BPA-funded activities.
VendingMi\$er®	A program to install energy savings controllers that cycle vend- ing 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 commu- nity.
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.

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