

Sustainability at BPA 2014

SMALL STEPS
big difference



Letter from **John Hairston**



Reviewing the sustainability reports from the past three years, I realize how much BPA's sustainability program has matured. Sustainability at BPA started as a "grass roots," volunteer-based committee of interested individuals in 2010. Of course, in the beautiful Pacific Northwest, it wasn't hard to find employees dedicated to maintaining our natural resources and devoted to finding ways to be more sustainable in all parts of their lives.

Since 2010, sustainability has become ingrained in how we do our work. That year BPA became a founding member of The Climate Registry. We now have collected enough data to show where we are doing well and where we can do better.

In the past four years, BPA has saved 6,674,422 gallons of water (nearly an 18 percent reduction) and 1,128,758 kWh of energy. Our landfill diversion rate has gone from 69 percent in 2010 to almost 80 percent in 2014. BPA employees are engaged and know they may be taking small steps but they are making a big difference.

We have expanded our partnership roles with the Energy Trust of Oregon, the Electric Power Research Institute Energy Sustainability Interest Group, the Public Sector Sustainability Coordinators Network and the Lloyd Ecodistrict. This year BPA became a co-host of the newly formed Oregon Federal Executive Board Sustainability Coalition.

These efforts have not gone unnoticed. BPA started off the year being recognized by the Department of Energy for work in sustainability employee engagement, the headquarters building received first place in the Kilowatt Crackdown Highest Performing category, four of our facilities earned Green Globe certification and BPA won the Federal Green Challenge for transportation.

These continue to be our target areas:

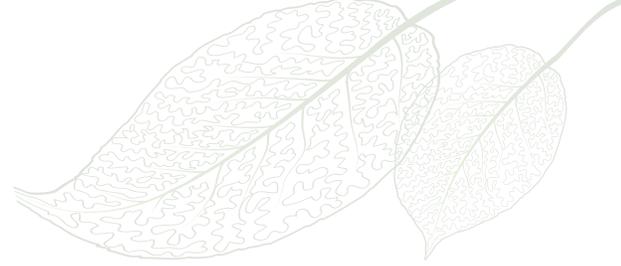
- Energy management;
- Water management;
- Fossil fuel reduction;
- Materials and services management; and
- Employee engagement

Inside this report is a scorecard listing our overall progress for the past several years and specific accomplishments in our target areas.

I look forward to seeing the accomplishments we will make next year.

A handwritten signature in black ink that reads "John L. Hairston".

John L. Hairston
Deputy Chief Administrative Officer (Acting)



A program matures

In December 2013, BPA submitted the verified 2012 Climate Registry report. This submission reflects the fourth year of data collection. This information is now available for data analysis. The successful implementation of the disciplined and consistent methodology required by The Climate Registry demonstrates the continuing maturity of BPA's sustainability program.

The concepts of sustainability and resource conservation have been incorporated in our process improvement initiatives. When evaluating how BPA can make process improvements, employees evaluate costs of materials including transportation through disposal. Many processes have been streamlined to reduce the materials and consumable products used in the process.

Of particular note this year is the development of a strategic framework for the Ross Complex. The complex has more than 80 buildings: a variety of office space, warehouses and miscellaneous out-buildings. BPA's Facilities Asset Management organization developed a long-term strategy that evaluates resource conservation, including accessing facilities around the complex.

KEEPING IT GREEN

Climate Change Risk Mitigation Team studies long-term weather impacts

This group integrates climate change adaptation planning into BPA's operations, policies and programs to ensure resources are invested wisely and that BPA services and operations remain highly effective in current and future climate conditions.

2014 Sustainability Scorecard

CATEGORY	UNITS	BASELINE YEAR	BASELINE	FY 2012	FY 2013	FY 2014	% CHANGE FROM BASELINE
SCOPE 1 - FUGITIVE EMISSIONS							
SF6	LBS	2010	6,473	7,076	11,735	4,645	- 28.2%
SCOPE 1 - PETROLEUM FUEL USE							
Aviation Fuel Consumption	GALLONS	2010	124,902	123,884	135,714	139,058	+ 11.3%
Gasoline Consumption	GALLONS	2009	749,206	740,265	698,919	651,219	- 13.1%
Diesel Consumption	GALLONS	2009	264,754	299,212	262,383	314,920	+ 18.9%
SCOPE 1 - ALTERNATIVE FUEL USE							
E85 Consumption	GALLONS	2009	33,292	27,719	29,436	41,619	+ 25.0%
BD20 Consumption	GALLONS	2009	27,893	92,303	81,112	91,849	+ 229.3%
Propane Consumption	GALLONS	2009	680	743	277	704	+ 3.0%
SCOPE 1 - HEATING							
Natural Gas Consumption	THERMS	2010	138,999	148,543	134,134	124,765	- 10.2%
SCOPE 2 - ELECTRICITY							
Electricity Consumption	KWH	2003	114,348,710	110,902,281	107,992,806	108,678,966	- 5.0%
SCOPE 3 - WASTE							
Waste to Landfill	TONS	2010	635	605	533	518	- 18.4%
Waste Diverted	TONS	2010	1,475	2,248	2,310	1,867	+ 26.6%
SCOPE 3 - WATER							
Water	GALLONS	2008	38,611,901	31,703,697	28,513,500	30,694,411	- 20.5%
SCOPE 3 - PAPER CONSUMPTION							
Paper Consumption (total)	REAMS	2008	45,596	36,828	37,616	65,595	+ 41.9%
SCOPE 3 - BUSINESS RELATED TRAVEL							
Employee Commuting - Driving	MILES	2011	23,703,741	34,863,558	17,045,090	16,702,980	- 29.5%
Employee Commuting - Alternative	MILES	2011	4,080,932	5,001,214	7,272,168	5,979,041	+ 46.5%
Business Air Travel	MILES	2009	4,975,620	6,269,171	2,480,605	4,720,614	- 5.1%
Business Car Rental	MILES	2009	618,660	685,650	319,410	not available	

Energy management: savings and recognition

MANAGED PRINT SERVICES “BIZHUB” IMPLEMENTATION SAVES ENERGY, TONER AND PAPER

BPA reduced the number of printing devices by 30 percent. The new “bizhub” devices consolidate printing, scanning and copying functions. The combination of removing the legacy printers and replacing them with new multi-function devices reduced energy use by approximately 40 percent.

In addition, the new leased printer contract and “just-in-time” toner delivery reduced printer supply expenditures by 33 percent. Paper consumption in FY 14 was reduced by 5 percent.

MYPC REALIZES BIG ENERGY SAVINGS

As old desktop PCs are retired, BPA is replacing them with more efficient, energy saving “thin client” versions. This change is estimated to save the agency approximately 2,006 kilowatts a day, equivalent to the energy contained in 1,372 gallons of gasoline.

EARNING ENERGY INCENTIVES

BPA established a formal process to participate in and earn energy incentives at substations serviced by public utility districts and station-serviced sites. This year focused primarily on lighting at existing sites and new construction. Plans are to expand the program next year to include full building systems.

For reductions at station-serviced sites, the Energy Smart Reserve Power program will award BPA \$132,437 for an estimated annual reduction of 520,108 kWh. Incentives from the public utility districts and Energy Trust of Oregon total \$61,711 for an estimated annual reduction of 220,013 kWh.

BPA HEADQUARTERS WINS FIRST PLACE

Winning first place in the Kilowatt Crackdown energy efficiency competition was not enough. In addition, the BPA headquarters building



was recognized for “most aggressive” building team and received an individual award for “energy efficiency champion.” This recognition was due to implementing opportunities for savings and improving building performance.

FOUR BUILDINGS CERTIFIED BY GREEN GLOBES

BPA adopted Green Globes and the federal guiding principles as a pilot program. This year four buildings were certified. BPA will continue with this certification over LEED because there is no prerequisite to disqualify buildings; lower administration cost; credits that don’t apply to the building are not included in the scoring; and it places



a higher importance on energy conservation — our main area of interest. Green Globes provides a framework that ensures BPA buildings are set to a current sustainable design standard and the guiding principles bring BPA into alignment with federal mandates. BPA plans to keep the momentum going and hopes to certify four more buildings next year.

Water management: planning = saving

WATER COOL CONDENSER REPLACEMENT PAYS OFF

BPA replaced the single pass water cool condenser for the B1 refrigerator in the headquarters building. To date, this one effort has already saved more than 620,000 gallons of water.

BPA PLANS FOR XERISCAPING

BPA identified several substations that will serve as xeriscaping pilot projects next year. The pilots were chosen because of water use, potential for water savings and sites that can be viewed by the public.

KEEPING IT GREEN

What is xeriscaping?

Xeriscaping is landscaping that reduces or eliminates water use. Plants whose natural requirements are appropriate to the local climate are used, but with an emphasis to avoid water loss caused by evaporation and run-off.

Fossil fuel reduction: opportunities and recognition

STRATEGIES TO REDUCE FOSSIL FUEL

Due to the nature of BPA's mission, overall reduction of fossil fuels continues to be a challenge. However, since 2008 BPA has made significant reductions in fossil fuel use by increasing the use of alternative fuels such as biodiesel and ethanol.

The Fossil Fuel Reduction Team recently completed an extensive strategic report identifying and recommending ways in which BPA's over-the-road motor fleet can be more fuel efficient. One of these strategies is the implementation of a standard operating procedure for idle reduction. Educating drivers is still a key component. A report of missed opportunities (where drivers had the opportunity to fuel with E-85 but filled up with regular gas) is reviewed quarterly.

KEEPING IT GREEN

Two new electric vehicles available

The headquarters motor pool turned in two vans in exchange for electric cars, bringing the number of plug-in hybrid electric cars available in the motor pool to three. More than 75 percent of the trips made are between Portland and Vancouver. These cars reduce carbon emissions, fuel consumption and vehicle lease costs. Plus, people like to drive them.



BPA WINS NATIONAL TRANSPORTATION AWARD

The Federal Green Challenge is a national effort under the Environmental Protection Agency's Sustainable Materials Management Program which challenges federal agencies throughout the country to lead by example in reducing environmental impact.

Among participants in the Federal Green Challenge, BPA received the Transportation Award for the highest reduction in transportation activities across the nation. The recognition was due to efforts which included a focus on and accountability for all electric/alternative fuel vehicles, reductions in gasoline and diesel consumption,



significant reduction in commercial airline miles (50 percent), rental car miles (60 percent) and an awareness campaign highlighting commuting alternatives and telework options.

Materials and services: small steps and major logistics

“PLEASE SQUEEZE THE CHARMIN” PILOT

After a successful pilot, the headquarters building implemented new toilet paper and holders. The new products use much larger paper rolls; greatly reducing the waste of cardboard core associated with traditional toilet paper. The larger rolls also require less custodial attention to refill holders.

TAKING ON “THE BIG ONE” – ROSS STRATEGIC FRAMEWORK PLAN

The Ross Complex is the largest BPA owned property and the primary logistics center for transmission operations. Originating in 1939, the complex began as a substation and a warehouse. Facilities developed organically to meet evolving mission needs, currently there are more than 80 facilities on the complex.

BPA developed a strategic framework plan for the next 20 years to guide the prioritized replacement and modification of aging facilities, support infrastructure and to address complex-wide space constraints. A key component of the plan includes evaluating resource efficiency and protection of natural resources for all development projects and comprehensive design standards and guidelines. The plan also strives to improve multi-modal transit connectivity between BPA facilities and the community.

KEEPING IT GREEN

Environmental Management System (EMS)

BPA uses the EMS to meet its environmental responsibilities, including the sustainability requirements of Executive Orders (E.O.) 13423 and 13514. The EMS is implemented through an agency-wide Balanced Scorecard Management System to guide BPA's activities and ensure implementation of environmental/sustainability requirements and encourage a process of continuous improvement.

The EMS uses an ISO 14001 checklist to help BPA improve resource efficiency, reduce waste and drive down costs.

Employee engagement: teamwork, speakers and programs

DOE RECOGNIZED BPA FOR 2013 SUSTAINABILITY EMPLOYEE ENGAGEMENT

The year was off to a great start for sustainability. In December, BPA received the 2013 DOE Sustainability Award for SUSTAINable communications. This award recognized BPA's Employee Engagement Team for development and implementation of employee education programs.



2013 DOE Recognition for Employee Engagement

SECOND ANNUAL “TRICK OR trEEt” EVENT PROVES ENERGY EFFICIENCY DOESN’T NEED TO BE FRIGHTENING

Representatives from Energy Efficiency demonstrated ways to conserve energy and save money on utility bills. Employees learned how an incandescent lamp compares to a CFL or an LED. Lighting

engineers answered questions about matching lamps to application and how to read the new Federal Trade Commission’s Lighting Facts labels.

Representatives presented “The Light is Right” game (based on “The Price is Right” game show) at the all-managers meeting. Managers guessed what type of lamp was being shown in a small light booth. The booth demonstrated how light affects the appearance of what is being presented: such as reading or detailed handiwork (fly tying). Participants then guessed the price and lifetime of the lamp.

KEEPING IT GREEN

“Sustain Your Love” event promotes use of recycled materials

On February 13, approximately 30 employees showed off their creative sides by making their own Valentine’s Day cards using materials found in the print shop recycling bins.



EVENTS AND SPEAKERS

David Allaway from the Oregon Department of Environmental Quality presented “Materials, Wastes, Energy and the Environment” — an informative discussion of effective waste management strategies that also dispelled some common myths. Employees learned that recycling is not enough; the real opportunities for reducing environmental impacts need to be made “upstream” (prior to the consumer).

Denver Igarta, transportation planner for the City of Portland, walked employees through the historical development of transportation alternatives that contributed to Portland’s reputation as one of the most bike friendly cities in the United States.

KEEPING IT GREEN

Portland voted bike friendly

Portland was rated #2 on the list of America's Best Bike Cities. Minneapolis was rated #1.



EMPLOYEES TAKE ADVANTAGE OF E-CYCLE OPPORTUNITIES

The annual e-cycle event was held on Earth Day, April 22. Employees were able to recycle old or unwanted personal electronics — pretty much anything with a plug was accepted.

At the Ross Complex, a total of 5,154 pounds of electronics were collected. At headquarters, 5,033 pounds of materials were collected.



Earth Day events

SUSTAINABILITY FAIR

At the Sustainability Fair, employees were invited to “kick the can” — turn in their work station garbage cans and commit to using the centralized landfill, compost and recycle bins. Desk-side recycle bins in lieu of garbage cans were provided and team members explained potential ways of using the bins. More than 250 employees participate in this program.



A City of Portland Master Recycler, Elizabeth Erickson, returned to the Sustainability Fair for the second year and helped employees identify the right places to recycle left-over paint, old furniture and other common items.

Other Sustainability Fair topics included information about food waste and results of the headquarters waste audit.

KEEPING IT GREEN

Kermit and Miss Piggy make an appearance at recognition celebration

The Customer Support Services organization embraced sustainability as the theme for their recognition event, complete with an appearance by the famous couple singing “It’s not easy being green.”

The event featured re-usable materials and each group reported on efforts that supported sustainability.





BPA employees turned out on Earth Day for a river bank cleanup at Beaver Creek.

NATURE STEWARDS INVADE BEAVER CREEK

On Earth Day, more than 30 BPA employees cleaned up river banks at Beaver Creek. They pulled up invasive species — from English ivy to garlic mustard to Himalayan blackberry — so that Oregon natives such as willow, dogwood and snowberry can thrive.

This work improves Beaver Creek's ecology; especially its habitat for migrating fish such as steelhead, coho and chinook salmon.

DISCUSSION COURSES TEACH EMPLOYEES HOW TO TAKE ACTION

The Sustainability Team piloted the Northwest Earth Institute's self-led and facilitated training. The training breaks up big issues into bite-sized pieces and helps create a personal network of shared stories and support that make it easy to take action. The objective is to give people a framework to talk about our relationship with the planet and to share in discovering new ways to live, work, create and consume.

The BPA Library purchased these materials and has made them available for all interested employees.

TELEWORKING CONTINUES TO GAIN POPULARITY

In the third quarter of 2014, BPA had more than 200 instances of teleworking over the same time period the previous year. BPA put clarifying expectations in place around teleworking; these expectations reinforce the program's viability.

AUGUST TRANSPORTATION EVENTS DRAW CROWDS

During August, BPA held the annual Transportation Fairs at headquarters and the Ross Complex. Each fair featured more than 20 exhibits and provided employees with information about sustainable commuting alternatives. The fairs continue to be very popular with more than 700 federal and contract employees attending.



2014 Transportation Fair, Ross Complex

In conjunction with the Transportation Fairs, BPA also offered new and renewed annual passes for mass transit systems in Portland and Vancouver. This year the process was on line and fully automated — saving paper, money and staff time. More than 650 employees took advantage of this benefit.

Partnerships: new and old

SUSTAINABILITY COALITION LAUNCHES TO BOOST FEDERAL EFFICIENCY

This year the Oregon Federal Executive Board launched the Sustainability Coalition. The team is comprised of representatives from the federal community in the Portland/Vancouver area. BPA and GSA co-host the group which is focused on the identification and sharing of lessons learned in integrating sustainability into the work place. These efforts will make implementation of Executive Order 13514 and other guiding documents more efficient.

BPA JOINS THE PUBLIC SECTOR SUSTAINABILITY COORDINATORS NETWORK

BPA joined this network, along with several other public sector organizations such as the Port of Portland, Washington County, Portland Water Bureau, Multnomah County, Clackamas County and Portland Public Schools. The forum seeks to advance sustainability in the public sector. BPA hosted the spring 2014 session.

ELECTRIC POWER RESEARCH INSTITUTE CONFERENCE

The Electric Power Research Institute's sustainability interest group held its spring conference in Portland. During the two-day workshop, teams built upon the materiality assessments done the previous year and focused on the relevant sustainability metrics for the electric utility industry. The group shared how different organizations across the sector adhere to voluntary reporting standards.



Public Sector Sustainability Coordinators Network

FOR MORE INFORMATION:

Internal audiences

Visit [BPA Connection/Agency/Sustainability](#).

External audiences

Visit www.bpa.gov and type sustainability into the search function or call Rodrigo George at 503-230-3260.

Who we are

The Bonneville Power Administration (BPA) is a federal nonprofit agency based in the Pacific Northwest. BPA markets wholesale electrical power from 31 federal hydro projects in the Pacific Northwest, one nonfederal nuclear plant and several other small nonfederal power plants. About one-third of the electric power used in the Northwest comes from BPA; the agency also operates and maintains about three-fourths of the high-voltage transmission in Idaho, Oregon, Washington, western Montana and small parts of eastern Montana, California, Nevada, Utah and Wyoming.

BPA promotes energy efficiency, renewable resources and new technologies. The agency funds regional efforts to protect and rebuild fish and wildlife populations affected by hydroelectric power development in the Columbia River Basin.



Sustainability Team members

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DOE/BP-4652 • February 2015