

Sustainability at BPA 2012



Sustainability at BPA is getting better all the time. The BPA Sustainability Team and the Sustainability Employee Education and Engagement Steering Committee have produced terrific results over the past eighteen months. Here at BPA sustainability is an effort of continuous improvement, a model of operational excellence and a huge team effort.

This second Sustainability Report provides results of our sustainability efforts and we want to thank the Sustainability Team members who have worked across the agency business lines to find sustainable opportunities that make good business sense, improve our operations and help the agency keep rates low for our customers.

Each year we set new sustainability targets for the year. The bottom line for setting those targets is to make good business decisions that meet the agency mission.

The cross agency team continues to identify opportunities where we can make improvements to help us reduce our greenhouse gas emissions, save money, protect the environment, demonstrate leadership and encourage employee innovation.

For this second report our major targets included:

- Energy reduction;
- Water reduction;
- Fuel efficiency;
- Electronic stewardship;
- Sustainable acquisition;
- GHG emission reporting;
- Scope 3 greenhouse gas education and communication strategy; and
- A print reduction strategy.

In this report we outline our sustainability efforts over the past year, and introduce you to some sustainability tips for you to use at work or at home.

We are proud of the Sustainability Team accomplishments. We believe that by adopting sustainability standards we will conserve resources, meet our overall mission, vision and values and position BPA to be an employer of choice as we recruit for new employees. Sustainability helps us fire on all cylinders.

Larry Buttress
Elliot Mainzer

Greg Delwiche
Karen Meadows

Reducing greenhouse gas emissions

BPA's Sustainability Action Plan is grounded in our commitment to environmental stewardship and Executive Order 13514 that calls on the federal agencies to "lead by example" by setting a 2020 greenhouse gas emissions target, increasing energy efficiency; reducing fleet petroleum consumption; conserving water; reducing waste; supporting sustainable communities; and leveraging federal purchasing power to promoting environmentally responsible products and technologies.

Setting greenhouse gas baselines

BPA is a founding member of the Climate Registry. It is a non-profit that serves as a centralized greenhouse gas registry. Data is verified by accredited third-party auditors.

Greenhouse gas emissions are evaluated in three ways based on the Climate Registry's system.

- The first is our direct emissions created from fuel combustion equipment like vehicles, aircraft and leaks. This is considered Scope 1.
- The second is our indirect emissions created from purchased electricity or fuel combustion from other types of equipment. This is considered Scope 2.
- The third is other indirect emissions that are created from indirect actions like employee commuting and business travel. This is Scope 3

What's Scope 3 all about?

The Scope 3 education and communication strategy focuses on building employee awareness that some actions they take as individuals can actually impact BPA's greenhouse gas emissions. Activities like printing, water use and employee commuting all can add or subtract from BPA's overall greenhouse gas emissions. The communication strategy included an executive challenge, promotional campaign and printer reduction

program.

Work solutions

BPA launched a project to look at the workplace of the future. The goal was to develop a vision and an integrated strategy work plan for managing individual and collaborative workspace, establishing workplace flexibility and using improved technologies. Sustainability plays an important role in the workplace of the future effort.

As BPA develops plans to reduce greenhouse gases, one item in the Scope 3 communications strategy is to address employee commuting and how the commuting adds to BPA's overall greenhouse gas emissions. As the agency moves to a workplace of the future a key strategy may include increased telecommuting, that would reduce the employee commuting and in turn may reduce the agency's greenhouse gas emissions.

ETO project

In October 2011 BPA joined a pilot program offered by the Energy Trust of Oregon. Throughout the past year, a team of Energy Efficiency and Workplace Services staff have identified and implemented low cost operations and maintenance projects to save energy. Projects included optimizing the heating and cooling system at the headquarters building by reducing system operations when the building is unoccupied, eliminating the cozy toes in work stations, and calibrating thermostats and air flow controls.

The pilot project started with the headquarters building but the project goal is to include BPA field sites to realize energy savings across the agency. The effort is predicted to save over 750,000 kwh per year at headquarters. That is a reduction of more than 6 percent compared to current usage. It means the agency will purchase \$42,000 less energy per year than we otherwise would have. In addition, the Energy Trust will be giving BPA an incentive check as part of the pilot that is estimated to be about \$15,000.

BPA's Sustainability Scorecard

Category	Units	FY 2003	FY 2008	FY 2009	FY 2010	FY 2011	% Change from Baseline
SCOPE 1 – FUGITIVE EMISSIONS							
SF6	lbs				6,473	4,302	33.54% decrease
SCOPE 1 – PETROLEUM FUEL USE							
Aviation Fuel Consumption	gallons				124,902	161,570	29.36% increase
Gasoline Consumption	gallons			749,206	815,318	767,974	2.51% increase
Diesel Consumption	gallons			264,754	306,646	382,734	44.56% increase
SCOPE 1 – ALTERNATIVE FUEL USE							
E85 Consumption	gallons			33,292	28,571	25,588	23.14% decrease
BD20 Consumption	gallons			27,893	25,253	48,777	74.87% increase
Propane Consumption	gallons			680	875	757	11.32% increase
SCOPE 1 – HEATING							
Natural Gas Consumption	therms				138,999	153,350	10.32% increase
SCOPE 2 – ELECTRICITY							
Electricity Consumption	kWh	114,348,710			109,390,554	111,998,723	2.06% decrease
SCOPE 3 – WASTE							
Waste to Landfill	tons				983	940	4.39% decrease
Waste Diverted	tons				975	1,225	25.70% increase
SCOPE 3 – WATER							
Water	gallons		38,611,901	38,081,833	37,368,833	34,120,473	11.63% decrease
SCOPE 3 – PAPER CONSUMPTION							
Paper Consumption (total)	reams		45,597	46,373	41,875	39,545	13.27% decrease
SCOPE 3 – BUSINESS RELATED TRAVEL							
Employee Commuting – Driving	miles			27,784,673		28,279,247	1.78% increase
Employee Commuting – Alternative	miles			4,080,932		5,071,465	24.27% increase
Business Air Travel	miles			6,826,926		5,783,350	15.29% decrease
Business Car Rental	miles			618,660		651,210	5.26% increase

Small Steps, Big Difference – In all corners of BPA

Climate change in your backyard

Employees had an opportunity to hear how climate change is (and will continue) to make a difference in the Northwest. Sustainability Co-Chair Jason Eisdorfer presented a Keeping Current presentation in June 2011 that focused on reduced snowpack and the big impact that could have on the Columbia River and how BPA manages it. A great quote from Eisdorfer during the presentation was, “In the next 10 years your backyard would need to move North to stay in the same place.”

Green roofs open and thrive at HQ

The green roofs on the terraces at the headquarters building opened in July 2011 and were thriving in July 2012. GSA Regional Administrator George Northrup joined Kim Leathley and the entire Sustainability Team for a grand opening that focused on BPA’s partnership with GSA. Green roofs have many benefits. They can:

- Outlast conventional roofs by up to 20 years;
- Provide insulation and reduce heating and cooling costs;
- Capture and evaporate an average of 60 percent of the rain that falls on them;
- Reduce storm water drainage and associated fees; and
- Provide vegetation and wildlife habitat.

Sustainability Tip

Native plant landscapes need less water saving money and resources. By using natives you could also spend less time mowing, raking and watering.



Kim Leathley and George Northcroft, GSA Region 10 Administrator, cut ribbon for green roof opening.

HCM goes green

With a click of the keyboard employees can now access their electronic personnel files. In July 2011 Human Capital Management sent all paper personnel folders on a recycling trip. More than 500,000 pages of paper files were copied to an electronic format and now employees just need to log in from their desktop to view their personnel file. This also freed up office space in HCM.



Administrator Steve Wright accesses his new electronic personnel file.

Transmission charrette

Facility experts, transmission and energy efficiency engineers and came together for a transmission facility design charrette. The goals of the charrette were to define the gap between where BPA is today on control house design and where we need to be regarding increased efficiency, reliability, and minimizing resources to be more sustainable.

This collaborative session looked at how we can design BPA facilities in a more sustainable way. The charrette looked at what it takes to design a building to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standard.

LEED is commonly referred to as green building. This means a structure has been built using a process that is environmentally responsible and resource-efficient throughout a building's life cycle: from siting to design, construction, operation, maintenance, renovation, and demolition.

Sustainability Tip

Wondering how to make your home "green"? Check out www.regreenprogram.org/ for tools you need to make your next home renovation project green, from installing a new dishwasher to remodeling your master bathroom to refurbishing an entire home interior or embarking on a whole house deep energy retrofit, REGREEN can give you the guidance you need to implement green practices.

Bell HMEM receives a facelift

In FY 2011 the Bell Heavy Mobile Equipment Maintenance Facility in Spokane, Wash., was remodeled to improve building efficiency and the workflow that takes place in the building. The facility had space, heating and light limitations. The facelift included a redesign that improved energy efficiency by 30 percent

through the installation of radiant floor heating, new light fixtures on dimmers that would adjust to natural day lighting, exterior windows installed along west and south facades to allow for maximum natural light, low flow water fixtures and use of recycled content for finish materials.



Removing the grass to go green

A landscape overhaul in the name of sustainability is saving BPA and its customers thousands of dollars a year and sharply reducing water use at the Toledo Substation, just east of Newport, Ore. The station was surrounded by a manicured lawn that inevitably turned brown and dry in summer. When the irrigation system needed repairs the maintenance team went with a more sustainable approach. They replaced the often unsightly lawn with crushed rock to cut water use and saved on mowing costs.



Greening the Supply Chain

The agency Supply Chain group began a process to advance sustainable purchasing in 2012. Who and what we buy can have a tremendous impact on what the marketplace sells. The Federal government has a goal to ensure that 95 percent of new contract actions promote products and services that are energy and water efficient, biobased, non-ozone depleting, contain recycled content, and are non-toxic or less-toxic than alternatives where such products and services can meet our agency performance requirements.

We have 23 product categories to look at but began this process looking at one of our largest purchasing categories – construction materials. Supply chain is setting standards and will add purchasing categories at the evaluation process continues.

IT advances energy saving mode and wins platinum

Forget going for the gold. BPA achieved platinum for its sustainability efforts in the Environmental Protection Agency's Federal Electronics Challenge. It represents significant work and creativity in finding ways to make sure that BPA manages its electronics in a sustainable, cost effective and responsible way.

A move to set computer defaults for a power management setting can result in big savings. During the day all BPA computers (with some exceptions for security and critical systems) now go into a standby mode when not in use. This will occur at night too but employees are still encouraged to turn off for nights and weekends for additional savings.



It's more than a plain old power strip

They may look like power strips but don't be fooled. Its much more. Smart strips were installed at some Ross Center locations in FY 2012. Employees plug all their gear into a smart strip and when you turn off your computer the smart strip turns everything off.



BPA car talk

BPA is looking at fleet operations across the agency to find efficiencies. The agency is looking at getting rid of old cars and purchasing energy efficient vehicles – this includes everything from lift trucks to standard passenger vehicles. A highlight this year is BPA was able to acquire a hybrid electric vehicle – a Chevy Volt. The Volt is located in the motor pool at the headquarters building. Take it for a test drive.



Fleet maintenance cleans up

BPA's Fleet has 16 maintenance facilities across four states, each produces chemical waste that must be tested and disposed of properly for environmental protection. The disposal rules are strict and the actual

disposal is costly. Fleet Maintenance Management has acquired new bio-remediation parts cleaners that are safe, environmentally friendly and will save the agency \$34,000 per year.

What's going on in the neighborhood?

BPA is a board member, participant and contributor of the Lloyd EcoDistrict. EcoDistricts have been set up in the City of Portland as a way to have local business districts help the City accelerate sustainable neighborhood development. The EcoDistrict has five showcase projects:

- District-wide green streets strategy;
- Food waste compost program — BPA is already fully on board with this initiative;
- Existing building retrofit — BPA can offer assistance to others in district due to our building improvements and green roof success;
- Improve district mode split — effort will increase use of alternative transportation methods (many of our employees are on board with alternative transportation); and
- Sustainable district brand — promotion of programs and projects.

Walking the talk: Employees take action

Home Efficiency 101

The Sustainability Employee Education and Engagement Steering Committee hosted Home Efficiency 101 workshops offered by Energy Trust in October 2011. The workshops focused on how to leverage energy savings and long-term benefits from a few simple “do it yourself” changes and improvements at home.

Participants also received a complimentary energy saver kit, which included compact fluorescent light bulbs, a high-performance showerhead, faucet aerators and energy-saving tips.

Kill-A-Watt program

The BPA Library offered a Kill-A-Watt device for checkout to BPA employees. The device makes it possible for employees to test their home energy use. The Kill-A-Watt device plugs into a wall socket and then the electronic equipment (television, computer, etc.) you wish to measure gets plugged into the Kill-A-Watt. It will display digitally the energy consumption of the electronic equipment or appliance you plugged in.



The device makes it possible to calculate the electrical expenses by the day, week, month, or for an entire year.

Transportation Fair and September Bike Challenge

Opportunities to learn about biking happen throughout the year but during the annual Transportation Fair employees get a chance to hear about biking as well as walking, vanpooling, carpooling and Zip Car and car2go rental options. Each August the BPA Transportation Team tries to make it easier for people to get out of their cars and reduce BPA's Scope 3 GHG.



Cozy Toes discontinued

In an effort to reduce energy consumption, Facilities Operations contracted a study of the headquarters building heating ventilation and air conditioning system (HVAC). The results found that individual space heaters, often stored under desks, were having a counterproductive effect on the HVAC system.

The personal “Cozy Toes” heating devices were counterproductive. They would warm work areas and the heat eventually reached the ceiling. When the thermostats, located along the ceilings, sensed the climb in temperature, the thermostat signals the air conditioning system and cools the entire HVAC zone. People then felt cold and would turn on their space heaters. This continuous cycle caused heating and cooling that was unnecessary.

Three hundred space heaters are spread across the headquarters building were removed in 2011 saving energy and driving down BPA’s annual heating and cooling bill by an estimated \$22,000.

CFC Gift Basket

Sustainability Team members helped out the Charitable Federal Campaign by creating a gift basket filled with sustainable, eco-friendly products for the 2011 CFC Gift Basket auction.



Earth Day 2012

In April events were held to celebrate Earth Day and to encourage employees to take actions that demonstrated their appreciation for the planet. Films, an E-waste recycling event, bike commute workshop, and a session with the Stand-Up economist were scheduled to increase sustainability both on the job and at home. Highlights included:

- Keeping Current session about BPA’s Sustainability Program;
- Computer recycling opportunity at Alvey Substation and Headquarters;
- Double feature films that focused on the damage in Third World countries caused by the improper disposal of electronic equipment;
- Talking trash with representatives from Waste Connections at Ross Complex;
- Bicycle brown bag;
- Chance to see BPA’s latest electric hybrid fleet vehicle; and
- Another opportunity to take the Small Steps, Big Difference pledge.



Print reduction campaign

In an effort to encourage employees to reduce their Scope 3 greenhouse gas emissions the agency focused on reducing energy, paper and toner by launching a print reduction campaign. Each BPA employee uses about 11 reams of paper annually. The Sustainability Team and the Sustainability Employee Education and Engagement Steering Committee sponsored the print reduction campaign with a three-pronged approach.

1. Overall awareness and education plan – Hints to Reduce Prints
2. Information Technology initiatives – Operation Paper Cut
3. Print Shop services — paper saving alternatives to hard copy products, and reuse of backstock paper.

Employees are taking small print reduction steps today which add up to a big difference tomorrow. Collectively, all the print reduction efforts made in FY 2012 have added up a savings of more than \$395,000.

New resources up the ante

The BPA sustainability effort is taking a giant step ahead. New resources — some very talented individuals — are giving the sustainability effort a new push. The individuals, hired to assist in facilities and operational excellence, actually bring a tremendous amount of sustainability knowledge to the BPA. They also bring a lot of enthusiasm for moving the Sustainability Program forward.

Caitlin Hirneisen, a Portland State University graduate, came to BPA as an intern through the Student Temporary Employment Program. Hired into the Operational Excellence Team she is managing the greenhouse gas monitoring and calculation program and is a whiz at tracking the agency's waste and emissions.

Rodrigo George, is working on an International Management master's degree from Portland State University, specializing in Sustainability. He has joined BPA to develop and implement an evaluation process, performance metrics, and reporting requirements to measure the implementation and effectiveness of BPA's Sustainability Program.

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.

BPA headquarters now “gold certified” for sustainability

On Dec. 5, the Portland Bureau of Planning and Sustainability recognized BPA's sustainability efforts at its Portland headquarters with their Sustainability at Work's gold certification. The achievement makes BPA the first federal agency to be certified by Sustainability at Work at any level.

The Portland Bureau of Planning and Sustainability awards its Sustainability at Work certifications to Portland organizations that create a more sustainable workplace. BPA earned gold certification by completing 60 out of a possible 74 actions related to initiatives such as education, transportation, materials and waste and energy and water use. The actions were verified during an onsite visit by a Sustainability at Work advisor.

Thirty-eight Portland organizations have achieved Sustainability at Work's gold certification, including Fluid Market Strategies, Portland Roasting Coffee, Travel Portland and Widmer Brothers Brewing. Silver level organizations include Northwest Energy Efficiency Alliance, Northwest Natural Gas Co. and Portland General Electric. The Sustainability at Work's certification is valid for three years.



Michael Armstrong, Portland Bureau of Planning and Sustainability's research and innovation manager, presents Larry Buttress, acting executive vice president, Internal Business Services, with a plaque commemorating BPA's gold certification



Sustainability Team

Barry R Wooley – Mail Shop & Printing

Becky Duoos-Bourgazas – Transmission Fac.Eng.

Bradley A Wright – Facilities Asset Mgm

Caitlin Hirneisen – Strategy Integration

Courtney Olive – Office of General Counsel

Dan Krauss – Workplace Services/Facilities Operations

Darby Collins – Energy Efficiency/Sustainability Team

Advisory Member

Dave Koski – Dalles District

Gloria Atchison – Transmission Field Services

Guy Kyle – Operations and Planning

Irene Frost – IT/Infrastructure & Client Services

Jennifer Riehl – Workplace Services/Facilities Asset Mgt

Joan Saroka – Public Affairs/Community Engagement

Kathryn C Rehmer – Analysis and Requirements

Loyd Towe – IT/Infrastructure & Client Services

Marty Gault – Sourcing Services

Matthew Schroettig – Purchasing/Property Governance

Matt Tidwell – Strategy Integration/ Team Chair

Michelle O'Malley – EF&W/Enviro Planning & Analysis

Pilar Rowe – Finance

Rick Hodges – Energy Efficiency

Rodrigo George – Operations and Planning /Team Chair

Ruth Chen – Space Management

Ryan Fedie – Energy Efficiency/Engineering Services

Sandra Ackley – EF&W/Environmental Planning & Analysis

Sarah Branum – EF&W/ Washington Implementation

Sean Joyce – Supply Chain/Asset Utilization

Shannon Greene – Power Services

Staci Pfau – Facilities Engineering

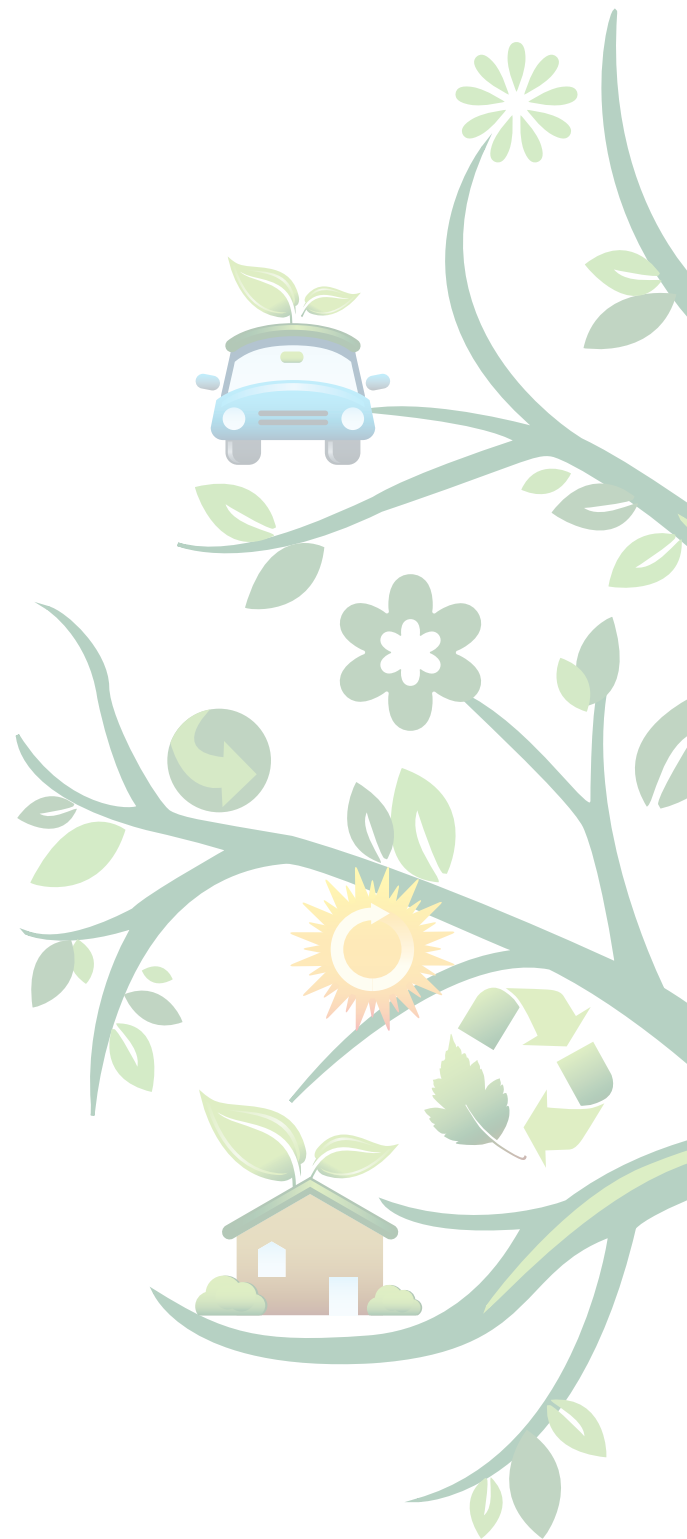
Steve Sander – EF&W/Pollution Prevention & Abatement

Steven Weiss – Public Affairs/Regional Relations

Summer Goodwin – Energy Efficiency/Employee
Engagement chair

Thane J Miller – Facilities Engineering

Tim Roby – Operations & Planning



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Bonneville Power Administration

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