



Sustainability **at BPA**

May 2011



To our employees, customers, partners and stakeholders

Sustainability is a team effort at the Bonneville Power Administration. When we launched this initiative, we quickly realized that it offered us the chance to do our business in a unique way that was good for the agency, the environment, the people who work here and the ratepayers of the Northwest. In these tough economic times, it is even more important now to focus on those opportunities that make good business sense, improve our operations and help keep rates low. Sustainability is good business.

[THINKING, WORKING, AND LIVING GREEN VIDEO]

We launched the Sustainability Team in 2009 and charged the team members with taking on the President's Executive Order to find those opportunities that made sense for BPA. For us, it isn't about compliance. It is about doing what's right for the agency. And, the team has really delivered.

They started off by creating a 27-goal action plan and tackling low-hanging fruit like composting and going paperless with employee pay statements. They moved to tougher assignments like pulling together baseline data on energy, water and waste use from across the entire agency. This was a first for BPA and will give us the data that we need to analyze and find future savings and efficiencies.

The team has been tremendously successful in a very short period of time. Coming from different BPA work groups, they have brought forward ideas, identified improvements and championed process changes both within their own organization and throughout the agency. The benefits are many

“... sustainability gives us a tremendous tool to improve how we do business while supporting our responsibility to protect the world we live in.”



— saving money, meeting regulatory requirements, demonstrating environmental leadership, and building employee enthusiasm and engagement.

I feel very privileged to be a part of this effort and believe sustainability gives us a tremendous tool to improve how we do business while supporting our responsibility to protect the world we live in.

A handwritten signature in black ink that reads "Kimberly A. Leathley".

Kimberly A. Leathley, Executive Vice President
Internal Business Services

Foundation for Sustainability

BPA's approach to sustainability is built on the agency's foundation of environmental stewardship partnered with its commitment to operational excellence.

Around the world today, sustainable business practices are driving innovation, opening opportunities for resource and cost efficiencies, as well as increasing employee engagement and productivity.

Business jumped on the bandwagon early finding that sustainability can be an important component of their company's competitive advantage. A 2010 survey by the United Nations Global Compact/Accenture of 766 CEOs from around the globe found that, despite the economic downturn, 93 percent of the CEOs surveyed see sustainability as critical to their company's future success.

Calling on the federal government to "lead by example," President Barack Obama issued Executive Order 13514 in October 2009 to green the government by improving "environmental, energy and economic performance."

DOE's Strategic Sustainability Performance Plan

In June 2010, the Department of Energy completed its own Strategic Sustainability Performance Plan, which describes DOE's activities to meet the president's sustainability goals.

DOE is working to achieve its sustainability goals by:

- ▶ Fostering a culture of energy efficiency and sustainability;
- ▶ Improving data quality to inform operations and decision making;
- ▶ Optimizing allocation of resources to achieve Executive Order goals while safeguarding the mission;
- ▶ Applying the best sustainability practices; and
- ▶ Adopting emerging, promising technologies.

Operational excellence at BPA

BPA launched its own sustainability initiative to address these challenges and drive improvements in its operations while bringing value to its employees and the ratepayers of the Northwest.



Did you know?

BPA's first composting effort began in April 2009 at the Seattle Office.

Operational efficiency and sustainability proved the perfect match for BPA. Identifying sustainable management of resources can streamline operations and reduce costs. The sustainability team adopted a business-case approach to introducing sustainability initiatives, focusing on finding ways to streamline operations, reduce waste and increase efficiencies while seeking innovation and creativity.

Meet the Sustainability Team



SUSTAINABILITY TEAM:

Co-chair Jason Eisdorfer (left front), Diane Davie, Ryan Fedie, Loyd Towe, Laura White, Bill Relyea, Steve Sander (in front of Bill), Scott Simms, Becky Duoos-Bourgazas, Dan Krauss, co-chair Darby Collins, Mark Nadeau, Sarah Branum. For a complete list of the team see page 12.

To address the challenges posed by the Executive Order and to help drive sustainability within BPA, the agency formed a cross agency Sustainability Team. Its mission is to support and encourage innovative, cost-effective business practices that reduce BPA's effect on the environment, conserve resources and cut greenhouse gas emissions.

The team is focused on integrating a number of BPA goals under the sustainability umbrella. Goals to improve employee engagement, find cost reductions, exhibit operational excellence, support environmental stewardship and improve data collection support the broader

sustainability effort and the work of all BPA business groups.

The team held its first meeting in December 2009 and by the following March had created a dynamic 27-goal action plan for the agency.

The team consists of representatives from almost every BPA organization. Team members provide leadership and guide strategy on how to reduce BPA's business impact on the environment.

Team members are always looking for new ways to incorporate sustainability into their jobs and into their business unit operations. Many of the sustainability success stories

are due to team members and other dedicated employees going the extra mile to improve operations and make sustainability a standard business practice.



The sustainability seal identifies projects, programs and products that help reduce the agency's carbon footprint.

Sustainability Action Plan

The sustainability action plan has 27 major goals to reduce our carbon footprint by saving energy, conserving water, reducing waste, cutting petroleum use, constructing green buildings and engaging employees to take action. The plan is an ongoing effort to integrate sustainability into internal business practices to save money and protect the environment.

Not all action plan goals are quantitative in nature. A critical step for any goal is to know the baseline and measure the progress. A key part of the action plan called for the Sustainability Team members to work with employees across the agency to establish baselines for numerous metrics such as energy, water and petroleum use.

The plan identified five major target areas:

- ▶ **Energy** — 30 percent reduction by 2015;
- ▶ **Water** — 20 percent reduction by 2020;
- ▶ **Petroleum** — 2 percent reduction per year and increase use of alternative fuel by 10 percent per year;

- ▶ Meet the Federal Electronics Challenge; and
- ▶ Establish BPA's greenhouse gas footprint.

In November 2010 BPA reported its emissions to the Climate Registry. The emissions are generated from energy and fuel use and fugitive emissions, which are created from chemicals used in the transmission equipment.

The Climate Registry is a non-profit organization that serves as the centralized-greenhouse gas registry in North America. They conduct a third-party verification of the emissions and publish the results.

The Climate Registry tracks greenhouse gas emissions in three ways:

- ▶ **Scope 1 — Direct emissions:** emissions created from fuel combustion equipment like vehicles, aircraft and leaks.
- ▶ **Scope 2 — Indirect emissions:** emissions created from purchased electricity or fuel combustion from other types of equipment.
- ▶ **Scope 3 — Other indirect emissions:** emissions created from indirect actions like employee commuting and business travel.



Did you know?

BPA estimates a reduction of nearly 2 million paper towels because of the hand dryers installed at BPA facilities. This means fewer trees cut down for paper towels and less landfill space needed.

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BPA is setting baselines and grading performance in a number of ways. The sustainability scorecard indicates reductions, activities and identifies which scope category emissions belong to.

BPA's Sustainability Scorecard

	Scope	Units	Baseline	FY 2010	Yearly Target	% Change from Baseline
Energy Use	1	kWh	113,402,530 (2003)	107,990,700	3% decrease	4.8% decrease
Natural Gas	1	therms	106,800 (2009)	97,938		8.3% decrease
Steam	1	therms	54,519 (2009)	64,010		17.4% increase
Water	3	cubic feet	4,733,706 (2008)	4,068,551	2% decrease	14.1% decrease
Vehicle Energy Use						
PETROLIUM-BASED FUELS						
Gasoline & Diesel	1	gallons	971,473 (2007)	1,118,743	2% decrease	15.2% increase
ALTERNATIVE FUELS						
Bio-Diesel & E-85	1	gallons	48,722 (2009)	41,374	10% increase	15.1% decrease
Aviation Fuel	1	gallons	182,446 (CY 2009)			
Waste						
Waste Generated	3	tons	Pending* (2011)			
Waste to Landfill		tons	Pending			
Waste Generated		tons	Pending			
<i>*Data collection began September 2010.</i>						
Electronics Recycling						
Agency investment recovery/recycling	3	tons	95.5 (2007)	59.99	N/A	N/A
<i>Recycling has decreased due to prior removal of large equipment and to the life-time extension of new equipment.</i>						
Fugitive Emissions						
Sulfer hexafluoride	1	pounds	5,160 (CY 2009)	7,874		52.6% increase
Paper Use						
20# & 28# weight with 30%/100% recycled content	3	reams	42,966 (2009)	36,360		15.4% decrease
Employee Commuting						
Driving	3	miles	27,784,673 (2,413 employees) (2009)			
Alternative Travel		miles	4,080,932			
Business Travel						
Air Travel		miles	8,550,839			

Small steps produce results

Composting saves money

Thousands visit the Portland office every day making the BPA headquarters office the largest and highest traffic building for potential compost collection. Headquarters and its dining facility, the Marketplace Café, kicked off a joint effort in April 2010 to increase composting and recycling.

To date, the café has doubled the amount of compost it usually collects from its kitchen operation. Dan Krauss, Facilities Operations,



Elliot Mainzer helps a café guest separate materials for composting and recycling.

notes that it costs 55 percent less to dispose of composting than it does trash. For every \$100 spent to dispose of trash, the same amount (weight) of compost would cost \$45 to dispose.

Supply Centers go green

Need a pen and notepad for your next meeting? BPA's administrative service centers are replacing office supplies with earth-friendly alternatives. So far, at least 13 items have been swapped out. Many items use up to 40 percent post-consumer materials and are purchased locally, reducing fuel consumption.

Recycled paper that's homegrown

Most of BPA's copier paper already consists of 40-percent recycled content which meets the requirements of the Executive Order. But, BPA is pushing the envelope — so to speak — purchasing 100 percent recycled paper from Grays Harbor, Wash. Previous paper came from Tennessee so this new stock cuts down on fuel use and travel. BPA has also switched to 100 percent recycled-content binders made in the U.S.



Did you know?

Electric vehicles can cost the same or less than the operation and maintenance costs of traditional fleet vehicles.

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Reducing handouts

Sometimes making a simple change in a routine task can net significant benefits. That's exactly what happened when Tom McDonald from Internal Governance and Control revamped how information is shared at a monthly meeting he leads. Rather than handing out a big stack of documents for the 25-member Internal Controls Oversight Team to review, McDonald is using an overhead projector to display documents posted on a shared site.

Electronic pay statements

On Nov. 18, 2010, the BPA employee Earnings, Leave and Benefits Statements went electronic — saving the agency more than \$1,000 each month in paper and printing costs and removing thousands of non-recyclable envelopes from the garbage.

The LEED standard produces green buildings

BPA used green buildings standards in the design of its new McNary Substation Maintenance Building and remodeled Bell Heavy Mobile Equipment Maintenance Building. At both buildings the improvements will help save energy through the use of radiant floor heating, window placement, roof slope



Did you know?

BPA is now saving about \$13,000 per year by moving to electronic pay statements.



Electronics packaged for recycling at the first e-recycling event in 2010. More than 10 pallets of electronics were recycled.

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and underground exhaust systems. The improvements use natural sunlight and wind conditions at each site to maximize energy savings and support employee workplace health. The buildings would qualify for LEED certification.

IT — taking the electronics challenge

Electronic devices have an environmental impact in all phases of their lifecycle, everything from manufacturing, operations and ultimately disposal. The Federal Electronics Challenge (FEC) is a partnership program that encourages federal facilities and agencies to:

- ▶ Purchase greener electronic products;
- ▶ Reduce impacts of electronic products during use; and

- ▶ Manage obsolete electronics in an environmentally safe way.

In January 2011, BPA's IT group documented all the IT improvements and applied for the FEC award.

Greening the fleet

In line with a fleet optimization plan (to have the right vehicles in the right place at the right time for the right cost), two charging stations have been installed in the headquarters basement near the motor pool office. Each station can fuel two plug-in electric vehicles at one time. The next step in the plan is to lease two plug-ins once they are available. The cars will be used to save fuel on the short hops from Portland to the Ross Complex in Vancouver.



Scott Simms drives a plug-in electric vehicle to test the new charging stations at headquarters.



Laura White uses the Dyson hand dryer to reduce paper towel use.

Air dryers save towels

Dyson hand dryers have been installed in rest rooms at BPA Headquarters to reduce the amount of paper towel use. While the dryers do use energy, the energy use and costs is minimal to what is being saved in disposal costs. It also reduces the amount of paper towels purchased.

Low-flow toilets cut water use

Reducing water use helps save money, energy and the environment. Low-flow toilets and shower heads

are being installed at BPA facilities and more installations are on the way. The first toilet being piloted uses ambient light to power its system. All water related improvements at headquarters are expected to use 45 percent less water.

Compacting waste at Ross

The installation of a waste compactor at the Ross Complex has reduced the garbage volume by 54 yards, saving BPA \$500 each month.

Going digital

Digital monitors at headquarters and Ross will save printing costs. In the past, BPA used posters and flyers to announce events and even the café menus each week. Video monitors



Did you know?

Digital monitors are expected to save \$3,000 each year in paper, ink and printing costs.



A garbage compactor at the Ross Complex reduces garbage volume and saves money.

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have been installed at the café and in conference rooms. The Energy Star LED monitors use minimal electricity and have been programmed to shut off at night and on weekends.

New lights produce big savings

Lighting improvements at substations, maintenance facilities and the Ross Complex are saving money and reducing energy use. A new set of LED lights for BPA headquarters lobby are lighting the way for the future. BPA is integrating all the energy efficiency programs it offers to its customers and seeing how they work at BPA facilities. Energy audits were completed in 2010 on high-energy buildings and that information will be used to drive down energy use.

Recycling to reduce waste

In the past year, recycling efforts at the headquarters building have had the following results:

- ▶ Recycled 177 tons of paper,
- ▶ Recycled nearly one ton of plastic,
- ▶ Recycled almost 22 yards of glass, and
- ▶ Recycled kitchen oil from café was turned into biodiesel.

Creating an EcoDistrict

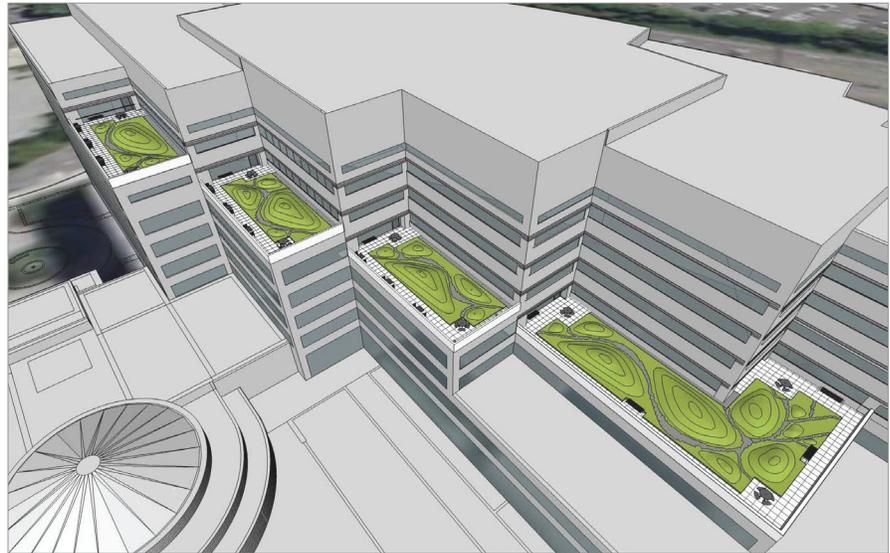
The Lloyd Business District is working to become one of Portland's first EcoDistricts. The EcoDistrict initiative is a comprehensive strategy to accelerate sustainable neighborhood development. BPA is working with the Lloyd Transportation Management Association to figure out how to

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Did you know?

BPA's water and waste reductions in 2010 are the equivalent of not burning 5,523 barrels of oil.



Plans for converting four BPA headquarters terraces to green roofs.

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improve access and mobility for those who work, reside, shop and commute in and to the Lloyd District. BPA's commuting and bike programs at its headquarters office are being coordinated with this initiative. At the Ross Complex, the agency partners with Clark County, the city of Vancouver and C-tran, the local transit company, on a variety of projects from waste reduction to commuting.

Growing a green roof

Working with the General Services Administration, BPA is installing green roofs on four of the headquarters building terraces. The \$4.5 million GSA project is part of the agency's plan to reduce stormwater runoff by 85 percent and energy consumption by 270 million BTUs per year. The

green roofs are living ecosystems that absorb and filter rain water.

The project is funded by GSA and the American Recovery and Reinvestment Act.

Plugging the leaks

Sulfur hexafluoride is an inorganic gas used for electrical insulation in high-voltage power lines. By virtue of its potency (22,800 times more potent than CO₂), SF₆ leaks are the largest source of BPA's greenhouse gas emissions. BPA is already an industry leader in reducing SF₆ leaks. BPA has improved its ability to accurately track SF₆ emissions. This will help Transmission Services continue to reduce its greenhouse gas emissions.

Engagement team promotes employee action

The Sustainability Employee Education and Engagement Steering Committee's theme is small steps, big difference. The theme is intended to inspire employees to take action in their daily lives to support sustainability efforts at BPA.

Employee engagement is a major action item in the overall Sustainability Action Plan. The committee was

created from volunteers representing a wide variety of BPA work groups and field sites. The committee created an education campaign that asked employees to take the small steps, big difference pledge. Within two weeks, more than 10 percent of BPA employees took the pledge

to be more sustainable through individual actions.

The committee's next steps include projects to reduce waste, participate in alternative transportation options and increase use of energy efficiency measures.



Award-winning sustainability

In 2009, BPA was recognized with the Champions of Environmental Leadership and Green Government awards by the Federal Green Challenge in Seattle. The award recognized the agency for its Climate Change Roadmap and for work in reducing energy use 57 percent by updating lighting at the Ross Complex.

BPA followed that in 2010 by winning two environmental leadership awards. One award was for the Energy Smart Federal Partnership program that works with other federal agencies to help them find energy savings. The other award was for BPA's Grand

Coulee Dam lighting retrofit project with the Bureau of Reclamation.

BPA also was a semi-finalist in the 2010 first annual GreenGov Presidential awards. This award celebrates extraordinary achievement in the pursuit of President Obama's Executive Order 13514 on Federal Leadership in Environmental, Energy and Economic Performance.

Internal Business Services Executive Vice President Kim Leathley was recognized under the Sustainability Hero category. The agency also produced a short video that highlighted BPA's sustainability efforts which was chosen to be one of eight

shown at the national conference in Washington, D.C., in October 2010.



Did you know?

For one meeting alone, the agency saved \$200 in paper and production costs. Multiply that by 12 meetings a year and the savings add up to more than \$2,400.

Summary of Progress

This chart summarizes progress against actions outlined in the Sustainability Action Plan.

	NOT STARTED	BEHIND SCHEDULE	ON HOLD	ON PLAN	ACHIEVED
Energy					
Conduct 20 energy audits					
Develop energy efficiency implementation plan					
Coordinate with Technology Innovation					
Develop business case on metering opportunities					
Add energy efficient design to major replacements					
Develop design specs for BPA facilities					
Reduce energy consumption of data center operations					
Investigate personal computer power management					
Investigate Smart Power Strips					
Implement a test project to measure power use					
Purchase renewable power for HQ					
Water					
Investigate water metering systems					
Evaluate landscaping opportunities					
Achieve EPA storm water guidelines for new construction					
Fuel					
Develop strategy to reduce petroleum use					
Explore electric vehicle use					
Explore alternative fuel use					
Replace vehicles with hybrids					
Electronics					
Apply for Federal Electrics Challenge Platinum					
Purchase 95% EPEAT equipment					
Use Energy Star eligible computers					
Achieve average computer life span of 4 years					
Recycle 100% of computers					
Reuse, refurbish, donate used equipment					
Look for additional recyclers					
Create database to track savings					
New Building Construction					
Achieve zero-net buildings for 2020 buildings					
Use Carbon Footprint Building portfolio					
Meet LEED gold standards (buildings over \$1 million)					
Meet Federal Guiding Principles (over 5,000 sq. ft. buildings)					
Historic Buildings					
Review historic buildings with states					
Develop process to protect historic sites					
Purchasing					
Investigate criteria for green purchasing					
Develop training for procurement staff					
GHG Reporting					
Determine baselines					
Report GHG info to The Climate Registry					
Report yearly data to DOE					
Track and report state GHG data					
Hire GHG gas emission verifier					
Recommend processes/tools for reporting					
Develop and track Sustainability XAT					
Track GHG Scope 3 policies					
Develop GHG Scope 3 activities					

NOT STARTED BEHIND SCHEDULE ON HOLD ON PLAN ACHIEVED

	NOT STARTED	BEHIND SCHEDULE	ON HOLD	ON PLAN	ACHIEVED
Recycling					
Hold at least two recycling events					
Quantify recycling amounts					
Recycle spent oil, hydraulic fluid, solvents					
Collect spent toner cartridges/batteries					
Divert 50% non-hazardous waste					
Divert 50% construction debris by 2015					
Use LEED specs for new construction waste					
Recycle demolition debris					
Set up system to track and measure disposal					
Pollution Control					
Report pollution prevention activities					
Implement PCB replacement program					
Complete ADF on reuse of PCB-contaminated oil					
Travel					
Develop strategy on telework					
Encourage LiveMeeting opportunities					
Paper					
Meet 30% post consumer fiber content					
Reduce paper use					
Develop green product offerings					
Employee Education					
Create a committee to focus on employee participation					
Develop employee education and involvement plan					
Hold 2 events to educate employees					
Innovation					
Construct green roof at HQ					
Regional Planning					
Participate in regional planning efforts					
Encourage bike commuting					
Continue transit pass program					
Participate in Lloyd Transit EcoDistrict activities					

Looking Forward

A message from Darby Collins and Jason Eisdorfer, co-chairs of BPA's Sustainability Team

In many ways, 2010 was a foundational year for sustainability at BPA — establishing the Sustainability Team, setting agencywide baselines and multi-year targets. Looking forward, we now have a better sense of the challenges and opportunities that we face. There are exciting new projects in the works to reduce energy, waste and water use in our buildings.

We face some clear challenges as our business grows. For example, as BPA crews work to construct new transmission lines and keep pace with maintenance on our aging system, we will need to find creative solutions to drive down petroleum use.

As interest in BPA's sustainability activities increases in the workplace,

there's no telling what innovative money-saving and Earth-saving ideas will emerge from our dedicated and talented employees.

It will be exciting to see the new ideas that come forward to lessen our effect on the environment and improve how we do business.

BPA Sustainability Team

- Sandra Ackley** – Environmental Protection Specialist, Portland
- Jim Anderson** – Regional Operations and Maintenance Manager, Snohomish
- Sarah Branum** – Fish & Wildlife Project Manager, Portland
- Becky Duoos-Bourgazas** – Supervisory Architect, Vancouver
- Ryan Fedie** – Supervisory Mechanical Engineer, Portland
- Irene Frost** – IT Specialist, Portland
- Shannon Greene** – Customer Account Executive, Seattle
- Caitlin Hirneisen** – Program Analyst, Portland
- Sean Joyce** – Asset Utilization Supervisor, Vancouver
- Dan Krauss** – Supervisory Facility Operations Specialist, Portland
- Mark Nadeau** – Supply Systems Analyst, Portland
- Michelle O'Malley** – Environmental Protection Specialist, Portland
- Courtney Olive** – Attorney-Adviser, Portland
- Kathy Rehmer** – Program Analyst, Portland
- Bill Relyea** – Facilities Sustainability Coordinator, Portland
- Steve Sander** – Environmental Physical Scientist, Portland
- Joan Saroka** – Public Affairs Specialist, Portland
- Janelle Schmidt** – Public Utility Strategist, Portland
- Scott Simms** – Communication Strategist, Portland
- Debi Smiley** – Compliance Specialist, Portland
- Loyd Towe** – Supervisory IT Specialist, Portland
- Michael Ware** – Supervisory General Supply Specialist, Vancouver
- Steven Weiss** – Constituent Account Executive, Portland
- Laura White** – Supervisory Program Analyst, Portland

Co-chairs:

- Darby Collins** – Special Assistant, Internal Business Services, Portland
- Jason Eisdorfer** – Greenhouse Gas Policy Strategist, Portland

Sustainability Employee Education & Engagement Steering Committee

Christy Adams – Public Affairs Specialist, Portland

Patrick Barrett – Supervisory Electronics Engineer, Eugene

Katherine Cameron – Electrical Engineer, Salem

Anthony Goodsell – Electrician, Keizer

Summer Goodwin – Energy Efficiency Marketing Specialist, Portland

Jeff Lane – Operational Excellence Consultant, Portland

Christine Lindner – Technical Training Program Specialist, Vancouver

Andrew Montañó – Environmental Protection Specialist, Portland,

Curt Nichols – Energy Efficiency Public Utilities Specialist, Portland

TJ Rhoads – Facility Operations Specialist, Vancouver

Chris Stoffels – IT Specialist, Vancouver

John Vareldzis – Contract Specialist, Vancouver

Annamarie Weekley – Financial Analyst, Portland

Co-leads:

Shannon Greene – Customer Account Executive, Seattle

Sarah Branum – Fish & Wildlife Project Manager, Portland

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 Darby Collins, 503-230-3811

www.bpa.gov

Bonneville Power Administration

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