

PACIFIC REGION 2011 *INTERIM* SUSTAINABILITY REPORT



10/7/2011

Reducing our Carbon Footprint, Reducing
Pollution and Saving Funds

FWS Photo: The Inland Northwest National Wildlife Refuge Complex HQ, located at the Turnbull National Wildlife Refuge will be awarded the 2011 U.S. Department of the Interior "Environmental Achievement Award." It also received the 2010 Federal Energy and Water Management Award for outstanding sustainable integrated design for energy and water conservation.

Pacific Region 2011 *Interim* Sustainability Report

**REDUCING OUR CARBON FOOTPRINT, REDUCING POLLUTION AND
SAVING FUNDS**

Introduction

The Pacific Region has undertaken many activities during 2011 including a 25% travel reduction, increasing teleworking, numerous energy and water efficiency projects, fleet management improvements, waste reduction efforts, encouraging employees to use mass transit, carpooling or other modes of non-automobile based travel for commuting, and many other measures.

Please note that this report is not conclusive or complete as data are still being collected regarding 2011 energy usage, solid waste, recycling and other measures. Also, our regional fleet management report shows reductions but it appears to contain incomplete data and we are trying to resolve these issues.

This information will be compiled and this report will be updated as reports are obtained. We provide the following highlights at this time.

American Recovery and Reinvestment Act Funded Projects

Many American Recovery and Reinvestment Act (ARRA) funded projects were completed in 2010 and 2011 on FWS-owned properties. Examples of these projects and the broad impacts are summarized here. Additionally, projects that were funded prior to 2010, which have an impact on sustainability measures now and in the future, are also summarized here.

Tier 1 Energy Improvements: Region-wide

FWS has overseen the completion of a series of energy efficiency facility improvement projects using \$4.03 million in the Pacific Region as part of the ARRA. The Recovery Act funding was used at 29 separate facilities for various energy efficiency projects, including, but not limited to (*A spreadsheet report is available*):

- Wall and ceiling insulation
- Window replacement
- Lighting replacements
- Door replacements
- Caulking and weatherizing
- Replacement of old appliances with Energy Star rated appliances
- Programmable thermostat installation
- Light motion detector installation

Following Tier 1 energy audits at its Pacific Region facilities, facility-specific energy improvements were completed in order to bring stations into compliance with the Energy Policy Act of 2005, the Energy Independence and

Security Act of 2007, and Executive Order 13423.

These improvements are designed to reduce overall energy use by 30 percent by 2015 from the 2003 Baseline; reduce hot water demand by replacing 30 percent of hot water production using solar energy; and water reduction of 16% by 2015 from the 2007 Baseline.

Energy Efficiency Project: Eagle Creek NFH

FWS has overseen the completion of facility improvement projects at the Eagle Creek National Fish Hatchery which included \$169,864 for a series of energy improvement upgrades, including the replacement of the Hatchery's Heating, Ventilating, and Air Conditioning (HVAC) system.

Water Recirculation & Pond Rehabilitation Projects: Kooskia NFH

FWS has overseen the completion of two facility improvement projects at the Kooskia National Fish Hatchery using \$1,103,673 in Recovery Act funding:

- 1) **Water Recirculation System:** This project totaling \$671,156 was completed by Burton Construction. Burton rehabilitated the Hatchery's water circulation system by replacing an outdated, inefficient 180-ton chiller used for egg incubation with a modern 20-ton chiller. Burton also replaced a series of aging 25-horsepower pumps with more efficient 10-horsepower pumps that recirculate water through the incubation racks.

Previously, the large chiller system was operated to provide chilled water flow for egg incubation. This caused the large chillers to run inefficiently resulting in higher electricity use and increased mechanical maintenance. The new chiller is sized to the specific incubation needs and runs more efficiently resulting in reduced energy consumption (see results below). The large chiller system is still in operation to provide chilled water to the raceways. This system allows for sufficient usage of the small and large chillers which are needed at different times of the year.

- 2) **Pond Rehabilitation:** LanPacific Inc., used \$432,517 to complete a series of ecological improvements including upgrades to sediment structures to prevent pollution and replacing aging in-channel infrastructure.

Project Results: Electricity usage has dropped from around \$12,000 a month during the spring of 2010 to \$4,000 this year. In addition to the energy savings, the new system also helps us avoid unexpected temperature spikes, improves our alarm response time, and provides a more stable environment for egg incubation.

Turnbull NWR

The Inland Northwest National Wildlife Refuge Complex Headquarters and Visitor Center at Turnbull NWR, completed in December 2009, is a multi-award winning Leadership in Energy and Environmental Design (LEED) certified building featuring energy producing and water saving devices. The facility received the [2010 U.S. Department of Energy's Federal Energy and Water Management Award](#). More recent construction as described below, has earned another award, the [2011 U.S. Department of the Interior's Environmental Achievement Award](#).

Tier 2 Energy Efficiency & Tier 3 Renewable Energy Projects were completed at the Turnbull National Wildlife Refuge using \$582,000 of ARRA funding. Energy renovations of existing buildings were completed in October, 2010 including installation of geothermal with solar-thermal-assist heating, ventilation, and air conditioning system, expansive foam insulation, energy star light fixtures, solar tubes and triple panel windows. At the maintenance shop, the renovation achieved a 32% reduction in energy consumption.

Additionally, a photovoltaic array was completed in January, 2011 with non-ARRA funds and a new 13-person

bunkhouse at Turnbull NWR completed in July 2011 is a Leadership in Energy and Environmental Design certified equivalent building featuring geothermal heating, ventilation, and air conditioning system, solar-thermal domestic hot water, triple-pane low e windows, and expansive foam insulation throughout. The new bunkhouse replaces an energy-inefficient 7,000 square foot 1890s vintage building.

A new 12.2 KW photovoltaic system was installed at the maintenance shop at Turnbull NWR in January 2011 (image below). The photo also shows the 640 SF flat-plate solar-thermal collector that heats domestic hot water used in the shop and supplements the ground-source heating, ventilation, and air conditioning system. That work was part of an energy renovation completed in the summer of 2010 that also included expansive foam insulation, triple-pane windows, florescent and LED lights, and solar tubes that replace single-skin translucent roof panels. Project Results: The PV system generates about 11,100 kWh annually. In the first year of operation, the 2010 energy renovation of the maintenance shop resulted in 34% reduction in energy consumption saving 149,000 kBtus (and \$3,100 annually) which includes the equivalent energy from 8 months of operation of the photovoltaic system. Estimated Annual Greenhouse Gas Emissions Avoided: 52 Metric Tons CO₂. Annual Use of Renewable Energy: 75.2 MWH. Because of the energy contributed by the solar-thermal collector, the heating, ventilation, and air conditioning system heat pumps operate at efficiencies well above the manufacturer's published data, and the late-summer/late-winter brine temperatures from the geofield were measured at 8 to 13 degrees Fahrenheit (22 to 25 percent) warmer than those from an adjacent conventional geofield (serving the Complex office) where the brine temperature ranges seasonally between 36 and 50 degrees Fahrenheit.

Project Results: The bunkhouse investments are paying off: the energy costs are 52% lower than the old Turnbull bunkhouse (\$5.26 per day compared to \$11.06 per day). Additionally, the bunkhouse consumes 38% less energy per square foot of heated space than a comparable bunkhouse constructed in 2004. Both bunkhouses experience similar weather, and have near identical foot prints. The principal differences are type of insulation, windows, HVAC system, fuel type, and use of solar-thermal domestic hot water. This finding also applies to the Inland NW Complex office constructed in 2010 when compared to other offices.

At other buildings, the renovation achieved a 32% reduction in energy consumption. Overall, the projects will reduce the energy needs of the facility resulting in cost savings. The improvements and new systems will also reduce the amount of pollution, allowing the Refuge to more effectively achieve its mission to manage and protect wildlife and habitat for present and future generations.



Turnbull NWR Maintenance Shop Renovation and 12.2 KW Photovoltaic Panels (on the left)



The new Bunkhouse at Turnbull NWR was constructed to LEED standards

Energy Efficiency & Rehabilitation Projects: Midway Atoll NWR

The following projects were completed using \$2 million in ARRA funding at Midway Atoll NWR: Rehabilitate Barracks BOQ Electrical Systems; Tier 1 Energy Efficiency Project; Tier 2 & 3 Energy Efficiency.

- 1) Chugach Industries Inc. used the funds to rehabilitate the deteriorating Charlie barracks at the Refuge, including energy efficient upgrades to the electrical, air conditioning, windows, and other outdated systems.
- 2) In addition, Chugach performed energy efficiency and renewable energy upgrades to Officers homes, and rid refuge buildings of lead paint, asbestos tiles, and other hazards.

Project Results: We now have safe, energy efficient lodging for current staff, contractors, and visitors. Rehabilitation of the Charlie barracks addressed serious safety hazards for visitors, scientists and residents resulting from aging electrical systems and asbestos. The energy efficiency projects will reduce the significant cost of generating electricity at this remote island location as well as lessen use of fuel-burning generators.

Replace Hatchery Building and Pump House Windows: Makah NFH

In September 2011, at Makah NFH, the design-build team of Tetra-Tech and Clements Construction replaced 24 single-pane windows with new windows that are thermal-pane, low thermal emissivity, tinted, and have thermal-break frames. Thirteen of the windows were downsized to save energy, improve safety, and make better use of wall space.

Fish Production Water Wells: Sawtooth NFH

This multi-phase design-build project performed by McMillen LLC at the Sawtooth Fish Hatchery, focused on providing new energy-efficient fish-production well water to replace the declined yields from existing wells. Before and after plant-efficient tests were performed at each well to guide the design and verify the performance of the new construction. Work accomplished, November 2010 includes:

- 1) A new 1,000 gallons per minute well
- 2) A replacement for undersized conductors serving well
- 3) Correction to a low voltage issue at Well 3 by installing a new buck-boost transformer
- 4) Rebuilt well pump Motor 3
- 5) Modernization of the controls at three pump houses to prevent the room heaters and exhaust fans from operating simultaneously.
- 6) Construction is also underway on a new 1,600 gallons per minute well that will be operational in the first quarter of FY2012.

Replace Shop Boiler: Bear Lake NWR & Camas NWR

In September 2011, McMillen LLC and HydroSci completed the replacement of old inefficient non-condensing propane-fired boilers with new high efficiency (up to 96%) 260 MBH condensing-type propane-fired boilers that serve the radiant floor heat systems. *Project Results:* The new boilers are expected to operate about 20% more efficiently than the old boilers. The energy efficiency of a condensing boiler is evidenced by the relatively cool to warm exhaust gas, compared to the noticeably hot exhaust gas from non-condensing boilers.

Headquarters and Visitors Center: New Kealia Pond NWR

This facility is being constructed at Leadership in Energy and Environmental Design (LEED) silver standard (minimum). The project is under construction and occupancy is scheduled for November 2011. See: <http://www.fws.gov/kealiapond/recovery%20act.html>

Energy Efficiency Projects: Warm Springs NFH, Spring Creek NFH & Dworshak NFH

Recovery Act funds allowed the completion of energy efficiency projects at Warm Springs NFH and Spring Creek NFH. Projects replaced electrical switch gear and multiple pumps and motors critical to hatchery operations. Both projects were submitted to the Bonneville Power Administration (BPA) for a utility monetary incentive for energy efficiency. As a result, \$150,000 in incentives were received that helped to fund another energy efficiency project at Dworshak NFH.

- 1) The project at Warm Springs NFH replaced eight pumps and motors and upgraded associated electrical system components. Total project cost was \$1.41M, from that \$477K went towards the energy efficiency portion of the project. The project replaced five rearing pond raw water pumps, added premium efficiency motors and added variable frequency drives (VFDs) (See *images a & b below*). The project also replaced the three 30 horsepower filtered water pumps, added premium efficiency motors and added VFDs. *Project Results:* Projected savings for the project were 543,122 kWh per year. Since January 2011 the station has saved 245,000 kWh.
- 2) The project at Spring Creek NFH replaced 14 pumps and motors and upgraded associated electrical system components. Total project cost was \$1.34M. The energy efficiency portion of the project cost \$591K. The project replaced four spring water pumps, four de-aeration pumps, and six aeration pumps (see *image c*). It also added premium efficiency motors and variable frequency drives (VFDs) (see *image d*). *Project Results:* Projected savings totaled 1,193,670 kWh per year.



a. Variable frequency drives



b. 75 HP motors



c. New aeration pumps & motors



d. Variable frequency drives

Other FWS Facility Reports

Sheldon-Hart Mountain National Wildlife Refuge Complex Headquarters and Visitor's Center wins Department of the Interior Environmental Achievement Award

The new headquarters and visitor's center located on a 78-acre parcel with an energy efficient building (passive solar design, great insulation, solar water heater), a commercial styled building and a large steel barn is the recipient of one of the [2011 Department of the Interior Environmental Achievement Awards](#). The condition of the previous, old facility had deteriorated over time, presenting health and safety issues for refuge staff, including: asbestos, lead paint, radon gas, faulty heating, ventilation, and air conditioning; insect pests; compliance with fire regulations; and inadequate cleaning and repairs. The Refuge Complex office examined renovation of current leased space, co-locating with other federal agencies in another GSA facility, other rental options, and purchasing or building on federal land. The purchase of an existing facility with upgrades added, proved to be the most cost-effective long term way to provide safe and productive office space while protecting and improving the environment. These include:

- Rather than developing a new site that results in habitat loss, existing facilities were reused, and associated lands will receive habitat improvements (e.g., invasive species control);
- The existing facilities on the purchased land were energy efficient and well-engineered, remodeling further improved energy efficiency reducing the carbon footprint for refuge operations;
- The contract process provided local jobs, developed expertise and capacity for green projects, and reflected an effective partnership to complete the project with contractors, staff, and volunteers;
- Cost savings from leased space, utilities, and maintenance will be redirected to habitat management on Sheldon and Hart Mountain Refuges; and
- The new refuge headquarters will provide a new mission capability to welcome and orient the public to recreational opportunities across federal lands in the region, and education/interpretation with

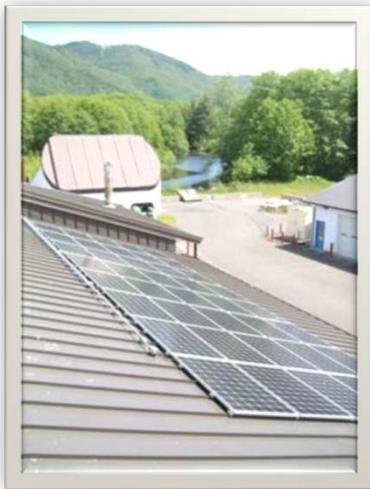
schools, libraries and conservation/sportsmen/community groups. It also educates and demonstrates the energy conservation and generation technology.

The most important aspect of green design for the new headquarters office was finding land and existing buildings that were ideally suited by location, size, and design. The property had a passive solar design (location, size and tint of windows; orientation of building, design of eaves for capture of sun in winter and minimization in summer), high energy conservation (thick wall and ceiling insulation, double-pane gas filled windows, aggregate floor for mass thermal storage, air tight walls/windows/doors), and solar water heater. In addition, remodeling resulted in a number of green enhancements. Lighting was converted to highly efficient fluorescent and LED lights. Electric wall heaters were replaced by a ground-sourced heat pump heating, ventilation and air conditioning system. Specifications have also been developed for implementation in the next year for an 8.4 KW grid-tied photovoltaic array and 2.4 KW grid-tied wind generator, which is expected to result in a zero carbon footprint structure. The open design of the original facility was largely kept by using existing walls and rooms where possible. Existing fixtures were re-used where possible.

New Photovoltaic System at Makah National Fish Hatchery

A new 8.64 KW Photovoltaic system was installed at Makah NFH (see *image below*) in the late summer of 2010, and brought on line in September. While the weather in the far Northwest is often cloudy, the system has been outperforming predicted production by about 17%.

Project Results: The new PV system generated 7068 kWh of power in the first 9 months of operation, as compared to the predicted 6036 kWh for this length of time. The cost savings to the hatchery for the time was \$282.02. The hatchery is happy to have this clean energy source contributing to operations both in cost reductions and reducing habitat and environmental impacts as compared to other methods of power generation.



e. Photovoltaic system at Makah NFH

Ecological Services and Science Applications Carbon Footprint Offsets and Activities

Since FY 2009, Ecological Services field stations and the RO have been calculating their carbon emissions associated with their building energy use, business travel, and employee commutes. Once they've calculated their carbon footprint, they work with The Conservation Fund's Go Zero Program to offset their emissions through tree planting (carbon sequestration) activities on Service Refuge lands. In FY 2009, 2,844 trees were planted to offset 2,843 tons of CO₂ emitted during from FY 2008 business activities; in FY 2010, 2,810 trees were planted to offset 3,358 tons of CO₂ from FY 2009 emissions*; and in FY 2011, 2,461 trees were planted to offset 2,941 tons of CO₂ emissions from FY 2010 emissions. FY 2011 emissions data are not available at this time. (*More stations participated in reporting emissions. This explains the increase from 2008 to 2009.)

The Science Applications Program joined this effort in FY 2011, and they offset 32 tons of their associated CO₂ emissions by having 27 trees planted.

These offices are in leased or federally-owned General Services Administration office space and they pursue opportunities for energy efficiency and other improvements as tenants. Not all requests are immediately accepted and some are not pursued by property owners.

Following are highlights of sustainability activities undertaken in 2011 from Ecological Services offices.

Idaho Fish & Wildlife Office

- a) The IFWO building has received the EnergyStar approval this year.
- b) Employees practice green purchasing through recycled paper, EnergyStar appliances and other recycled items.
- c) Employees cut their electricity consumption in half by removing two fluorescent light bulbs per lighting unit in the office.

Oregon Fish & Wildlife Office

- a) Installed motion sensors in conference rooms, lunch room and restrooms to reduce lighting when not in use.
- b) Employees have removed extra light bulbs from lighting units in individual offices.
- c) Installed low flow toilets and motion detectors on all sink faucets.
- d) Employees practice green purchasing through recycled paper and energy efficient appliances.

Pacific Islands Fish & Wildlife Office

- a) Through renovation of the federal building (ARRA funds), improvements will include energy efficient restrooms and upgraded infrastructure.
- b) Established a new contract with Xerox, which will eliminate 28 printers from their inventory.
- c) Utilize a hybrid vehicle that was purchased in 2009.

Washington Fish & Wildlife Office: The WFWO is a leader in sustainability: the office was recognized in 2008 as governmental leaders in conservation and waste reduction and the office continues to be a leader.

- a) Expanded recycling program by increasing the type of recyclable items collected such as plastic film and compostable items such as paper towels and food soiled paper.
- b) WFWO was the first federal agency to participate in "Food Recycling Plus Program" and was recognized in Thurston County's "Talking Trash" publication.
- c) Employees practice green purchasing through recycled paper, energy efficient appliances and reduction of printers.
- d) GSA lease fleet includes 3 hybrid vehicles and leasing of vehicles is scrutinized to ensure fuel efficiency based on operational needs.
- e) Initiated the purchase of solid ink printers.

Previous award winning facilities: Tualatin River NWR Headquarters and Visitor Center

In November 2007, this project received the Federal Energy Saver Showcase Award from the Department of Energy. In May 2008, the project received the USFWS Environmental Leadership Award for Sustainable Design and Green Buildings. The new facility has outstanding features in all of the Leadership in Energy and Environmental Design (LEED) categories, including: innovation and design process, sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. It achieves notable results benefiting the environment including sustainable design, environmentally preferable materials, recycled content materials, construction waste recycling, and energy and water conservation. An analysis of the facility's features indicates that it would achieve between 33 and 38 points in the LEED rating system, and attain an equivalent rating of "LEED Silver."

Region One Buildings Designed to Maximize Energy Use

Region 1 has 18 buildings designed to be at least 30% below ANSI/ASHRAE/IESNA Standard 90.1--2004 in terms of energy use, and one at 24% below. (Note: Only new buildings which began the design phase after the

beginning of FY 2007 are reported). A list of these buildings is available upon request.

Other Projects

Comprehensive Regional Refuge Energy Plan

The Region has developed a strategic approach that will provide a step-down plan to tailor designs to each refuge to meet their individual energy needs coupled with taking advantage of the local environmental conditions. A dialog has been established between BPA, DOE and USFWS to facilitate the transfer of technological knowledge and enhanced value through direct rebates and energy audits.

Electronics Stewardship Events

The Regional Office's Green Team has sponsored electronics stewardship events the past two years. This year's events resulted in 8.1 tons of electronics being recycled. Awareness begins at the grassroots level and many Green Team members provide a contact point for fellow regional office employees to gain from experience.

Video Conferencing

The Region has greatly increased its use of videoconferencing to help improve communications and reduce the need to travel. We now have 21 video conferencing locations throughout the Region.

Green Purchasing

Training has been provided for all regional purchasers. For example, employees routinely purchase paper with at least 30% postconsumer fiber, utilize biopreferred, EnergyStar, WaterSense, FEMP-designated and EPEAT products, and purchase double-sided printers.

Featured New Product

We are beginning to replace our printers using Xerox's phaser (solid ink) technology. These printers now are less expensive to purchase and operate than black and white lasers while being more environmentally friendly (lower production carbon footprint for the ink, waste reduction, no need to mail recycled cartridges). *For more information, see the following videos:*

http://www.youtube.com/watch?v=CpvmtaHALks&NR=1&safety_mode=true&persist_safety_mode=1

<http://www.youtube.com/watch?v=Ci9CbM2VGBw&NR=1>

Promotion of Electric Vehicles

- 1) Multiple programs contributed funds to enable the purchase of the RO's first all-electric vehicle (EV), a Nissan LEAF, in FY 2011. The purchase of this EV is a big step in meeting our requirements under EO 13514, section 2(a)(iii), which calls for reducing our fleet's consumption of petroleum products 2% annually through the end of FY 2020, and increasing our use of low GHG emitting vehicles. The LEAF was delivered at the end September, 2011.
- 2) In addition, the RO has stepped up to be one of the first Federal participants in the Portland, OR area to participate in ECOtality's EV Project. The EV Project will collect and analyze data to characterize vehicle use in diverse topographic and climatic conditions, evaluate the effectiveness of charge infrastructure, and conduct trials of various revenue systems for commercial and public charge infrastructure. The ultimate goal of The EV Project is to take the lessons learned from the deployment of the first 9,300 EVs, and the charging infrastructure supporting them, to enable the streamlined deployment of the next 5,000,000 EVs.

This is a great opportunity for the Fish and Wildlife Service to show leadership by joining the local community in support of establishing an EV infrastructure, and participating in the associated 2-year research and trend analysis of this initial electric vehicle and charging station deployment. By participating in this study, the RO also received

a Blink Level 2 wall-mounted charger for free which, through excellent coordination and commitment from our landlord (General Services Administration), was installed in a highly visible, dedicated parking spot in our building's garage.

Information Exchange/Building Awareness

The region maintains a Green Manual that can be found at:

<https://intranet.fws.gov/region1/climatechange/mgreeninggovt.html>

Regional Office (GSA-Owned Building)

Earth Hour Practices

Since 2009, it has been GSA's goal and standard operating practice to follow the Earth Hour practices to the greatest extent possible. That is to say, all non-emergency lighting are turned off, building system operation are reduced as much as possible, and all non-critical office equipment is turned-off (to include printers, servers, task lighting, etc.) after business-hours.

Building Operational Tours

Since December 2010, a twice monthly operational tour of the building at 5 AM is undertaken to ensure all non-emergency lighting systems are turned off and the building systems are running on optimal schedules after-hours. Additionally another twice-monthly tour of the building systems occurs during business hours to ensure the building systems are operating efficiently and to look for ways to further reduce building's footprint (increased energy saving and greener operating practices).

Energy Improvements

The ARRA project replacement of the Building Automation System, Boiler, Chillers, hot water distribution pumps, and the air handling dampers has contributed to energy use reductions with further reductions anticipated as equipment testing and commissioning process concludes.

Program Results: These operational changes in addition to overall building system optimization contributed significantly to a reduction in energy use in the 911 Federal Building of over 50% when comparing FY2009 to FY2010, and a further 22% when comparing FY2010 energy use to FY2011 energy use.

Leadership in Energy and Environmental Design (LEED) Existing Building Certification

GSA is currently seeking a LEED EB (Existing Building) certification. After factoring in the ARRA equipment replacements, the ARRA green roof, the FWS Renewable Energy Credits, and the many other sustainable activities and practices we believe that we have enough LEED EB Points to apply for a Platinum LEED EB certification.

Composting

GSA added composting bins on each floor last August 2010 and for the cafeteria earlier.

Water Reduction

The restrooms in the regional office are being refitted with water saving flush handles

Carbon Neutral at the Regional Office

Starting in FY 2009, the Regional Office has been working with our landlord, GSA, and utility companies to offset our share of the energy (electricity and natural gas) use in the 911 Federal Building. As such, we are a Visionary Partner in Pacific Power's Blue Sky Renewable Energy Program, purchasing 100% of our electricity from renewable wind generated energy.

Program Results: Through this program we have offset nearly 740 tons of carbon dioxide (CO₂) emissions (the equivalent of not driving a car over 1,400,000 miles) in FY 2009, 713 tons CO₂ in FY 2010, and 694 tons CO₂ in FY 2011.

We are also a partner in *NW Natural Gas' Smart Energy Program* at the 100% offset level, and purchase 'carbon offsets' to support projects that prevent greenhouse gas emissions. The Climate Trust, a nationally recognized non-profit in Portland, OR, invests these funds in clean energy, with an emphasis on biogas.

Program Results: Through this program, we have offset 228 metric tons of CO₂ emissions in FY 2009, 223 metric tons CO₂ in FY 2010, and 153 metric tons CO₂ in FY 2011. Our initiative has encouraged GSA to follow suit and they too are now participating in the Blue Sky Renewable Energy Program.