

DOE Technical Assistance Program

U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy



The Parker Ranch installation in Hawaii

Panel Session B: Strategic Alliances:
Community Energy Planning and
Partnering with Utilities

Spokane County, WA

EECBG Strategic Alliances



EECBG Programs

- Spokane County Building Retrofits
- LED Signal Light Replacements
- Community-based Residential Audits
- Shared Resource Conservation Manager

Alliances – Building Retrofits/LED Signals

- Avista Utilities
- Benefit: Maximizing Funding Resources; Projecting Energy/Cost Savings

Alliances – RCM Program

- Avista Utilities, Central Valley School District, City of Ritzville, WSU Energy Office
- Benefit: Program Funding/Match, Hiring Committee, Training

Alliances – Community-based Residential Audit Program

- Avista Utilities, Cities of Spokane and Spokane Valley
- Benefits: Experience and Access to Community with Avista, Program Design, Shared Partner between Local Governments,
- What about other utilities?



EECBG & SEP Northwest Regional Peer Exchange Meeting

Strategic Alliances:
Community Energy Planning & Partnering with Utilities

March 7, 2011

Presented by: Jennifer Stapleton, Grant Administrator for Spokane County &

Joe Brabeck, DSM Program Manager, Residential Energy Audits

Setting the stage

Developing an In-Home Audit Program in Spokane County

Creating a market for home energy audits

- a. Few companies were providing comprehensive audits
- b. No standards or consistency in services provided
- c. Limited customer understanding of the audit and its benefits
- d. Few people willing to pay full price for full audits

Finding qualified auditors

- a. Whitman County
- b. Stevens County
- c. Kootenai County (ID)
- d. Spokane County (2)

Challenges of Developing an In-Home Audit Program in Spokane County *(continued)*

- Avista serves electricity and/or natural gas in nine counties in Washington and nine counties in Idaho
- Limited Geographic Area-Spokane County only
- Not all communities in Spokane County received EECEBG grants
- Variety of heating fuels being used
- Five different electric providers in Spokane County (not all with the same EE goals)
 - one investor owned utility-Avista
 - one electric cooperative
 - two water and electric companies
 - one municipal electric department

Result is a variety of price points for the home audits across the County

Inside Spokane city limits, Spokane Valley city limits or in the unincorporated areas of Spokane County
 or in the towns of Rockford, Spangle, Fairfield, Latah and Waverly

Electric Provider	Avista Utilities	Inland Power and Light	Modern Electric	Vera Water and Power	City of Cheney Electric
<i>Primary Heat Source</i>	325				
<i>Natural Gas</i>	99	143	143	143	281
<i>Electricity</i>	99	187	187	187	325
<i>Heating oil</i>	143	187	187	187	325
<i>Propane</i>	143	187	187	187	325
<i>Wood Pellets</i>	143	187	187	187	325
<i>Cord Wood</i>	143	187	187	187	325

How amounts were derived:

\$99 = \$325 audit minus EECBG grant (\$138) plus Avista electric DSM (43.75) **and** gas DSM (43.75) or Avista Electric Heat DSM (43.75)

\$143 = \$325 audit minus EECBG grant (\$138) minus Avista electric DSM (43.75) **or** gas DSM (43.75)

\$187 = \$325 audit minus EECBG grant (\$138) only

\$281= \$325 minus Avista gas DSM (\$44)

Strategic Alliances

- ✓ Government (Funding) Partners
- ✓ Implementation Partners
- ✓ Education Partner
- ✓ Financing Partners

Government (Funding) Partners

- Spokane County-EECBG
- City of Spokane-EECBG
- City of Spokane Valley-EECBG



Implementation Partners

Home Energy Auditor Contractors & more

- ✓ Energy Alliance Solutions
- ✓ Quantum Energy Services
- ✓ Integrity Energy Solutions
- ✓ Residential Energy Consultants Northwest (RECON)

- ✓ Mailstream USA
- ✓ SNAP- CAP agency for low and limited income customer program



Education Partner

Spokane Community College

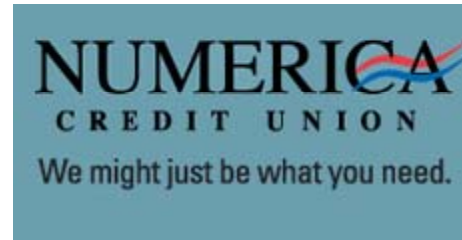
- BPI Building Analyst 1 certification training
- Access to SCC's HVAC lab
- Developing air sealing and specialty insulation installation skills training



Financing Partners

Energy Efficiency Credit Enhancement Program

- SLIP –Sustainable Local Investment Partnership
- Numerica Credit Union
- Spokane Teachers Credit Union
- SNAP Financial Access



Funding of Audits

- County or city's EECBG funds 35%
- Avista DSM funds 40%
- Customer contribution 25%

(depends on the factors previously discussed)

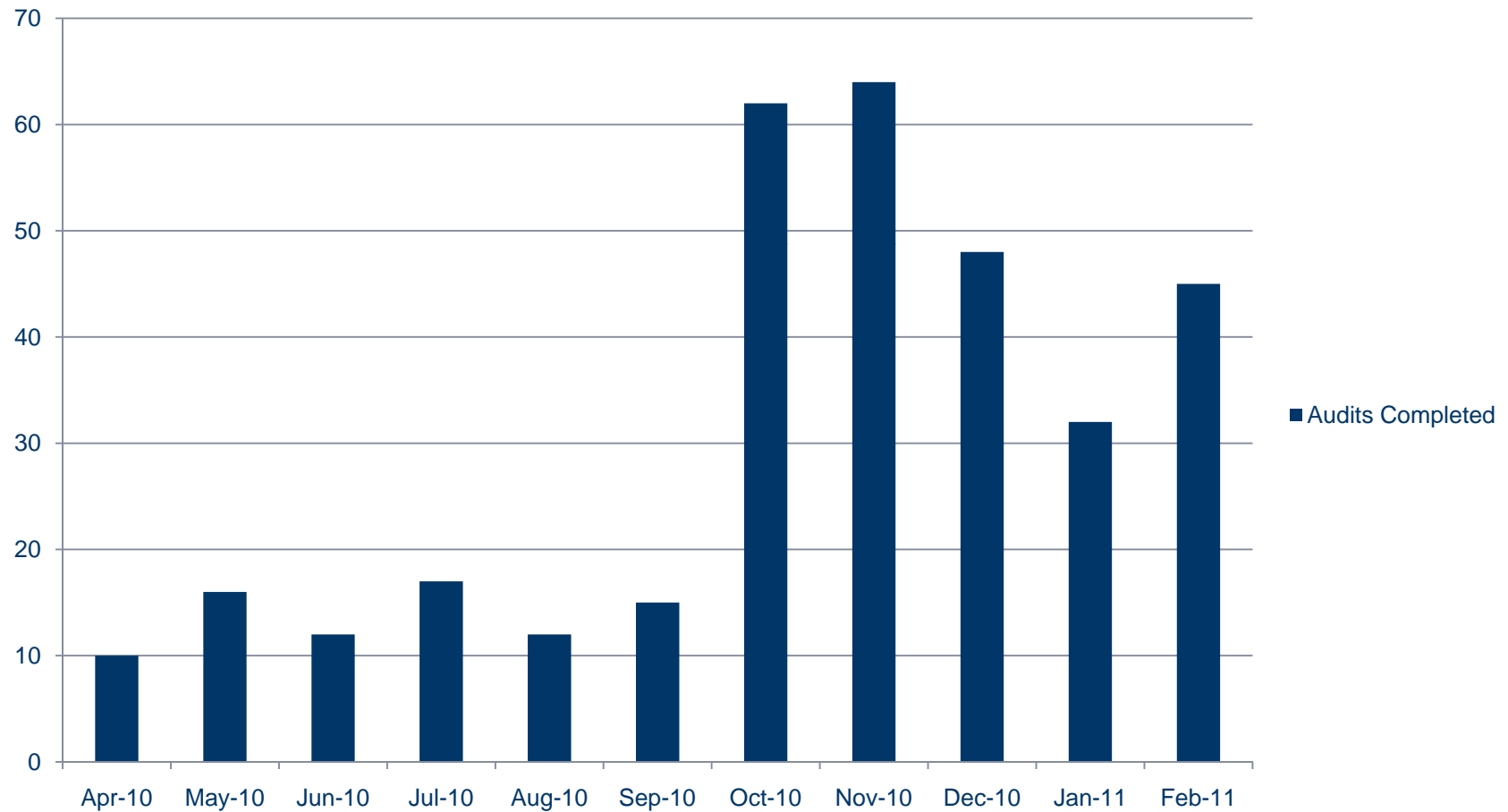
Raising Awareness/Educating the Public

- a. Website
- b. email blasts
- c. Printed materials: flyers, bill inserts, rack cards, door hangers
- d. Yard signs
- e. Magnetic Truck Signs
- f. Earned media (TV news spots and newspaper articles)
- g. Paid advertising
- h. Events (Home and Garden, Parade of Homes, Energy Fairs, Senior Fairs, Spokane Interstate Fair)
- i. Online video
- j. DVDs

Program Adjustments

Effect of Price Change

Audits Completed



Reaching the Right Demographic

Zip Code Analysis

Average size participating home-

- Spokane County 3,291 sq. ft
- City of Spokane 2,590 sq. ft.
- City of Spokane Valley 2,820 sq. ft.

Average Energy Utilization Index (EUI) Number

- Spokane County 45.7
- City of Spokane 50.7
- City of Spokane Valley 49.8

Low Income Residential Assistance Program

City of Spokane Community Development

Low Income Housing Rehabilitation Program

- No cost audit
- Full comprehensive report
- Weatherization materials
- Avista rebates for eligible measures

Limited Income Component

“Home Audit Plus”

Partnering with SNAP for income verification focusing on homeowners in the following groups:

- Elderly
- Have young children
- Physically impaired
- Mentally challenged

Limited Income Component- “Audit Plus” (continued)

- Continue using: EECEBG funds from government partners
- Avista DSM funds
- Adding “Limited income” (LIRAP) funding to leverage all available funds
- Provide audits at no cost to homeowners
- Provide additional weatherization/energy efficiency materials

Energy Efficiency Credit Enhancement Program

\$1,000,000 State Energy Program Grant- WA Dept of Commerce

- Sustainable Local Investment Partnership (SLIP)
 - Loan applications
 - Administration
 - Reporting
- Three partner lending institutions
 - Numerica Credit Union-Residential
 - Spokane Teacher's Credit Union-Small Commercial
 - SNAP Financial Access- Small commercial/specialty loans
- Revolving Loan Fund concept

Successes to Date

- 377 home energy audits assigned/completed
- 1.5 FTE at Avista working on program
- Four, two person BPI contractor teams working
- \$94,000 in auditor wages paid
- \$20,300 in weatherization materials
- \$3,300 in wages to Spokane company that assembles and distributes the weatherization kits

Energy Savings

Audit Savings	24,300 kWh	420 therms
Follow Up	78,700 kWh	5,400 therms
Total	103,000 kWh	5,820 therms

Follow up/monitoring energy savings

- Audits don't save energy, measures do.
- Cross-referencing rebate programs every 90 days
- Customer surveys and interviews
- Regression analysis on a random sample at 12 months to check for behavioral changes.

Questions?



EECBG & SEP NW REGIONAL
PEER EXCHANGE MEETING

Strategic Alliances: Community Energy
Planning and Partnering with Utilities

Michael Piper
Clackamas County



- All activities are strategically aligned with utilities through Energy Trust of Oregon.
- Increased energy efficiency in county buildings or active solar on county buildings.
- Community Facing programs that benefit residents and small businesses.



- \$3,159,500 Funding Through August 2012
- Planning
- Retrofit Public Buildings
- Active Solar 65 KW on county building
- Energy Efficiency on Main Street
- Green Building Program (New and Existing)
- Revolving Loan Fund (CEWO)
- Outreach and Education



- **Retrofit Public Buildings**
- 8 County Buildings – improvements to insulation, lighting, HVAC, controls and/or sensors, etc. all leverage Energy Trust of Oregon incentives.
- All county buildings under consideration were evaluated using Utility Manager Pro for best opportunities.
- Selected buildings received Level 2 Energy Audits that targeted recommended EEM's and utility incentives.



Solar on Development Services Building

- Project cost: \$350,000
- System Size (capacity): 65 kilowatts
- Solar Modules: 273 240-w Sharp panels (U.S. manufactured)
- Inverters: 2 30-kW Inverters by PV Powered (Bend, OR)
- Contractor: Northwest Solar Solutions (Tigard, OR)



- Portland General Electric pilot feed-in-tariff program
- PGE administers its program as the Solar Payment Option.
- County will continue to pay retail prices for electricity, but will benefit by receiving payments from PGE for the renewable energy at a fixed premium under a 15-year-contract (\$0.49/kwh)

Development Services Building Photovoltaic Solar Project

PROJECT SUMMARY

Clackamas County is constructing a solar photovoltaic array on the roof of the Development Services Building. The County will own and operate the array, which is projected to generate an estimated 67,250 kWh of electricity annually. Funding for the project comes from an Energy Efficiency Conservation Block Grant (EECBG), administered by the US Department of Energy as part of the American Recovery and Reinvestment Act.

The project is managed by the Division of Strategic Planning and Sustainability and the County's Facilities Management department.

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PROJECT SCHEDULE

Contract Awarded: September 2010
 Contract Agreement: November 2010
 Design & Permitting: December 2010-February 2011
 Construction: March 2011-May 2011
 System Online: May 2011



REAL TIME DASHBOARD

Energy production from the array will be displayed in real time on a County webpage. The site will also show the environmental benefits of the array.

PGE SOLAR PAYMENT INCENTIVE PROGRAM

This project was successfully enrolled in Oregon's competitive pilot feed-in-tariff program, an innovative program to encourage solar power in the state. PGE administers its program as the Solar Payment Option. The County will continue to pay retail prices for electricity at the DSB, but will benefit by receiving payments from PGE for the renewable energy at a fixed premium under a 15-year-contract (\$0.49/kwh). Over time, the County will reinvest the incentive proceeds into new renewable and energy efficiency projects. PGE will own the renewable energy credits towards Oregon requirements for renewable energy generation.

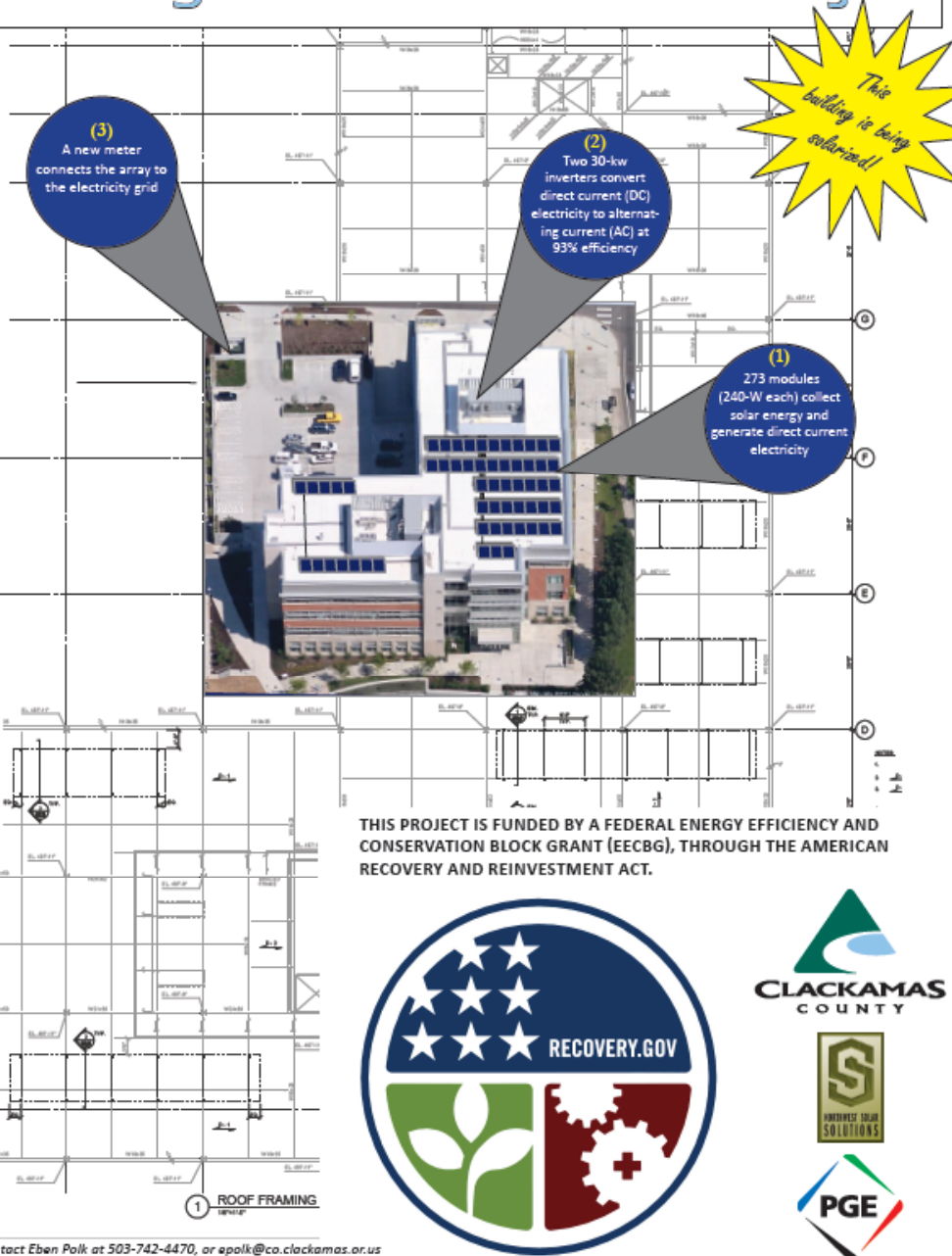
ABOUT THE DEVELOPMENT SERVICES BUILDING

The Development Services Building is a LEED Gold certified green building. Among the building's many green features are: storage of stormwater in a tank for landscape irrigation, energy efficient lighting, heating and cooling (designed for 30% better than code), heat recovery from computer servers, sustainably certified wood (Forestry Stewardship Council), recycled steel and other components, non-toxic carpets, flooring, paints and adhesives, and significant daylighting. Lockers and showers encourage healthy, active commuting. The building's solar array will further lessen its footprint.

ABOUT ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANTS

The EECBG program funds energy efficiency and renewable energy projects across the country. Clackamas County received approximately \$3.1 million, which we are employing to benefit homeowners, builders, business owners, and public buildings owned by the County and our cities. Activities include:

- Rebates for home construction that exceeds energy code
- Rebates for energy efficiency retrofits for businesses in designated 'Main Streets' and for homeowners
- Simple, affordable energy retrofit loans for homeowners through Clean Energy Works Oregon
- Energy efficiency retrofits in county and city facilities
- Workshops and public education on energy efficiency



THIS PROJECT IS FUNDED BY A FEDERAL ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG), THROUGH THE AMERICAN RECOVERY AND REINVESTMENT ACT.

For More Information: Contact Eben Polk at 503-742-4470, or epolk@co.clackamas.or.us



Green Building Programs

- Includes both existing buildings and new construction.
- New buildings are presented to Energy Trust of Oregon for an Energy Performance Score (EPS) and available incentives.
- County issues rebate to builder/owner in a dollar for dollar match up to \$4,000.



- Existing buildings qualify for \$150 rebate for each measure installed up to \$500; or income qualified up to \$1000 (including more measures).
- Audits, guidelines, qualified contractors, and inspections or verification of work is done by Energy Trust of Oregon (ETO).
- ETO proven track record, pushes more activity into statewide public purpose fund while leveraging more resources into county.



Energy Efficiency on Main Street

- Up to \$5,000 rebates available for participating small commercial buildings in Main Street districts.
- Audit and Energy Trust Incentives.
- Benefits small businesses through lower utility bills, increased comfort, extended longevity of building and equipment.



Revolving Loan Fund

- EECBG contract with Clean Energy Works Oregon as a participating jurisdiction – rather than create a new program.
- Bonus rebates of \$500 to first 150 homes.
- CEWO jointly hosting 12 Energy IQ workshops for prospective homeowners.
- County sponsoring 20 to 40 additional IQ workshops in more outlying areas.

STATEWIDE EXPANSION

- \$20 Million Better Buildings Grant
 - American Recovery and Reinvestment Act
- Independent Non-Profit
 - Created Summer 2010
 - Triple Bottom Line Organization
- Customer launch March 2011

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3 YEAR BUSINESS GOALS

- 6,000 Residential Retrofits
- 1,300 Family-Supporting Jobs
- Scalable, replicable, self-sustaining model
- Market transformation for Home Performance with Energy Star

HOW?

- **COST:** no-money down, no fee financing, generous rebates.
- **CONVENIENCE:** one-stop-shop home energy remodel and on-bill repayment, online processing
- **CONFIDENCE** a trusted non-profit providing independent, objective advice and quality assurance
- **CONSCIENCE:** reduced environmental impact and family-supporting job creation

OFFER

HOME PERFORMANCE WITH ENERGY STAR

- BPI certified contractors
- Comprehensive home assessment & customer report
- Quality assurance
- Eligible measures:
 - Attic, wall & floor insulation
 - Air & duct sealing
 - Space & water heating
 - Windows (R-5)



Trade Ally of
EnergyTrust
of Oregon





Outreach and Education

- Energy Workshops jointly sponsored with utilities and ETO,
- Home displays on benefits,
- Energy Steward (Climate Master) Classes,
- Meters for home monitoring
- Web-based energy efficiency through social marketing – EarthAid.net



Key Lessons

- Strategic alliances are key to enrolling residents or businesses in energy efficiency;
- Leverage other resources – allows for greater affordability and increases success of mutual programs;
- Co-branding or mutual marketing of programs;
- Unique Oregon situation with ETO and value of local government partner.