Salem's Community Energy Strategy

Partnering to be the Nation's Most Sustainable Capital City

September 2010

CITY OF Salem
AT YOUR SERVICE

A letter from Salem's Mayor and the Energy Strategy Task Force

Dear Salem Community,

I am pleased to introduce you to Salem's Community Energy Strategy. The Strategy serves as a road map for energy saving efforts community-wide, now and in the future. It includes short and long term goals, objectives, and actions that the City, individuals, and businesses can take to reduce greenhouse gas emissions, improve energy efficiency, and incorporate renewable energy into Salem area projects. Some of the actions can be initiated by City staff, while others require collaboration with Salem area organizations. Some can be completed with little or no additional funds, but many will require additional financial or technical resources to achieve.

Salem businesses, educational and public institutions have been leading the way by constructing energy efficient buildings, using solar and wind to power facilities, and making sustainability their core business. As the capitol of Oregon, Salem aims to build on the state's reputation for green innovation, to be the next energy efficient Capital City. Achieving this will require partnerships and shared resources.

In addition to the actions identified within the Strategy, the City has embarked on $1.2M in projects to reduce energy use in City buildings. These investments include HVAC, lighting, window, insulation improvements and establishing a Resource Conservation Management program to monitor and maintain energy performance. HVAC improvements alone are expected to generate $124,000 in annual savings. Other City initiatives include a reduced idling policy for City fleet, using energy efficient LEDs in streetlights, and achieving Earthwise certification for City offices.

This is a "living" document, which may require changes as the City and community's efforts progress. We will review the Strategy annually to check in on our progress and make adjustments as needed.

Energy Strategy Task Force

- Allan Pollock, Cherriots
- Nathan Good, AIA
- Kristi Reed, Salem Conference Center & Phoenix Grand Hotel
- Ray Burstedt, SEDCOR
- Tracy Meyer, SAIF
- Elin Shepard, State of Oregon Department of Administrative Services
- Ron Comstock, Portland General Electric
- Wendy Buck, Portland General Electric
- Travis Henry, Wildwood Inc./ Mahonia Vineyards and Nursery
- Joe Bowersox, Willamette University

I sincerely thank everyone who has provided input into the Strategy, in particular, the Energy Strategy Task Force, who helped refine feedback received from forums and workshops.

For more about related City and community projects please visit:

www.cityofsalem.net/sustainability

Sincerely,

Janet Taylor

City of Salem Mayor

August 2010

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Energy Strategy Overview

What is the Municipal Energy Efficiency Strategy?

Salem's *Community* Energy Strategy is designed to work in tandem with a *Municipal* Energy Strategy that focuses on reducing energy use and greenhouse gas emissions in municipal facilities. Activities include retrofitting City-owned buildings with high efficiency heating and cooling equipment, installing lighting and control improvements, and weatherizing City Hall.

What is the Community Energy Strategy ?

In August 2009, the City of Salem received notice of a $1.5M award from US Department of Energy's (US DOE) Energy Efficiency and Conservation Block Grant (EECBG) Program. The EECBG Program aims to reduce fossil fuel emissions, total energy consumption, and create jobs. It also requires communities develop an Energy Strategy to meet these objectives. In December 2009, US DOE approved Salem's Energy Strategy and several activities the City will get started on in 2010. The Strategy was developed with input from the community and with assistance from representatives of Salem-Keizer Transit, Willamette University, State of Oregon Department of Administrative Services, SEDCOR, Oregon Energy Trust, Portland General Electric, and some of Salem's largest employers.

What Near Term Actions (for Fiscal Year 2010-11) Does the Strategy Include ?

Energy Efficiency - $150,000

- Develop a loan program that provides upfront financing for energy efficient lighting upgrades in existing commercial buildings. (Funding will require applicants to first access Energy Trust of Oregon or other resources to complete an energy audit to identify energy improvements.)

Diverse Transportation Network - $90,000

- Support development of a community-wide plan to locate electric vehicle charging infrastructure
- Implement recommendations identified in the Salem River Crossing Alternate Modes Study to improve access to bicycle, pedestrian, and transit connections

Public Awareness and Commitment - $65,000

- Develop marketing plan and materials to promote energy savings programs and disseminate information about Salem's energy use
- Develop website to serve as a clearinghouse of information about energy programs, projects, policies, and incentives
- Conduct ongoing outreach activities, including an annual forum

How are the Remainder of US DOE Funds Being Spent ?

Approximately 20 percent of the US DOE funding will support projects to improve energy efficiency, conservation, and cost savings in industrial, commercial, transportation, and residential sectors, and promote sustainable industry and jobs, and related activities, community-wide.

The remaining 80 percent of funding will focus on improving energy efficiency, conservation, and cost savings in City facilities (see sidebar).

Goal 1: Improve energy efficiency in buildings community-wide

Objectives

- Provide financial assistance and tools to improve energy efficiency
- Lead efforts to improve energy efficiency by example

Year One

- Develop a loan fund that provides upfront financing for energy efficient lighting upgrades in existing commercial buildings (funding will require applicants to first complete an energy audit)

Short Term

Requires Municipal Leadership/Involvement

- Establish policy to construct new City buildings to LEED or equivalent green standard
- Establish incentives to reduce permit fees for buildings that exceed state energy code and/or incorporate renewable energy generation

Requires Community Leadership/Involvement

- Engage business and public institutions in establishing policies and programs for energy efficiency in buildings, through local Task Force or similar avenue of ongoing communication

Long Term

Requires Municipal Leadership/Involvement

- Adopt a green building code or similar standard for Salem
- Pursue City ownership and piloting of energy efficient infrastructure

What is the Energy Loan Fund?

Energy programs currently available to residents and small businesses require large initial investments, and often require more than one investment, increasing upfront costs. The Salem Energy Strategy proposes a loan fund that provides upfront financing for energy efficient lighting upgrades in existing commercial buildings. Loans will be repaid with energy savings over time and leveraged with existing financing programs.

Homes and buildings consume almost half the energy used in the United States. We use this energy to heat, cool, light, and run appliances in our homes and businesses.

Technological improvements and efficiency upgrades can help reduce the amount of energy used to perform these tasks.

Renewable energy comes directly from natural sources, such as sunlight, wind, rain, tides, and geothermal heat. These sources of energy are naturally replenished.

With the right set of policies and incentives, renewable technologies like solar and wind can be well suited for small-scale applications, such as neighborhoods and individual homes or businesses.

Goal 2: Increase renewable energy used or produced by Salem residents and businesses, while decreasing total energy consumption

Objectives

- Provide financial assistance to increase renewable energy generated
- Lead efforts to increase renewable energy generation by example

Short Term

Requires Municipal Leadership/Involvement

- Promote new renewable energy projects community-wide by reducing building permit fees
- Review City building code and make recommendations to encourage installation of renewable energy generation, including solar, wind, and hydroelectric
- Raise awareness for the City's purchase of renewable energy by adding signage to City buildings: “Powered by green electricity”

Requires Collaborative Leadership/Involvement

- Partner with community organizations to incorporate renewable energy and energy efficiency innovation into projects:
  - Install solar panels as canopy for downtown walkways, LED streetlights, etc.
  - Promote development of “energy districts” designed to meet their own energy needs and finance construction for energy systems
- Increase the number of residents participating in green power programs through their local utility (e.g., PGE Green Electric program); work in partnership with Salem Electric to establish a green power purchase program available to customers in their service territory
- Participate as a smart grid pilot community, in partnership with PGE, to evaluate the effectiveness of technology in improving the electric grid's reliability when incorporating solar, wind, and other renewable energy into the grid

Long Term

Requires Municipal Leadership/Involvement

- Pursue powering City Parks with renewable energy

Requires Collaborative Leadership/Involvement

- Explore opportunities to expand Salem’s low-head hydroelectric turbines

Goal 3: Create and support a viable and diverse transportation network that focuses on moving people

Objectives

- Develop infrastructure to strengthen transportation options
- Increase access to transportation options and raise awareness

Year One

- Support development of a community-wide plan to locate electric vehicle charging infrastructure
- Implement recommendations identified in the Willamette River Crossing Alternate Modes Study to improve access to bicycle, pedestrian, and transit connections

Short Term

Requires Collaborative Leadership/Involvement

- Complete permitting and identify funding for a Minto Island bridge
- Pursue pilot program for electric bikes, bike sharing, and solar charging, in tandem with Willamette University; roll out to other institutions
- Add amenities to transit stations and stops including bike sharing and storage, and develop a network of Park and Ride locations
- Launch an educational campaign, in partnership with Cherriots, to raise awareness for bicycle safety and rules of the road (e.g. Eye to Eye Campaign); seek ways to measure benefits of the campaign

Requires Municipal Leadership/Involvement

- Identify safe walking routes; collaborate with Safe Routes to Schools
- Pursue "Gold–Bicycle Friendly Community" status:
  - Develop a funding plan for projects identified in the Salem Transportation System Plan (TSP) for new bike lanes and paths
  - Increase access to bicycles by collaborating with the Salem Police Department to move stolen/stored bikes back into use; develop a bike sharing program

Requires Community Leadership/Involvement

- Encourage community partnerships in funding programs to encourage use of transit and alternate modes
- Increase access to car sharing programs (i.e., Zip Car)

Long Term

Requires Municipal Leadership/Involvement

- Amend Salem Revised Code to encourage a mix of transportation options and walkable neighborhoods

Requires Community Leadership/Involvement

- Encourage employers over a certain size to develop a transportation management plan that includes subsidies or discounts on transit passes for employees

Electric Vehicles

Oregon has been named as one of five test markets by ECOtality as part of a $99.8 million federally funded effort known as The Electric Vehicle Project (The EV Project).

ECOtality estimates it will install about 2,200 vehicle charging stations in the Portland, Salem, Corvallis, and Eugene metropolitan areas.

Between 2011 and 2013, ECOtality will collect and analyze information about the electric vehicles and the charging systems to gain insights into future expansion of electric vehicles throughout the U.S. For more information, please go to:

www.theevproject.com

The Oregon Employment Department defines a "**green job**" as one that provides a service or produces a product in:

1. Increasing energy efficiency
2. Producing renewable energy
3. Preventing, reducing, or mitigating environmental degradation
4. Cleaning up the natural environment
5. Providing education, consulting, policy promotion, accreditation, trading and offsets, or similar services supporting the above

Goal 4: Position Salem as a leader in sustainable industry

Objectives

- Attract and retain sustainable industry and jobs
- Prepare the workforce for green jobs and innovation

Short Term

Requires Municipal Leadership/Involvement

- Brand and market Salem as an energy efficient capital City
- Track market trends to better understand job growth opportunities

Requires Collaborative Leadership/Involvement

- Identify former manufacturing buildings suitable for conversion to renewable energy manufacturing and assist those business and building owners with resources to improve energy efficiency in existing buildings
- Identify opportunities to attract and retain additional industry sectors to the region
- Continue funding for Team Oregon cities in the Willamette Valley

Long Term

Requires Collaborative Leadership

- Encourage partnerships with high schools and universities to train students in math and science that will prepare them for green industry jobs
- Develop ongoing new training opportunities and/or jobs for Salem residents in renewable energy, green building, or related fields

Green Jobs in Oregon

Oregon Employment Department estimates there were about 51,000 "green" jobs in Oregon (3 percent of total employment) in 2008, spread across 5,000 employers. Oregon's green jobs were distributed across every industry and occupation, but tended to be more concentrated in industries and occupations related to construction, production, natural resources, and transportation

Goal 5: Conduct a public participation program that engages the community and communicates the value of energy savings and greenhouse gas reduction community-wide

Objectives

- Report information in clear, concise, easy to understand method
- Raise awareness for the value of energy savings

Year One

- Develop marketing plan and materials to promote energy savings programs and disseminate information about Salem's energy use
- Develop website to serve as a clearinghouse of information about energy programs, projects, policy, and incentives
- Conduct ongoing outreach activities, including an annual forum
- Develop clearinghouse of energy resources for businesses and residents; launch an educational campaign to alter behaviors about energy use
    - Include Marion County Earthwise, Travel Salem, Salem Chamber of Commerce, and Salem-Keizer Schools in campaign

Short Term

Requires Municipal Leadership/Involvement

- Develop an inventory of community-wide energy data that can be updated/reported on annually
- Support businesses in completing greenhouse gas inventories
- Design and launch an event to raise awareness about energy efficiency and sustainability

Requires Collaborative Leadership/Involvement

- Pursue student (university and K-12) involvement in community projects; get involved in the Green Schools Program through Salem-Keizer Schools
- Continue holding an annual forum to raise awareness about sustainability

Requires Community Leadership/Involvement

- Develop options for an "alternate modes road show" with community partners (possibly in tandem with EV roll-out)

Community Energy Forum 2009

Over 50 residents, including business and civic leaders, attended the Salem Community Energy Forum in December 2009 to learn about Salem's current energy use, relevant energy policies and programs, and practical tools to help Salem meet future energy demands and capitalize on opportunities for economic growth.

Attendees included representatives from

- SANYO Solar
- Chemeketa Community College
- Willamette University
- Bicycle Transportation Alliance
- Department of Energy
- Pringle Creek Community
- Salem-Keizer Transit.

Glossary of Terms

District energy: District energy systems produce steam, hot water, or chilled water at a central plant. The steam or water is then piped underground to individual buildings for space heating, domestic hot water heating, and air conditioning. As a result, individual buildings served by a district energy system don't need their own boilers, furnaces, chillers or air conditioners. [Source: International District Energy Association]

Energy efficiency: Using less energy to provide the same level of energy service. For example, insulating a home allows a building to use less heating and cooling energy to achieve and maintain a comfortable temperature. Another example would be installing fluorescent lights and/or skylights instead of incandescent lights to attain the same level of illumination. [Source: US DOE via Wikipedia definitions]

Bicycle Friendly Community: The League of American Bicyclists recognizes communities that provide safe accommodation for cycling and encourage its residents to bike for transportation and recreation, by providing awards in bronze, silver, and gold categories. In 2008, Salem received the bronze Bicycle Friendly Community award.[Source: League of American Bicyclists]

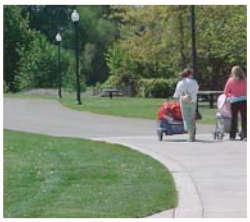
Green power purchase programs: Portland General Electric offers residents and businesses options to purchase power from renewable energy sources, for a fee, including the Green Source and Clean Wind programs.[Source: US Environmental Protection Agency]

Greenhouse Gas Emissions: Gases that trap heat in the atmosphere are often called greenhouse gases. Some, such as carbon dioxide, occur naturally and are emitted to the atmosphere through natural processes and human activities. Other gases are created and emitted solely through human activities (methane, carbon dioxide, nitrous oxide, and fluorinated gases). [Source: U.S. Environmental Protection Agency]

Hydroelectric turbines: When flowing water is captured and turned into electricity, it is called hydroelectric power or hydropower. Power is generated from the energy from flowing water as it moves downstream. Turbines and generators convert the energy into electricity, which is then fed into the electrical grid to be used in homes, businesses, and by industry. [Source: USDOE]

LEED (Leadership in Energy and Environmental Design): A certification system for buildings and communities that incorporate the required energy savings, water efficiency, CO_2 emissions reduction, improved indoor environmental quality, and natural resource stewardship into their design, construction, and maintenance. [Source: U.S. Green Building Council]

Marion County EarthWISE: The EarthWISE designation is given to Marion County businesses who incorporate environmental friendly practices into their operations, maintenance, and purchasing. Examples include purchasing recycled content paper, implementing water saving measures, and implementing a paperless process. The program is free to Marion County businesses. [Source: Marion County EarthWISE]



Salem River Crossing Alternate Modes Study: Collaboration between the City of Salem, the Oregon Department of Transportation, Salem Area Mass Transit District (Cherriots), and the Mid-Willamette Valley Council of Governments (MWVCOG) that analyzed methods to decrease single-occupancy vehicle trips by offering different ways to cross the existing bridges or any new bridges that develop out of the Salem River Crossing project. [Source: Oregon Department of Transportation]

Smart Grid: Delivers electricity from suppliers to consumers using two-way digital technology to control appliances at consumers' homes to save energy, reduce cost and increase reliability and transparency. It overlays the electricity distribution grid with an information and metering system. [Source: USDOE]

Team Oregon: A collaboration of Oregon utilities, state agencies, economic development organizations, and others, formed for the purpose of recruiting large businesses to Oregon.

Zip Car: A for-profit, membership-based car-sharing company providing automobile rental to its members, billable by the hour or day. [Source: Zipcar]

For more information on the Energy Strategy, please contact:

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For more information on Energy Strategy projects and related information, please visit:

www.cityofsalem.net/sustainability

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