# SALEM COMMUNITY ENERGY INVENTORY

Spring 2011 Salem, Oregon

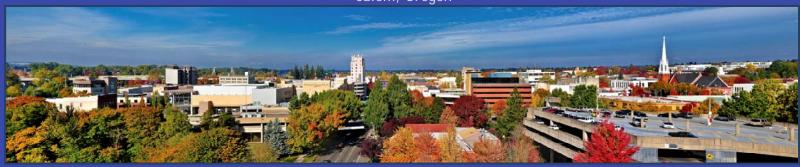


Photo by: Ron Cooper

### http://www.cityofsalem.net

## Summary

Salem's 2009 Environmental Action Plan and 2010 Community Energy Strategy provide objectives and plans for achieving sustainability in City facilities as well as community wide. This report establishes Salem's first comprehensive baseline of energy and resource use community-wide from which future comparisons can be made. The baseline evaluates current trends, 2005-2009, in usage/production of electricity, natural gas, waste, water, automobile energy usage in vehicle miles traveled, and (small scale) renewable energy instillations in Salem. Baseline trends, and comparison with other Oregon cities of similar size like Corvallis, reveal that Salem is poised well to reach its sustainability goals and challenges future regulations may bring.

The Energy Inventory Report provides context to evaluate the effectiveness of Salem's current energy reductions programs, such as the Lighting Loan Program and bi-monthly water billing, to increase consumer awareness about consumption levels. This public, quantitative baseline may be used to inform possible regulations and reductions to current energy usage trends. Additionally, the Inventory provides current and future Salem residents and businesses with valuable information about resource consumption, capacity, and cost.

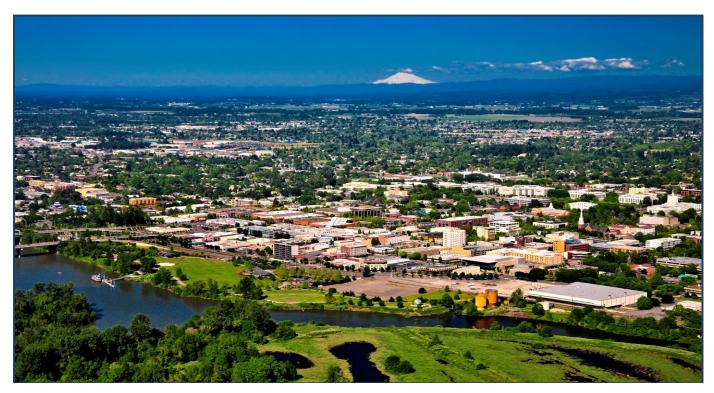


Photo by: Ron Cooper

## Introduction

The City of Salem, Oregon has a population of approximately 156,690 people (as of July 2009) living in approximately 48 square miles of land making it the third largest city in Oregon<sup>1</sup>. Population in Salem grew 33%



from 1990 to 2004, due to migration towards employment opportunities in the urban center. The City of Salem defines sustainability, using the State of Oregon's Sustainability Act (HB 3948), as: "using, developing, and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic, and community objectives." Salem's planning strategies for sustainability within its city limits include use of an urban growth boundary, redevelopment of blighted property in its eight urban renewal areas, and an emphasis on mixed-use developments in activity nodes<sup>2</sup>.

## **Background and Context**

Energy has become an increasingly important factor in community sustainability and quantitative assessments of sustainability. In June 2009, the U.S. Department of Energy's (US DOE) awarded the City of Salem a \$1.5M in an Energy Efficiency and Conservation Block Grant (EECBG) to reduce fossil fuel emissions, total energy consumption, and create jobs. These EECBG programs required Salem to develop an inclusive Energy Strategy to meet these objectives. The resulting report, *Salem's Community Energy Strategy*, was accepted by City Council on September 13, 2010.

# How Does this Align with Local Policy?

Salem's Community Energy Strategy has 5 major goals which may be informed by this Energy Inventory Report<sup>3</sup>:

- 1. Improve energy efficiency in government buildings and community-wide
  - Attained through Energy Loan Fund to support lighting upgrades in commercial buildings
- 2. Increase renewable energy used or produced by Salem while decreasing total energy consumption
  - Attained by providing financial assistance to incentivize and increase purchasing and instillation of renewables
- 3. Create and support a viable and diverse transportation network focused on moving people
  - Attained by development of an electric vehicle charging infrastructure as well as improvement of existing pedestrian, bike, and transit pathways
- 4. Position Salem as a leader in sustainable Industry
  - Attained through attraction and retention of sustainable Industry jobs and green jobs
- 5. Conduct a public participation program that engages the community and communicates the value of energy savings and greenhouse gas reduction community-wide
  - Attained by increasing open dissemination of information and materials to Salem community members, development of a website and clearinghouse for energy related resources, and creation of community outreach events focused on energy and sustainability.

<sup>&</sup>lt;sup>1</sup>Census Bureau Quick Facts, City of Salem Overview and Community Profile 2010

<sup>&</sup>lt;sup>2</sup> Salem Area Comprehensive Plan 2009

<sup>&</sup>lt;sup>3</sup> Information from Salem's Community Energy Strategy 2010

The Energy Inventory Report seeks to frame the Community Energy Strategy's proposed reductions and improvements by providing context and current trends based on indicators from 2004-2009. This information can be used to monitor the success of existing reductions and incentive programs. The inventory also prepares Salem for the possibility of future state and federal regulations, including legislation like the 2010 Oregon Senate Bill 1059 which will require municipalities, including Salem, to reduce greenhouse gas emissions by 2035. Reductions directed by this legislation have yet to be decided, but will be achieved through municipal transportation and planning. This inventory is a first step in understanding current usage trends. Understanding current trends will be the first step in preparing Salem for future reduction goals, which may be set for the state or region.

## Goals of the Energy Inventory

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- Baseline of current trends
- Informing the public about energy and resource use
- Comparison with other cities
  - Specific data on waste and water is compared with Corvallis
- Inform aspects of the Economic Strategic Plan
- Track progress of energy strategy programs
- Prepares Salem for potential future reductions benchmarks, as directed by state or local officials and legislation

## Methodology

All data indicators in this report roughly fall from 2004-2009; these years will be uses to establish the current baseline of energy usage in Salem.

The energy usage indicators measured in this report are:

- Electricity
  - Data gathered and aggregated from public web information and data requests to PGE & Salem Electric

Salem electricity data from PGE and Salem Electric was analyzed for usage trends separately and then aggregated to show total and per capita trends. Commercial usage data includes industrial customers.

- Natural Gas
  - Data gathered from web information and a data request to NW Natural

Natural gas data specific to Salem was requested directly from Northwest Natural. This data was analyzed for annual and seasonal usage trends, and then aggregated with total electricity data.

- Waste
  - Data gathered and aggregated from data requests to hauler data from the City Accounting Office

Salem's waste data aggregated from Salem's seven waste hauler censuses to protect address confidentiality. Annual waste tonnage trends were analyzed for solid waste, recycling, and yard waste/compost. Data was also used to determine the most prevalent waste types in Salem.

- Water
  - Data gathered from the 2009 Water Management and Conservation Plan and data requests to Public Works

Annual water consumption and usage peaks were analyzed from the 2009 Water Management Conservation Plan published by the City of Salem, Public Works. This report contains data up until 2007; more recent data from 2008 and 2009 was requested directly from Public Works. These indicators were analyzed on a total, per capita, and customer class basis.

Automobile Energy Usage: VMT (Vehicle Miles Traveled)

 Data gathered from US Dept. of Transportation: Federal Highway Administration Highway Statistics available online <a href="http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm">http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm</a>.

Automobile energy usage was analyzed using public records on VMT for major metropolitan areas available online from the Federal Highway Administration. This information was analyzed on a total and per capita basis.

#### Renewables

- Information on purchases and instillations
- Data gathered from requests to PGE for renewable energy purchase information, the State for BETC (Business Energy Tax Credit), RETC (Residential Energy Tax Credit), and Energy Trust of Oregon rebate records

Renewables were analyzed using a variety of factors. Data on renewable energy purchased in Salem was obtained through a data request to PGE. Information on renewable instillations was analyzed separately by renewable grant or tax credit type. Data trends are separated into BETC, for businesses, RETC, for homes, and Energy Trust rebates which can be broadly applied.

## Inventory Summary and Discussion

## **Electricity**



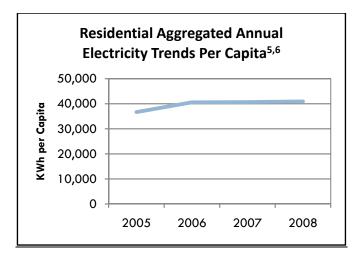
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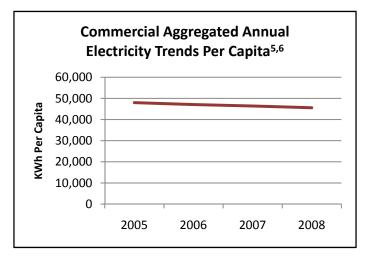
Salem's Electricity is controlled by two utilities companies:

- Portland General Electric PGE serves 89,246 customers, 81% residential (72,289 customers), and 19% commercial properties (16,957 customers) which include restaurants, shops, etc.
  - PGE average monthly residential bill in Salem \$91.00<sup>4</sup>
- Salem Electric serves 18,487 customers, 57.8% residential, 41.5% commercial, and 0.7% Street Lights
  - Salem Electric average monthly residential bill in Salem \$76.39<sup>5</sup>

<sup>&</sup>lt;sup>4</sup> Information from data request to PGE

<sup>&</sup>lt;sup>5</sup> Information from data request to Salem Electric





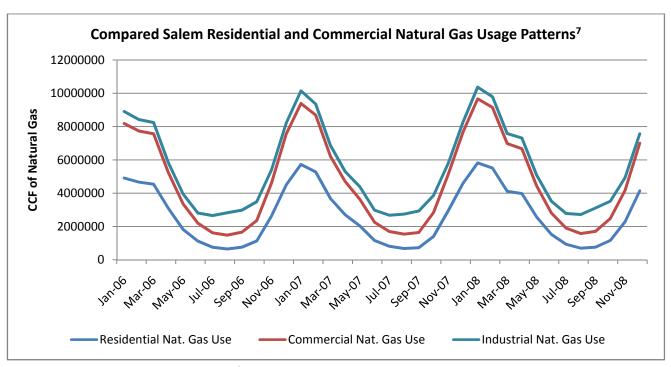
This figure indicates a slow increase in total residential electricity usage per capita. This increased residential usage can be explained by increased usage of appliances in homes as a part of modernization. The aggregate represents data from February 2005 through February 2008.

This trends graph indicates a slight decrease in commercial usage per capita. This reflects decreases in consumption due to businesses closures due to economic fluctuations during this time period. The aggregate represents data from February 2005 through February 2008.

#### Natural Gas

Salem's Natural Gas is provided by NW Natural. Within Salem, NW Natural serves 31,142 residential customers and 3,552 commercial customers<sup>6</sup>.

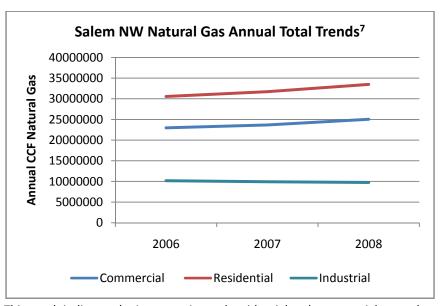
 NW Natural average monthly bill for residential users with gas space and water heating -\$70.83<sup>7</sup>



This graphic indicates seasonal trends and fluctuations in natural gas usage; clearly, gas usage increases during the winter because many single family residences utilize gas heating<sup>7</sup>.

 $<sup>^{\</sup>rm 6}$  Information from a data request to NW Natural and the NW Natural 2009 Annual Report

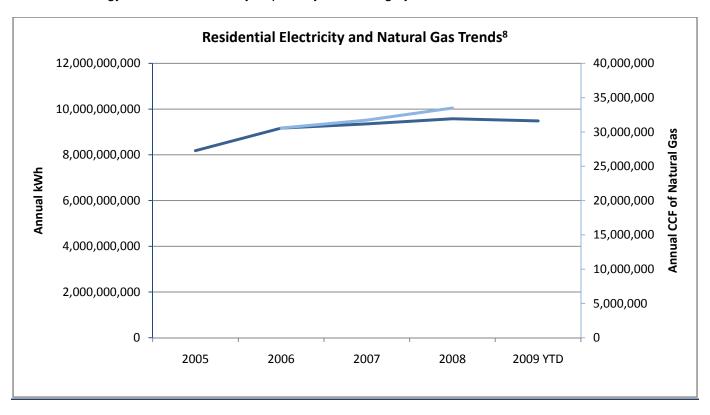
<sup>&</sup>lt;sup>7</sup> Information from a data request to NW Natural



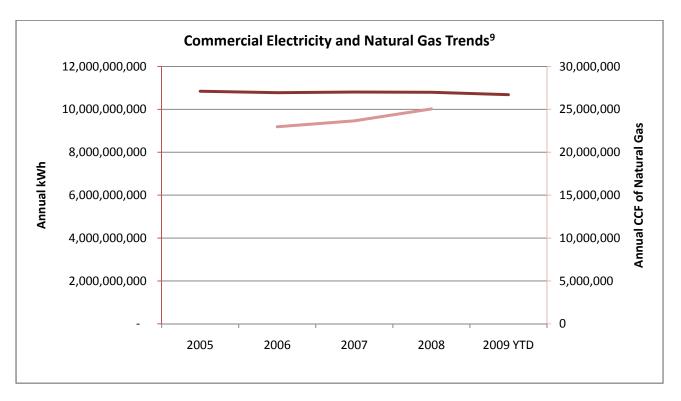
This graph indicates the increases in total residential and commercial natural gas usage, but a very slight decreasing trend in industrial consumption over all due to Salem's economy shifting away from industrial consumption.

#### Comparison of Electricity and Gas

Electricity and natural gas are inversely related to one another generally, because natural gas acts as a substitute energy source to electricity especially, in heating systems.



From 2005-2009, total residential electricity and natural gas usage has increased. This trend illustrates an increase in usage in response to population expansion, but also increased numbers of individuals living in homes<sup>8</sup>.



From 2005-2009, total commercial electricity usage has remained relatively stable or has decreased very slightly while natural gas usage has increased<sup>9</sup>.

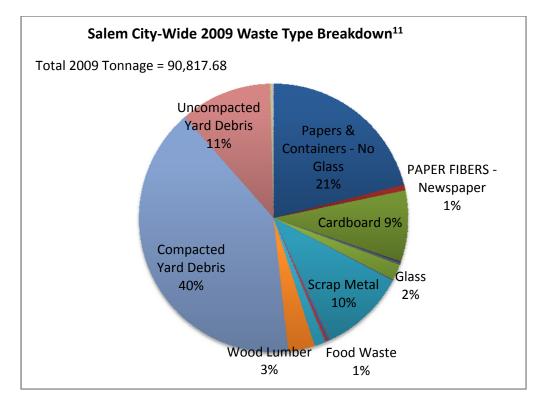
#### Waste

Waste collection in Salem is divided between seven waste haulers serving a specific geographic location, including Allied, Pacific, D&O, Suburban, Loren's, Valley, and N. Marion. Salem's waste production is generally reactive to economic and demographic variables in Salem and thus varies geographically. One recent change in Salem's waste infrastructure is the inclusion of food waste items into existing yard waste collection systems. The results of this trend are not yet apparent in quantitative data, but it is predicted that this will result in increased compost and yard waste tonnages and decreased trash/refuse tonnages.



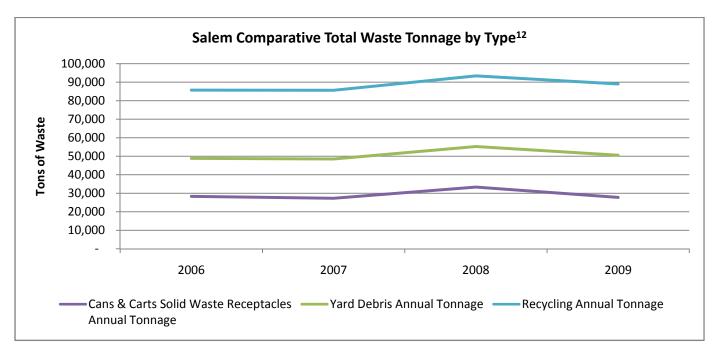
<sup>&</sup>lt;sup>8</sup> This information was aggregated from data requests to Salem Electric, PGE, and NW Natural

<sup>&</sup>lt;sup>9</sup> This information was aggregated from data requests to Salem Electric, PGE, and NW Natural





The above breakdown of waste in Salem clearly points to *Yard Debris, Mixed Recycling*, and *Scrap Metal* as the top three waste types in Salem in 2009<sup>10</sup>. These three waste types consistently produce the highest amounts of solid waste in Salem.



Waste tonnage patters for solid waste, yard debris, and recycling follow similar patterns of decreases and increases over time, but recycling consistently has the highest tonnages and solid waste has the lowest. For confidentiality reasons, commercial data could not be separated from residential because indicators were too identifiable. Small decreases in tonnages in 2007 can be explained by slight economic down turn and business closings<sup>11</sup>.

<sup>&</sup>lt;sup>10</sup> This information was gathered from the Salem area supervisor of waste haulers and City of Salem financial records on waste tonnage

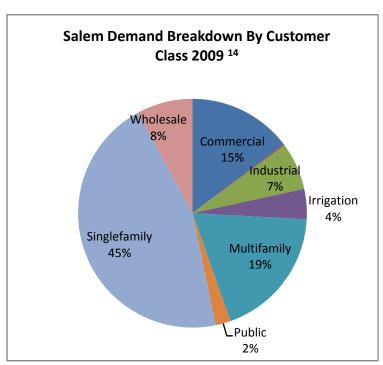
<sup>&</sup>lt;sup>11</sup> Information from a data request to the Salem area supervisor of waste haulers and city financial records on waste tonnage

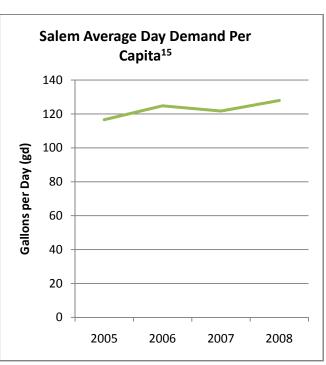
#### Water



Photo by: Ron Cooper

Water usage in Salem, like natural gas usage, is highly impacted by climate and seasonal patterns; this creates a pattern of high usage and heavy demand for water during hot, dry summer months and decreased usage during winter storm events. Water billing and dispersal in Salem is controlled by the Public Works Department<sup>12</sup>.



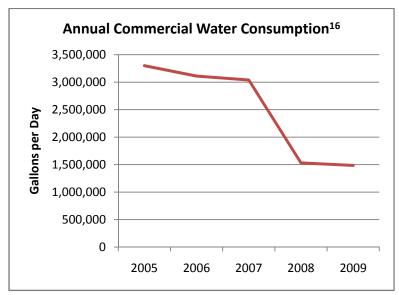


The majority water demand in Salem comes from residential users. Total residential demand makes up 64% of total water demand which is 3 times any other customer demand type<sup>13</sup>.

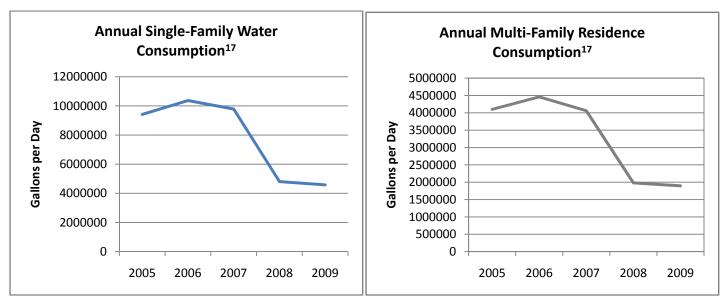
<sup>&</sup>lt;sup>12</sup> Information provided by the 2009 Salem Water Conservation Plan, and direct data requests to Public Works

<sup>&</sup>lt;sup>13</sup> Information provided by the 2009 Salem Water Conservation Plan, and direct data requests to Public Works

Average Daily demand for water per capita has shown a slight increase over time with some fluctuation based on annual climate patterns and number of persons living in households in Salem<sup>14</sup>.



Annual commercial water consumption shows a consistent decrease, with a steep decline in usage during and after the economic downturn of 2007<sup>15</sup>.



Single-family residence annual water consumption show stable usage trends until the economic down turn in 2007 began to effect families leading to decreases water consumption due to water cost<sup>16</sup>.

Multi-family residences show a very similar trend in water usage to single-family homes. Usage rates remained stable until the economic down turn began to effect families which led to decreases water consumption due to water cost.

<sup>&</sup>lt;sup>14</sup> Information provided by the 2009 Salem Water Conservation Plan, and direct data requests to Public Works

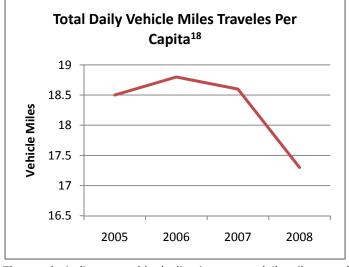
<sup>15</sup> Information provided by the 2009 Salem Water Conservation Plan, and direct data requests to Public Works

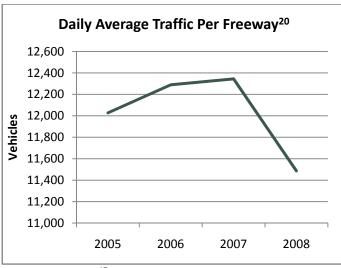
<sup>&</sup>lt;sup>16</sup> Information provided by the 2009 Salem Water Conservation Plan, and direct data requests to Public Works

#### Vehicle Miles

Estimates of the vehicle miles traveled (VMT) within the city limits provide one of the few ways of measuring transportation energy consumption. VMT estimates provide a snapshot of the vehicular travel in the metropolitan area; however, limitations to this method include the comingling of internal trips within the metropolitan area with trips that pass through. Information on the type of vehicle being driven, efficiency, and speed of the vehicle also impact energy efficiency and are not captured in this data. Data on vehicle miles traveled was obtained from the US Federal Highway Administration Statistics on Municipalities which pools information gathered from municipalities' reporting to state Departments of Transportation and is a data resource available to the public online. This information, however, is gathered for the greater Salem-Keizer area; therefore the data is representative of an area larger than the City of Salem. Generally, trends in VMT have dropped due to the economy and the high cost of fuel; this may coincidently aid in meeting VMT reductions goals, but long-lasting reductions will require more than just unintentional reductions.







The graphs indicate a stable decline in average daily miles traveled starting in 2007<sup>17</sup>. The sudden dip in miles traveled is a result of an increase in the cost of gasoline, and economic recession. There were similar decreases in traffic on the Salem bridges during 2006 and 2007.<sup>18</sup>

<sup>17</sup> Information from the US Department of Transportation: Federal Highway Administration statistics. This information can be sourced back to ODOT, Oregon Department of Transportation. <a href="https://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm">http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm</a>.



#### Renewables

Salem residents who are PGE customers have the option to support renewable energy sources purchasing renewable electricity from PGE that has been produced from renewable resources or contributes to green futures; this option amounts to only a nominal increase in electricity rates to ensure power is from renewable sources. PGE's sources of renewable energy include Clean Wind (supported by wind turbines) and Green Source (includes power from photovoltaics). In addition renewable sourced purchasing energy, Salem residents can elect to install renewable energy generation to power their homes and distribute any excess back into PGE's energy grid.

Photo by: SEDCOR

#### **Instillations**

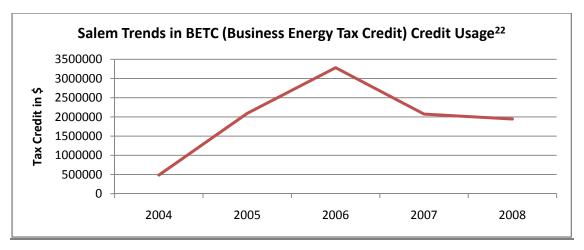
Salem residents and businesses can take advantage of state tax incentives and credits for installing sources of renewable energy such as photovoltaic cells or solar water heating systems on their homes or workplaces. Businesses and homeowners can benefit from rebates from Energy Trust of Oregon as well as separate state tax credits based on project type.

#### Business Energy Tax Credit - BETC

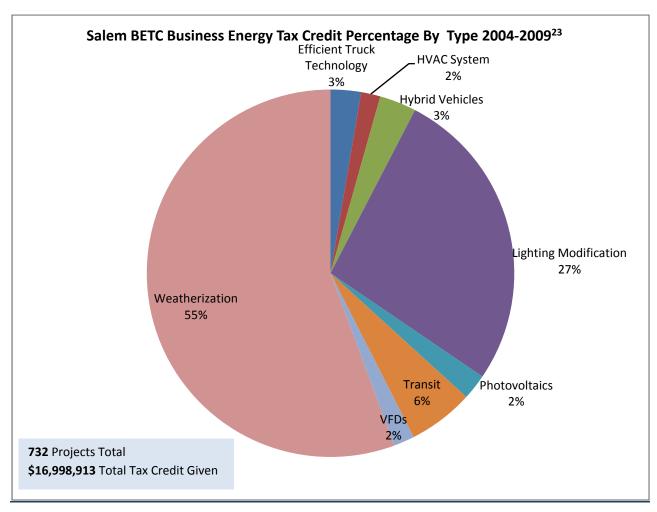
Business Energy Tax Credits are approved by the Oregon Department of Energy for qualifying commercial properties investing in energy conservation, recycling, renewable energy resources, and less-polluting transportation fuels. Credits are given for a diversity of project types and are assigned value based on the size of the project<sup>19</sup>.

 $<sup>^{18}</sup>$  Information from the Mid-Willamette Valley Council of Governments (MWVCOG) and ODOT data book 2000

<sup>19</sup> Information taken from the Oregon Department of Energy page on Business Energy Tax Credits http://www.oregon.gov/ENERGY/CONS/BUS/BETC.shtml



Usage of Business Energy Tax Credits (BETC) has fluctuated based on economic conditions in Salem. The small peak in 2006 is characterized by a large number of small scale weatherization projects. The small dip in 2008 is due to the economic down turn, but 2009 trends show a very steep increase in tax credit usage and a greater diversity of instillation projects<sup>20</sup>.



The most popular BETC eligible projects installed by businesses include: weatherization, lighting modification, transit services, and hybrid vehicles. 732 instillation projects have been incentivized by BETC which amounts to a total of \$16,998,913 in Business Tax credits given out by the Department of Energy to assist in funding renewable instillations<sup>21</sup> and energy efficiency improvements.

 $<sup>^{\</sup>rm 20}$  Information from the Oregon Department of Energy on BETC information

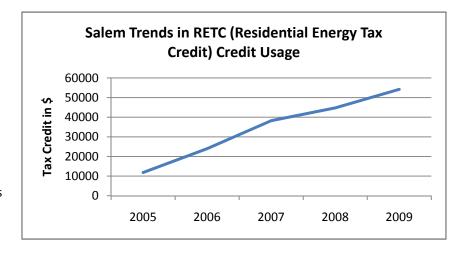
<sup>&</sup>lt;sup>21</sup> Information from the Oregon Department of Energy on BETC information

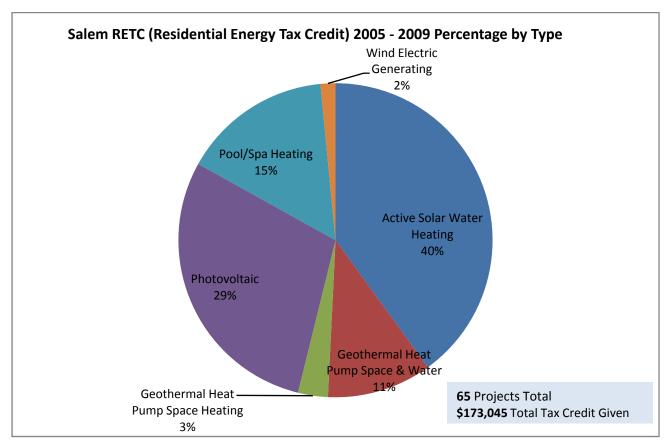
#### Residential Energy Tax Credits - RETC



Salem has experienced a steady increase in homeowners electing to use Residential Energy Tax Credits (RETC) to help fund instillation of renewables on their homes<sup>23</sup>. As more residents learn about the economic benefits of the DOE's RETC program, usages rates are expected to further increase.

Residential Energy Tax Credits (RETC) are available to provide credit on Oregon income taxes for adding solar energy system(s) and/or energy efficiency improvements. These projects must first be approved by the Oregon Department of Energy<sup>22</sup>.





The most popular residential instillations in Salem from 2005-2009 have been active solar water heating, photovoltaic, and pool/spa heating. RETC credits have supported 65 instillations from 2005-2009, and provided \$173,045 in tax credits<sup>5</sup>.

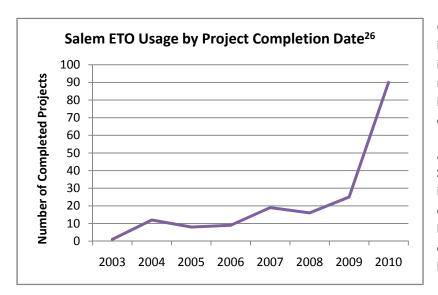
<sup>&</sup>lt;sup>22</sup> Information taken from the Oregon Department of Energy page on Residential Energy Tax Credits: <a href="http://www.oregon.gov/ENERGY/CONS/RES/RETC.shtml">http://www.oregon.gov/ENERGY/CONS/RES/RETC.shtml</a>.

<sup>23</sup> Information taken from a Data request to the Oregon Department of Energy DOE for RETC information

#### **Energy Trust of Oregon**

Renewable instillations on residential and commercial properties in Oregon are also supported by Energy Trust of Oregon, an independent nonprofit organization dedicated to helping Oregonians benefit from saving energy via cash incentives and grants for renewable instillations for Portland General Electric, Pacific Power, NW Natural, and Cascade Natural Gas customers.

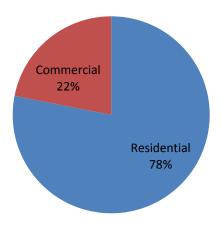
- In Salem, Energy Trust of Oregon grants and incentives have aided in the instillation of 1,052,266 kWh and 12,834 therms in Salem since 2003<sup>24</sup> This is equivalent to:
  - 475 tons of CO2 reduced (tons, 2,000lbs./ton)
  - 83 cars off the road
  - 93 homes powered on Salem generated renewable electricity
  - 25 homes heated solely by renewable energy



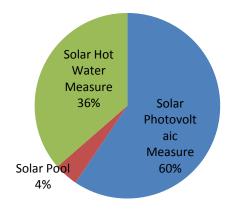
Over all usage of Energy Trust of Oregon (ETO) incentives and grants had experienced gradual increases followed by a spike in 2010. As more Salem residents learn about how they can utilize ETO incentives, it is expected that these usage rates will continue to increase<sup>26</sup>.

Additionally, Salem Electric offers its customers in Salem funding for weatherization projects and solar instillations as well as discount rates on energy efficient fluorescent lighting<sup>25</sup>. This financial support helps increase usage of renewables and energy efficient lighting and insulation in Salem's homes and businesses.

ETO 2003-2010 Projects in Salem by Customer Type<sup>26</sup>



ETO 2003-2010 Project Types in Salem<sup>26</sup> 217 Total Instillation Projects



Energy Trust of Oregon (ETO) supported instillations are primarily solar related.

<sup>&</sup>lt;sup>24</sup> Information obtained from a data request to Energy Trust of Oregon

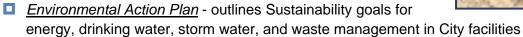
<sup>&</sup>lt;sup>25</sup> Information obtained from Salem Electric's Programs and Services Brochure

# **How Salem Compares**

As sustainability and energy efficiency have become more important in assessing and comparing cities, many cities nearby and similar in size to Salem have also carried out inventories of a variety of indicators and have created different reports.

#### Salem

In addition to this Energy Inventory report of quantitative data baseline, Salem currently has:



- Energy goals address electricity and natural gas reduction goals as well as goals and strategy for reducing energy usage in automobiles.
- Drinking water goals stress conservation
- Stormwater goals stress quality improvement of surface water
- Waste management goals include reduction of waste in government offices, increase renewable/recyclable items, and maximization of recycling efficiency.

#### Community Energy Strategy - Goals

- Improve energy efficiency in government buildings and community-wide
- Increase renewable energy used or produced by Salem while decreasing total energy consumption
- Create and support a viable and diverse transportation network focused on moving people
- Position Salem as a leader in sustainable industry
- Conduct a public participation program to engage the community and communicates the value of energy savings and greenhouse gas reduction community-wide

#### Other Cities

- The neighboring city of Gresham, Oregon, has a *Comprehensive Plan* that outlines historical usage trends and sets goals and future plans. Gresham also has a *Climate Futures Report* which focuses on the effects of climate change and what the municipality of Gresham can do to lessen these effects.
- ➤ Hillsboro has a Sustainability Work Plan, an Evergreen Concept Plan, and a Climate Action Plan which focus on plans, discussion, and goals, but do not specifically create a baseline of specific indicators available to the public.
- Eugene's Sustainability Report and Community Climate and Energy Action Plan follow a comparable pattern, and focus mostly on goals and preventative actions.
- Although Portland is not of similar size to Salem, in 2009 Portland published its first *Climate Action Plan* and in 2010, Portland carried out an in-depth inventory of metro area greenhouse gas sources. Portland's *Greenhouse Gas Inventory* does set a quantitative baseline, but its narrow focus on greenhouse sources differs from this broader, quantitative inventory.

All of these reports include reduction goals and actions for achieving goals, but do not include a quantitative baseline of energy consumption. These goal-based reports are analogous to Salem's *Environmental Action Plan* and *Community Energy Strategy*, but Salem's Energy Inventory Report takes this analysis one step further with measures that can be used to anchor and track goals.



#### **Corvallis**

The City of Corvallis published a 2009 Sustainability Report, 2008 Community Sustainability Action Plan, and 2010 Energy Challenge Evaluation, which includes information about waste output and water usage in the city of Corvallis. Corvallis has obtained grant funding to expand their baseline to include energy information and will likely publish the information in late 2011. Water and waste usage provides valuable context for comparison.

#### Waste

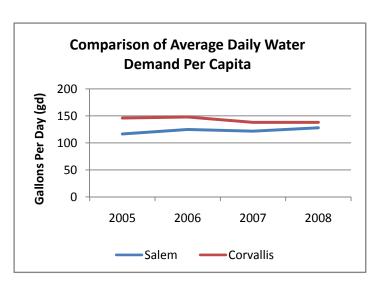
Salem's 2009 waste type data provided by the hauler census indicates that Salem waste production has been improving with expansion of Recycling and yard waste/compost curbside pickup programs. Due to differences in hauler data collection and recording techniques, the most effective comparison of waste output and recycling recovery rates between Salem and Corvallis is determined by comparing 2009 Wasteshed tonnages for Benton County, for which Corvallis makes up 65%, and Marion County, for which Salem makes up about 50%.

2009 County Wasteshed Tonnage Comparisons <sup>26</sup>			
Benton County	Marion County *uses a waste incinerator		
51,470.2 Total Tons Disposed	200,419.8 Total Tons Disposed		
1,292 Total lbs. Disposed Per Capita	1,261 Total lbs. Disposed Per Capita		
37.9% Recycling Recovery	52.2% Recycling Recovery		
789 Recovered lbs. Per Capita	1,261 Recovered lbs. Per Capita		

According to the DEQ 2009 Oregon Material Recovery and Waste Generation Rates Report, Marion County, which uses solid waste incineration as a source of energy production, shows comparable rates of solid waste disposal to Benton County, but because if incineration, shows higher recycling and energy recovery rates that Benton<sup>28</sup>.

#### Water

In general, Corvallis shows slightly higher rates of water consumption for the city and per capita. This can be attributed to higher concentration of commercial water users in Corvallis. Salem's water demand totals at 64% residential, while Corvallis residential demand makes up only 56% of total water demand<sup>27</sup>. Differences in per capita usage, however, also relate to Salem's successful bi-monthly billing structure which is set up to encourage conservation by providing Salem consumers with increased information on their usage patterns<sup>28</sup>.



Average Daily Water Demand Per Capita serves as a general picture of water consumption patterns in Salem and Corvallis. Corvallis's average daily consumption per capita is slightly higher than Salem's rates. However Salem shows an increasing per capita usage trend while Corvallis per capita rates appear to be decreasing.

<sup>&</sup>lt;sup>26</sup> Information from the 2009 DEQ Report on Waste Generation and Recovery <a href="http://www.deq.state.or.us/lq/pubs/docs/sw/2009MRWGRatesReport.pdf">http://www.deq.state.or.us/lq/pubs/docs/sw/2009MRWGRatesReport.pdf</a>.

<sup>&</sup>lt;sup>27</sup> Information from the 2010 City of Corvallis Water Use and Water Conservation Project

<sup>&</sup>lt;sup>28</sup> Salem billing Information available from Public Works online

#### Economic Growth

One component of Salem's Energy Strategy and Economic Strategic Plan is business recruitment, with a particular focus on renewable energy product manufacturing to be located in industrial zoned geographical areas of the city. Companies looking to move to Salem prioritize capacity and affordability of electricity, natural gas, water, and waste water in Salem. Renewable energy product manufacturers like SANYO Solar, which has recently located some of its operations to Salem, require a large capacity of water and electricity resources, and prefer low utility costs to meet their logistical constraints and maximize profitability.

Billing rates for electricity in Salem are high compared to other cities throughout the Pacific Northwest, but still remain lower than national averages. For example, PGE electricity rates are on average \$5 more in Salem than in the rest of PGE's service area. This is a result of higher electricity usage in building heating<sup>29</sup>. Salem has expandable capacity for both electricity and water resources due to its geographic proximity to flowing bodies of water like the Willamette River. Water rates are generally low in Salem, averaging \$1.41 to \$2.12 per 100 cubic ft of water (as of January 2010). However, water capacity in the city is limited by the existing water distribution infrastructure, which could be altered to support expanding commercial and industrial interests in Salem. Water available for use in the city is limited to 66 million gallons per day, because it must be piped from the Geren Island Water Treatment Facility, which treats water from the North Santiam River Watershed and the Franzen Reservoir, primary water sources for the Salem area<sup>30</sup>.

This Energy Inventory Report grounds and informs the upcoming *Economic Strategic Plan* and will help refine industry recruitment strategies. Salem is well positioned to use this inventory to expand existing businesses and attract new businesses by promoting its resource capacity, availability of affordable land supply, and competitive utility rates.



Photo by: Ron Cooper

<sup>&</sup>lt;sup>29</sup> Information from a data request to PGE

<sup>&</sup>lt;sup>30</sup> Information from a data request and meeting with City of Salem Public Works

# For more Information about the Energy Inventory, please contact:

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