


**WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP**  
[westcarb.org](http://westcarb.org)





## WESTCARB Annual Business Meeting

### Oregon Policy Initiatives

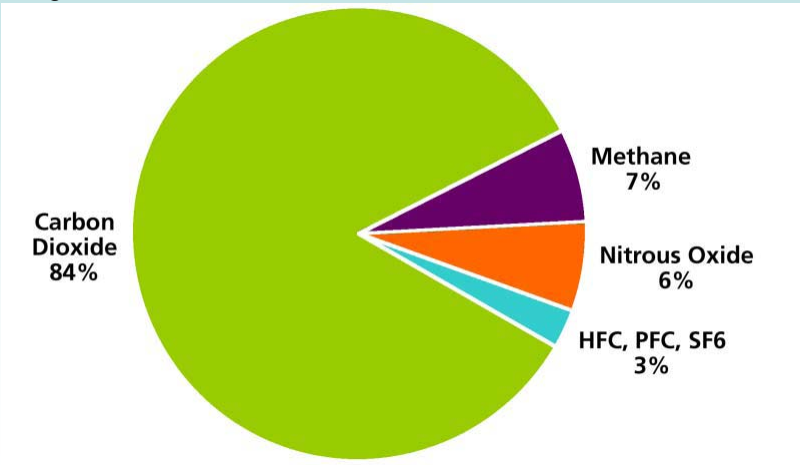
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Seattle, WA  
November 28, 2007



### A Little About Oregon



Oregon Greenhouse Gas Emissions Sources in 2000



Source	Percentage
Carbon Dioxide	84%
Methane	7%
Nitrous Oxide	6%
HFC, PFC, SF6	3%

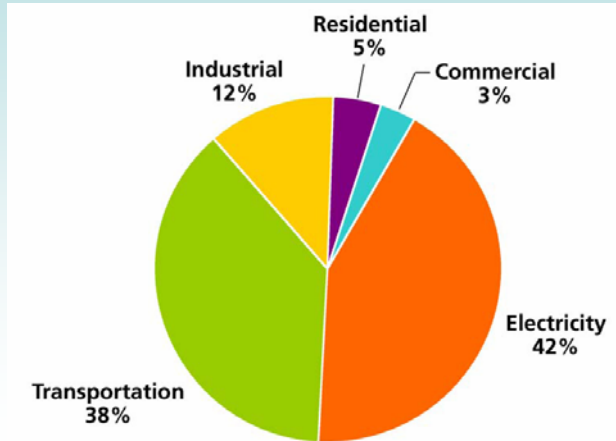
Source: Oregon Strategy for Greenhouse Gas Reductions – Governor's Advisory Group on Global Warming (2004)

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## A Little About Oregon

Oregon's CO2 Emissions from Fossil Fuels by Sector



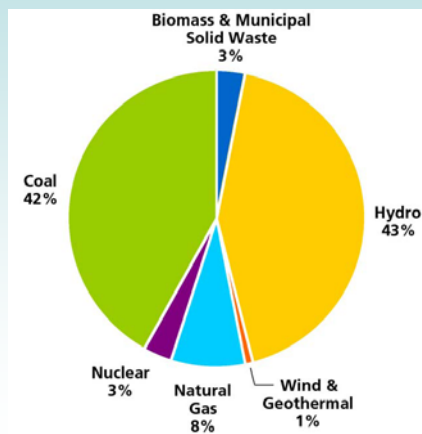
Source: Oregon Strategy for Greenhouse Gas Reductions – Governor's Advisory Group on Global Warming (2004)

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## A Little About Oregon

Electricity Generation Mix Supplying Oregon 2002



Source: Oregon Strategy for Greenhouse Gas Reductions – Governor's Advisory Group on Global Warming (2004)

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## Initiatives

- Best of Batch Competition (mid-1990's)
- Oregon's CO<sub>2</sub> Emission Standard (1997)
- Renewable Energy Action Plan (2003)
- West Coast Governor's Climate Initiative (2003)
- Oregon Strategy for Greenhouse Gas Reductions (2004)
- Forest Biomass Working Group (2005)
- Carbon Allocation Task Force (2005)
- Climate Change Integration Group (2006)
- The Western Climate Initiative (2007)
- 2007 Oregon State Legislature
- Local Action
- Putting it Together – Lakeview Biomass



## Best of Batch Competition

- Up to 500 Megawatt Exemption
- Waived "Need for Power" Siting Standard
- Competition Based on an Environmental Standard – CO<sub>2</sub>
- Initial Award Litigated and Upheld
- Klamath Cogeneration Project Offset Portfolio
  - Solar Electric Light Fund (photovoltaics)
  - Electricity Generation from Waste Methane
  - Geothermal Heating Projects
  - Forest Resource Trust

**Klamath Cogeneration Project**



## Oregon's CO<sub>2</sub> Emission Standard

<b>Base load gas plants</b>	<b>0.675 lb. CO<sub>2</sub> / kWh</b>
<b>Non-base load gas plants</b>	<b>0.675 lb. CO<sub>2</sub> / kWh</b>
<b>Nongenerating facilities</b>	<b>0.504 lb. CO<sub>2</sub> / horsepower-hour</b>

- Adopted in 1997 – New Energy Facilities
- Cogeneration Option
- Offset Projects
  - Own Portfolio
  - Monetary Path – The Climate Trust



Source: Oregon Climate Change Portal <http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>

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## Renewable Energy Action Plan

- Goals
  - Electricity Generation
    - 10% Renewable by 2015; 25% Renewable by 2025
  - Transportation Fuels
    - Biodiesel (5% 2010; 20% 2025)
    - Gasoline/Ethanol (5% E-85 by 2015; 15% E-85 by 2025)
- Actions
  - Biodiesel, Biolubricants, Biofuels, Biogas, Biomass
  - Combined Heat and Power
  - Fuel Cells
  - Geothermal
  - Hydroelectric Generation
  - Ocean, Solar and Wind Energy



Source: Renewable Energy Action Plan (2003)

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## West Coast Governor's Climate Initiative

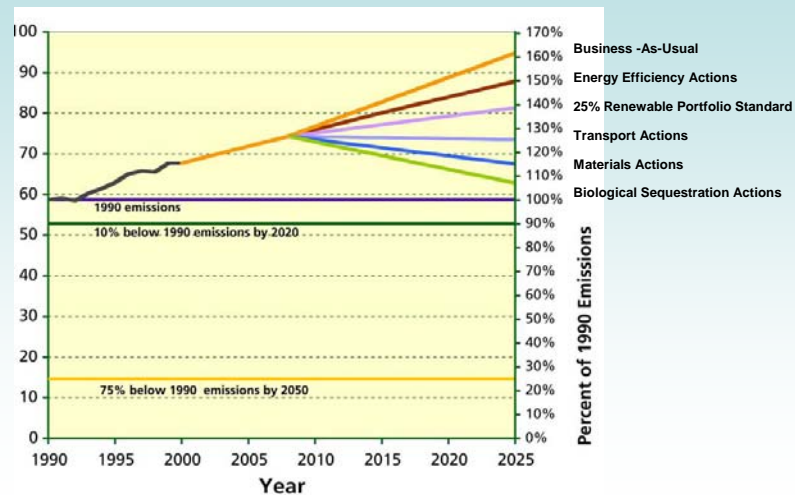
- Oregon, Washington, California
- 36 Recommendations for Five Areas of Action
  - Clean Cars: OR & WA adopt California's greenhouse gas tailpipe emission standards.
  - Appliance Efficiency Standards: All states upgrade to best in USA efficiency standards.
  - Truck Stop Electrification: Pilot program begins along interstates in OR, WA, and CA
  - States enact renewable electricity standards (RPS) and renewable fuel standards (RFS)

Source: David Van't Hof, Office of the Governor (Oregon) – "The Western Climate Initiative: Origins, Status, & Goals" (2007)

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## Oregon Strategy for Greenhouse Gas Reductions



Source: Oregon Strategy for Greenhouse Gas Reductions – Governor's Advisory Group on Global Warming (2004)

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## Forest Biomass Workgroup

### ■ State Actions

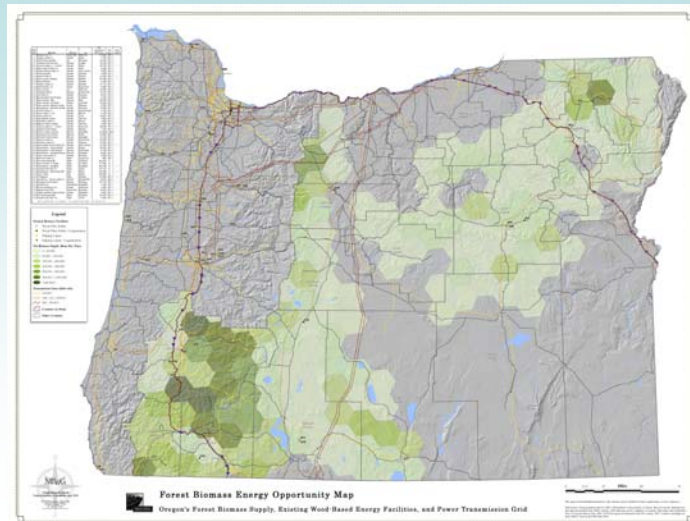
- Fund a biomass coordinator.
- Build on existing forest harvesting and research projects.
- Coordinate R&D technology advances in forest biomass utilization.
- Develop/expand incentives to off-set capital cost of biomass energy.

### ■ Federal Actions

- Fund and support development of the USFS Biomass Strategic Plan.
- Fund research on the conversion of biomass to cellulosic ethanol.
- Build a cellulosic ethanol commercial demonstration facility in Oregon.
- Expedite forest stewardship contracting to secure long-term supply.
- Address inequity in the federal production tax credit.

Source: State of Oregon Forest Biomass Working Group - A Report to the Governor's Renewable Energy Working Group (2007)

## Forest Biomass Opportunity Map



## Carbon Allocation Task Force

- Sets the stage for Oregon to look at carbon “cap and trade”.
- Examine the feasibility of, and develop a design for, a load-based carbon allowance standard for Oregon.
- Standard would reduce total amounts of carbon dioxide (CO<sub>2</sub>) and other greenhouse gas (GHG) emissions due to consumption of electricity, petroleum and natural gas by Oregonians in a deliberate, predictable, effective, equitable and verifiable manner.
- The Task Force will also consider an Oregon renewable portfolio standard and potential changes to public purpose charges as tools to meet a carbon allowance standard and overall state CO<sub>2</sub> goals.

Source: Oregon Climate Change Portal <http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>

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## Climate Change Integration Group

- Develop a Climate Change Strategy that:
  - Provides for long-term sustainability for the environment
  - Protects public health,
  - Consider social equity,
  - Creates economic opportunity,
  - Expands public awareness.
- Workplan for 2007
  - Specific recommendations for climate change adaptation strategies,
  - Strategies for expanding the local production and sales of low-carbon goods and services.
  - Develop an education and communication strategy on climate change in Oregon.
  - Create a state clearinghouse web site on climate change in Oregon.
  - Suggest research needs on climate change for the Oregon Universities.
  - Evaluate deferred measures from the 2004 Greenhouse Gas Reduction Strategy



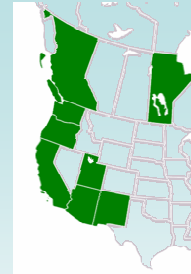
Source: Oregon Climate Change Portal <http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>

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## The Western Climate Initiative

- Formed by 5 western states in 2007; later expanded to 6 western states and 2 Canadian provinces.
- Proposed Actions
  - Set a regional greenhouse gas reduction goal (by 8/07) consistent with state-by-state goals.
  - Develop a design for a “market-based multi-sector mechanism” (by August of 2008) to achieve the regional emissions goal.
  - Participate in The Climate Registry.

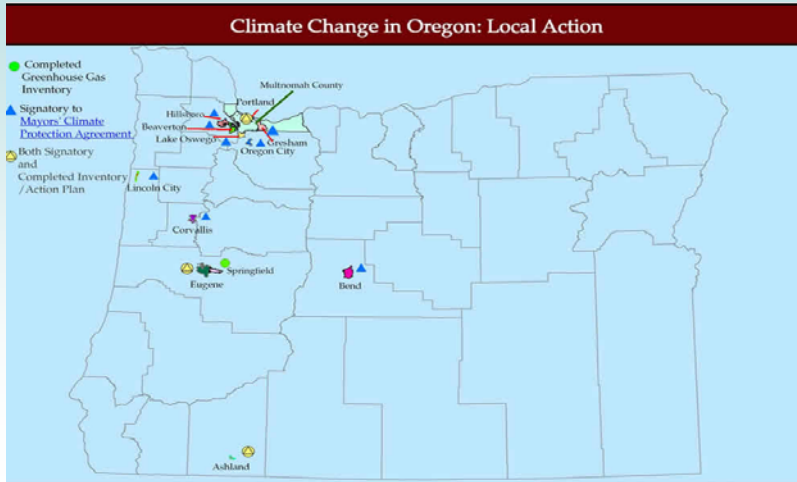


Source: David Van't Hof, Office of the Governor (Oregon) – “The Western Climate Initiative: Origins, Status, & Goals” (2007)

## 2007 Oregon State Legislature

- SB 838 – Renewable Portfolio Standard (25% by 2025)
- HB 2210 – Biofuels Fuels Package
- HB 2211 & HB 2212 – Business and Residential Tax Credits
- HB 2272 – Vehicle Emission Standards (beginning 2009)
- SB 375, HB 2565 – Appliance Efficiency Standards
- SB 875 – Ocean Energy Rules
- HB 3488 – Solar Incentives
- HB 3543 – Global Warming
  - Codifies Greenhouse Gas Reduction Targets
  - Establishes Global Warming Commission

## Local Action



Source: Oregon Climate Change Portal <http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>

## Putting it Together – Lakeview Biomass

- **15 MW Biomass Power Plant**
- **Sustainable – Social, Economic, Environmental**
  - Social – Renewable biomass energy and cogeneration.
  - Economic – Logging, transportation, manufacturing and energy.
  - Environmental – Restore forest health, reduce wildfire severity and extent.
- **Partnership**
  - Lake County Resources Initiative
  - Collins Company
  - US Forest Service Winema/Fremont National Forest
  - US Bureau of Land Management – Lakeview District
  - Defenders of Wildlife
  - Oregon Department of Forestry
  - WESTCARB
  - Many Others



Source: Oregon Solutions - <http://www.orsolutions.org/>;  
Jim Walls National Biomass Conference Presentation

## More Information

- Western Climate Initiative Website  
<http://westernclimateinitiative.org>
- The Climate Registry  
<http://www.theclimateregistry.org>
- Oregon Climate Change Portal  
<http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>

