Reducing Greenhouse Gases in Portland Metro through Integrated Transportation & Land Use

Asilomar – Session IV - Smart Growth and VMT Reduction
Mike Hoglund, Metro Portland, OR
August 31, 2011
Presentation overview

• Portland Metro’s Integrated Planning History
• State of Oregon GHG Requirements
• Metro’s Scenario Planning Approach
  • Framing Choices
  • Analytical Requirements
  • Key Issues/Lessons
• Q&A/Discussion
Portland
Cedar Grove
Planning For A Sustainable Metropolitan Region
Metro’s Role
Building on past innovation and successes

- **1992 - 1995:** Region 2040
- **1996 - 2009:** 2040 Implementation
- **2010:** Climate Smart Communities
  - GHG/Trans/LU Scenario Planning
  - Climate Prosperity
  - Climate Preparedness
  - Analytical Tools & Methods
- **2011 & beyond:** Implementation
Concepts for growth
1992-1995

Base Case

Concept A

Concept B

Concept C

2040 Growth Concept
2040: Maintaining a tight UGB
2040: Local plan implementation
“A level playing field”

- Housing and jobs targets
- Stream protection
- Regional parking management
- Street design standards (boulevards)
- Street connectivity
- Multi-modal mobility corridors
- Model development codes
2040: Preserving natural areas

To date:

- 11,200 acres purchased & preserved
- more than 90 miles of rivers and streams protected
- more than one million trees planted
2040: Investing in communities
1995-2010 (millions)

- Bike/Ped: $127
- HCT: $138
- Freight: $45
- RTO: $41
- TOD: $32
- Blvd.: $24
- Other: $27

71 percent ($309 M) of regional flex funds spent on 2040 implementation projects.
The region’s growth strategy is working
Portland area residents drive less...

1990-2008 average vehicle miles traveled (VMT) per capita

...bike more...

## World’s top eleven bicycle cities

1. Amsterdam, Netherlands
2. Portland, Oregon, USA
3. Copenhagen, Denmark
4. Boulder, Colorado, USA
5. Davis, California, USA
6. Sandnes, Norway
7. Trondheim, Norway
8. San Francisco, California, USA
9. Berlin, Germany
10. Barcelona, Spain
11. Basel, Switzerland

*Source: League of American Bicyclists*
...take transit more...

Per Capita Transit Trips, 2005

- Portland
- Seattle
- Los Angeles
- Baltimore
- Denver
- Atlanta
- Miami
- Houston
- Dallas
...and, emit fewer greenhouse gases.

Source: City of Portland and Multnomah County, 2009.
What have we done lately?
Oregon Greenhouse Gas Goals

Stop emissions increases by 2010
10% reduction below 1990 levels by 2020
75% reduction below 1990 levels by 2050

Adopted by the 2007 Legislature, the goals are for all greenhouse gas emissions sources.
Resolution No. 08-3931 approved sustainability definition and development of climate action plan
Resolution No. 08-3971 launched Climate Smart Communities Initiative
Mandated state climate work
HB 2001/SB 1059

• Set statewide transportation strategy
• Set MPO GHG targets for light duty vehicles (<10,000 lbs.)
• Develop scenario guidelines & toolkit
• Estimate future vehicle and fuel technology
• Public outreach campaign
• Portland Metro scenario planning
• Report to 2011 and 2012 Legislatures

Climate Smart Communities
Portland Metro scenario planning
Light vehicles: region’s mandated focus

The State calls for the region to reduce per capita greenhouse gas emissions from cars, small trucks and SUVs by 20 percent below 2005 levels.
Oregon MPO 2035 GHG Targets
(reduce per capita light vehicle GHG emissions below 2005 levels)

<table>
<thead>
<tr>
<th>Metropolitan Area</th>
<th>Adopted Target</th>
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<tbody>
<tr>
<td>Portland Metro</td>
<td>20%</td>
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<tr>
<td>Eugene-Springfield</td>
<td>20%</td>
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<td>Salem-Keizer</td>
<td>17%</td>
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<td>Rogue Valley</td>
<td>19%</td>
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<tr>
<td>Bend</td>
<td>18%</td>
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<tr>
<td>Corvallis</td>
<td>21%</td>
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# Project tracks

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<thead>
<tr>
<th>Technical &amp; policy analysis</th>
<th>Understand choices Phase 1</th>
<th>Shape Direction Phase 2</th>
<th>Select Strategy Phase 3</th>
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<tbody>
<tr>
<td></td>
<td>• Evaluation framework</td>
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<td>• Preferred scenario</td>
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<td>• Strategy toolbox research</td>
<td>• Alternative scenarios</td>
<td>• Update regional plans</td>
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<td>• Tool development and</td>
<td>• Tool integration &amp;</td>
<td>and policies</td>
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<td>sensitivity testing</td>
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<td>Communications &amp; engagement</td>
<td>• Opinion research</td>
<td>• Design workshops</td>
<td>• Public comment period</td>
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<td>• Stakeholder interviews</td>
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<td>• Best practices</td>
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<td>Tools</td>
<td>• Metropolitan GreenSTEP</td>
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<td>• Literature Review</td>
<td>• Envision Tomorrow</td>
<td>• Regional travel model</td>
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<td>• MetroScope</td>
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<td>• MOVES</td>
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*We Are Here*
Scenarios timeline

2011
Phase 1

Understanding choices

We are here
Jan. 2012
Report to Legislature

2012
Phase 2

Shaping the direction

Nov. 2012
Confirm preferred scenario elements

2013-14
Phase 3

Building the strategy

June 2014
Adopt preferred strategy; begin implementation

We are here.
Local implementation

- Comprehensive plans and zoning
- Transportation system plans
- Development codes
- Community investments
2040: Local aspirations and actions
Packages of policies and actions
Testing bundles of “plausible” strategies

Regional Scenarios

- Pricing
- Marketing and incentives
- Management and operations
- Community design
- Fleet and vehicle technology

Note: The state will provide assumptions
Land use strategies

*Emphasize low carbon development patterns*

- More infill and redevelopment in centers and corridors
- More mixed use and transit oriented development
- Higher densities for new development
- Tight urban growth boundary
Transportation strategies

*Expand low carbon travel options*

- Incentives for walking, biking, transit and low carbon vehicles
- Complete pedestrian and bike networks
- Transit service
- Parking management
- System management/pricing
# Technology & fleet estimates for the Portland region

<table>
<thead>
<tr>
<th></th>
<th>Fuel Economy mpg</th>
<th>Fleet Mix percentage</th>
<th>Hybrids percentage</th>
<th>Fuel Carbon Content percentage improvement</th>
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<tbody>
<tr>
<td></td>
<td>cars &amp; trucks</td>
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<tr>
<td>2005</td>
<td>29 &amp; 21</td>
<td>57 &amp; 43</td>
<td>0</td>
<td>0</td>
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<tr>
<td>2035</td>
<td>68 &amp; 48</td>
<td>71 &amp; 29</td>
<td>8 &amp; 2</td>
<td>20</td>
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Source: State Agency Technical Report (March 1, 2011) and assumed in the Metropolitan GHG Reduction Targets Rule
Scenarios show a range of potential reductions (2035/2050)
Most effective strategies

• Technology and fuels

• Built environment and community design
  • Infill, mixed-use, transit supportive development in centers
  • Expanded transit and active transportation networks
  • More jobs and services near where people live

• Pricing
  • Parking management
  • Fees that increase the cost to drive

• Marketing and other trip reduction programs
Assessing the benefits and impacts

- Greenhouse gas emissions
- Travel behavior
  - Walking, biking and transit
  - Vehicle miles traveled
  - Freight reliability
- Jobs and households
- Economy
- Public health and equity
- Household cost and affordability
Climate Smart Communities

Communications

PSSST...

IT'S A COVER-UP. FOLLOW THE MONEY.

CLIMATE GATE'S "DEEP THROAT"
Top Priorities for 2010

% rating each a "top priority"

- Economy: 83
- Jobs: 81
- Terrorism: 80
- Social Security: 66
- Education: 65
- Medicare: 63
- Deficit reduction: 60
- Health care: 57
- Helping the poor: 53
- Military: 49
- Energy: 49
- Health insur.: 49
- Crime: 49
- Moral decline: 45
- Finance reg.: 45
- Environment: 44
- Tax cuts: 42
- Immigration: 40
- Lobbyists: 36
- Trade policy: 32
- Global warming: 28

Q30a-w.
Let’s not talk about climate change... let’s do talk about outcomes...
Metro Council’s **Desired Outcomes**

- **Vibrant communities**
- **Equity**
- **Economic prosperity**
- **Transportation choices**
- **Clean air & water**
- **Climate leadership**
Data Gaps

• More research into health & equity benefits/impacts
• How does Climate Smart development grow businesses and create jobs?
• From Green Dividend to “Neighborhood Dividend”
• Mitigation vs. Adaptation (costs)
• Future housing preferences
Discussion

For more information, contact:
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