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Portland, OR 97232-2736
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Metro | *Agenda*

Meeting: Transportation Policy Alternatives Committee (TPAC)
Date: Friday, January 7, 2011
Time: 9:30 a.m. to noon
Place: Council Chambers

9:30 AM	**1.**		**Call to Order and Declaration of a Quorum**	**John Williams, Chair**
9:30 AM	**2.**		**Comments from the Chair and Committee Members** • Welcome and Introduce New TPAC Citizen Members • Mobility Corridor Atlas Web Site Update • 2035 RTP approved by DLCD on Nov. 24, 2010	**John Williams, Chair**
9:35 AM	**3.**		**Citizen Communications to TPAC on Non-Agenda Items**	
9:40 AM	**4.**		**CONSENT AGENDA**	
		*	• Approval of the TPAC Minutes for October 29, 2010	
		*	• Approval of the TPAC Minutes for November 19, 2010	
	5.		**INFORMATION / DISCUSSION ITEMS**	
9:45 AM	**5.1**	#	Climate Smart Communities Scenarios – INFORMATION / DISCUSSION • *Purpose*: Brief TPAC on proposed scenario development approach and upcoming discussion topics. • *Outcome*: TPAC input on proposed approach and committee's role.	**Kim Ellis**
10:15 AM	**5.2**	*	Oregon Sustainable Transportation Initiative (OSTI) – INFORMATION / DISCUSSION • *Purpose*: Brief TPAC on the 1st round of scenarios for the Statewide Transportation Strategy for reducing greenhouse gas emissions (GHGs). • *Outcome*: TPAC understanding of the GreenSTEP model, state-level scenarios assumptions, initial scenario results and next steps for setting GHG targets for the Metro region.	**Brian Gregor, ODOT**
11:15 AM	**5.3**	*	Regional Flexible Fund Task Force Strategy Draft Report – INFORMATION / DISCUSSION • *Purpose*: Brief TPAC on the draft RFFA task force report • *Outcome*: TPAC understanding of the direction the RFFA task force is recommending for the allocation of 2014-15 funds.	**Dylan Rivera** **Ted Leybold**

11:35 AM	**5.4**	*	Region wide Flexible Funds (Step 1) Review: Transportation System Management & Operations (TSMO) programs - Regional Transit Options (RTO) and Regional Mobility – INFORMATION • *Purpose*: Provide review of the Regional Travel Options and Regional Mobility programs as a component of the regional flexible fund allocation process. • *Outcome*: Clear understand of strategic direction and program activities.	**Deena Platman** **Dan Kaempff**
12 PM	**6.**		**ADJOURN**	**John Williams, Chair**

* Material available electronically.
** Materials will be distributed at prior to the meeting.
# Material will be distributed at the meeting.

For agenda and schedule information, call Kelsey Newell at 503-797-1916, e-mail: kelsey.newell@oregonmetro.gov.
To check on closure or cancellations during inclement weather please call 503-797-1700#.

Upcoming JPACT action items:
- FY12 Federal Appropriations and Authorization (**January 2011**)
- Lake Oswego to Portland Transit Project Locally Preferred Alternative (LPA) (**February 2011**)

Future TPAC discussion items:
- MOVES update
- On-street Bus Rapid Transit
- The State of Travel Models and how to use them
- Active Transportation update
- High Speed Rail – ODOT funds, alignment and station areas, etc.
- Update on the Columbia River Crossing Project
- Context sensitive design and least cost planning
- A briefing on the Metro Auditor's *Tracking Transportation Project Outcomes* report

2011 TPAC Work Program
12/29/10

January 7, 2011 – Regular Meeting • Region wide Flexible Funds (Step 1) Review: Transportation System Management & Operations (TSMO) and Regional Transit Options (RTO) • Climate Smart Communities Scenarios Development Approach – Information/Discussion • Oregon Sustainable Transportation Initiative (OSTI) Briefing – Discussion on Round 1 State Strategy Scenario Analysis • RFFA Task Force Strategy Recommendation – Briefing and Discussion	**January 28, 2011 – Regular Meeting** • Climate Smart Communities Scenarios – Discussion on Policy Toolbox and Evaluation Framework • Lake Oswego to Portland Transit Project Locally Preferred Alternative (LPA) Briefing – Information • Draft Unified Planning Work Program – Discussion • Opt In – Internet Opinion Panel – Information • Regional Flexible Funds Allocation: Criteria and Measures – Discussion • Active Transportation Projects Criteria and Evaluation – Information • ODOT State Freight Plan – Information
February 25, 2011 – Regular Meeting • Climate Smart Communities Scenarios – Discussion on Policy Options and Evaluation Framework • Lake Oswego to Portland Transit Project Locally Preferred Alternative (LPA) – Recommendation to JPACT • Oregon Sustainable Transportation Initiative – Discussion on State Transportation Strategy and Draft Metro Region Targets • Making the Greatest Place – Information/ Discussion o State of the Centers Report and 2040 Context Tool o Interim HCT System Expansion Policy Guidance (draft) o Local Plan Implementation Guidance (RTP and Title 6)	**March 25, 2011 – Regular Meeting** • 2011 – 2012 UPWP and Annual MPO Self-Certification – Recommendation to JPACT • Interim HCT System Expansion Policy Guidance – Discussion **FYI: April 1 Joint JPACT/MPAC Meeting** Climate Smart Communities Scenarios • Public Opinion Research Findings • Policy Options to Test
April 29, 2011 – Regular Meeting • Climate Adaptation Framework – Information/Discussion • Climate Smart Communities Scenarios Evaluation – Recommendation to JPACT • Interim HCT System Expansion Policy Guidance – Recommendation to JPACT	**May 27, 2011 – Regular Meeting**
July 1, 2011 – Regular Meeting	**July 29, 2011 – Regular Meeting** • 2014-15 Regional Flexible Fund Allocation – Recommendation to JPACT Climate Smart Communities Scenarios - Discussion on Preliminary Results

August 26, 2011 – Regular Meeting	**September 23, 2011 – Regular Meeting** **FYI: Hold Joint JPACT/MPAC Meeting** Climate Smart Communities Scenarios Results and Preliminary Recommendations
October 28, 2011 – Regular Meeting • Climate Smart Communities Scenarios – Discussion on Findings and Recommendations to be Submitted to 2012 Legislature	**November 18, 2011 – Regular Meeting** • 2012-15 MTIP/STIP Approval and Air Quality Conformity – Recommendation to JPACT • Climate Smart Communities Scenarios – Recommendation to JPACT on Findings and Recommendations to be Submitted to 2012 Legislature

Parking Lot:

- MOVES update
- On-street Bus Rapid Transit
- The State of Travel Models and how to use them
- Active Transportation update
- High Speed Rail
- Update on the Columbia River Crossing Project
- Context sensitive design and least cost planning
- A briefing on the Metro Auditor's *Tracking Transportation Project Outcomes* report
- Congestion Pricing Pilot Study

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TRANSPORTATION POLICY ALTERNATIVES COMMITTEE
October 29, 2010
Metro Regional Center, Rooms 370A & B

MEMBERS PRESENT	AFFILIATION
Sorin Garber	Citizen
Elissa Gertler	Clackamas County
Mara Gross	Citizen
Katherine Kelly	City of Gresham, Representing Cities of Multnomah Co.
Scott King	Port of Portland
Nancy Kraushaar	City of Oregon City, Representing Cities of Clackamas Co.
Alan Lehto	TriMet
Keith Liden	Citizen
John Reinhold	Citizen
Paul Smith	City of Portland
Jenny Weinstein	Citizen
Tracy Ann Whalen	Citizen
Rian Windsheimer	Oregon Department of Transportation
Sharon Zimmerman	Washington State Department of Transportation

MEMBERS EXCUSED	AFFILIATION
Brent Curtis	Washington County
John Hoefs	C-TRAN
Dean Lookingbill	SW Washington RTC
Mike McKillip	City of Tualatin, Representing Cities of Washington Co.
Satvinder Sandhu	FHWA
Karen Schilling	Multnomah County
Dave Nordberg	Oregon Department of Environmental Quality

ALTERNATES PRESENT	AFFILIATION
Andy Back	Washington County
Nancy Cardwell	Oregon Department of Environmental Quality
Lynda David	SW Washington RT
Margaret Middleton	City of Beaverton, Representing Cities of Washington Co.

STAFF: Colin Deverell, Kim Ellis, Tom Kloster, Ted Leybold, Lake McTighe, Kelsey Newell, Ross Roberts, Dylan Rivera, Mark Turpel.

1. CALL TO ORDER AND DECLARATION OF A QUORUM

Chair Ross Roberts declared a quorum and called the meeting to order at 9:35 a.m.

2. COMMENTS FROM THE CHAIR AND COMMITTEE MEMBERS

Chair Roberts highlighted the upcoming Oregon Climate Summit and updated the committee on the development of the Regional Flexible Fund task forces.

3. CITIZEN COMMUNICATIONS ON NON-AGENDA ITEMS

There were none.

4. APPROVAL OF THE TPAC MINUTES FOR OCTOBER 1, 2010

MOTION: Mr. Alan Lehto moved, Ms. Tracy Ann Whalen seconded, to approve the October 1, 2010 TPAC Minutes.

ACTION TAKEN: With all in favor, the motion passed.

5. ACTION ITEMS

5.1 Resolution No. 10-4201, "For the Purpose of Amending the 2008-13 Metropolitan Transportation Improvement Program (MTIP) to Include Funding of Initial Land Acquisition, Construction and Related Costs for the Portland-Milwaukie Light Rail Project."

Mr. Ted Leybold and Mr. Mark Turpel of Metro described the amendment, which would formally recognize approved funding sources for the Portland-Milwaukie Light Rail (PMLR) project, allowing for the commencement of related right-of-way acquisitions and preliminary construction tasks.

MOTION: Mr. Paul Smith moved, Mr. Sorin Garber seconded, to recommend Resolution No. 10-4201 to JPACT.

ACTION TAKEN: With all in favor, the motion passed.

5.2 Resolution No. 10-4210, "For the Purpose of Amending the 2010-12 Metropolitan Transportation Improvement Program (MTIP) to Transfer Funds from the Greenburg Road: Tiedeman to Hwy 217 Project to the Walnut Street: Tiedeman to 116th Project."

Mr. Leybold and Mr. Mike McCarthy of the City of Tigard presented the resolution. Mr. McCarthy described the current project as financially impractical due to an unforeseen

requirement of bridge replacement along the route and presented the City of Tigard's request to divert the funds to a similarly important but more feasible project.

Committee members discussed the resolution, noting their general support for the changes, but inquired about this project's ability to meet the criteria set for the original project and whether TPAC was considering the funds inappropriately.

MOTION: Mr. Keith Liden moved, Ms. Nancy Kraushaar seconded, to recommend Resolution No. 10-4210 to JPACT.

ACTION TAKEN: With seventeen in favor, one opposed (Whalen), the motion passed.

5.3 Resolution No. 10-4211, "For the Purpose of Amending the 2010-13 Metropolitan Transportation Improvement Program (MTIP) to Delete the Washington Square Regional Center Trail: Hall to Greenburg Project and Substitute the Fanno Creek Trail: Main to Hall Project."

Mr. Leybold described the amendment, noting the original project's inability to move forward due to the lack of a willing seller in the proposed right-of-way. The City of Tigard requested that funds for the project be reallocated for other trail improvements.

Committee members discussed the resolution and inquired about the changes in the project's funding mechanics.

MOTION: Mr. Lehto moved, Ms. Margaret Middleton seconded, to recommend Resolution No. 10-4211 to JPACT.

ACTION TAKEN: With seventeen in favor, one opposed (Reinhold), the motion passed.

6. INFORMATION/DISCUSSION ITEMS

6.1 Regional Flexible Fund Step 1 Review: Regional Planning Program

Mr. Tom Kloster of Metro briefed the committee on the allocation of MTIP funds for regional planning efforts. Mr. Kloster described JPACT's past decision to adopt an MTIP/STIP model in lieu of a regional dues program and its likely continuation. Mr. Kloster also described several of the areas to which MTIP funds are allocated, including regional freight planning, livable streets and local project development.

The committee inquired about specific aspects of the regional planning process and concerns raised by the Metro auditor regarding project outcome measurement. Mr. Kloster acknowledged there was room for improvement, but that additional funds would be required to address them. Members requested a visual representation of the historical RFF allotments to regional planning efforts and an update on the travel demand survey.

6.2 State Transportation Improvement Program (STIP) Draft for Public Comment

Mr. Rian Windsheimer updated the committee on the STIP draft prepared by ODOT, provided a list of safety and preservation projects and noted the modeling used to develop projects. Mr. Windsheimer reiterated ODOT's commitment to work with local jurisdictions to leverage limited funds effectively.

Committee members inquired about specific projects and the application process. Members also inquired about the projects' alignment with the RTP and the ability of projects to qualify under both the "safety" and "preservation" categories.

6.3 Oregon Transportation Greenhouse Gas Emission Reduction Planning (HB 2001/SB 1059)

Ms. Kim Ellis of Metro introduced Mr. Bob Cortright from the Oregon Department of Land Conservation and Development, who reported on the state's greenhouse gas (GHG) emissions planning efforts and their implications for the Portland metropolitan area. Mr. Cortright described the challenges ahead in addressing the state-mandated reduction in carbon emissions and the ongoing development of emissions reduction strategies. The statewide strategy will identify the combination of strategies needed to meet the state goals, with transportation-related GHG emissions reduction targets being developed for each metropolitan area. The Portland metropolitan region's scenario planning effort will be focused on identifying the combination of strategies needed to meet the region's target, tailored to address trips that begin, end or are entirely within the region's urban growth boundary.

Committee members discussed the specifics of the relevant legislation and the areas of responsibility for the region and state. Intercity travel options will be an important component of the overall strategy. Members discussed the risks of overly aggressive technical assumptions and highlighted the importance of considering a range of these assumptions at the state level. Members also noted the significance of addressing the equity implications of the different strategies, along with providing state-level incentives and public outreach.

7. ADJOURN

Seeing no further business, Chair Roberts adjourned the meeting at 11:48 a.m.

Respectfully submitted,

Colin Deverell
Recording Secretary

ATTACHMENTS TO THE PUBLIC RECORD FOR OCTOBER 29, 2010
The following have been included as part of the official public record:

ITEM	DOCUMENT TYPE	DOC DATE	DOCUMENT DESCRIPTION	DOCUMENT NO.
5.2	Handout	n/a	City of Tigard - Proposed Walnut St. Improvements	102910t-01
6.1	PowerPoint	n/a	Regional Planning Funds	102910t-02
6.2	Handout	10/25/2010	ODOT Region 1 Draft 2014-15 STIP Candidate List	102910t-03
6.3	PowerPoint	n/a	State and Metropolitan GHG Planning	102910t-04

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TRANSPORTATION POLICY ALTERNATIVES COMMITTEE
November 19, 2010
Metro Regional Center, Council Chambers

MEMBERS PRESENT	AFFILIATION
Sorin Garber	Citizen
Mara Gross	Citizen
Katherine Kelly	City of Gresham, Representing Cities of Multnomah Co.
Scott King	Port of Portland
Alan Lehto	TriMet
Mike McKillip	City of Tualatin, Representing Cities of Washington Co.
John Reinhold	Citizen
Tracy Ann Whalen	Citizen
Rian Windsheimer	Oregon Department of Transportation
Sharon Zimmerman	Washington State Department of Transportation

MEMBERS EXCUSED	AFFILIATION
Brent Curtis	Washington County
John Hoefs	C-TRAN
Elissa Gertler	Clackamas County
Nancy Kraushaar	City of Oregon City, Representing Cities of Clackamas Co.
Keith Liden	Citizen
Dean Lookingbill	SW Washington RTC
Satvinder Sandhu	FHWA
Karen Schilling	Multnomah County
Paul Smith	City of Portland
Dave Nordberg	Oregon Department of Environmental Quality
Jenny Weinstein	Citizen

ALTERNATES PRESENT	AFFILIATION
Kenny Asher	City of Milwaukie, Representing Cities of Clackamas Co.
Andy Back	Washington County
Margaret Middleton	City of Beaverton, Representing Cities of Washington Co.
Jane McFarland	Multnomah County

STAFF: Colin Deverell, Megan Gibb, Ted Leybold, Lake McTighe, Kelsey Newell, Tim O'Brien, Ross Roberts, Gerry Uba, John Williams, Chris Yake, Dennis Yee.

1. CALL TO ORDER AND DECLARATION OF A QUORUM

Chair Ross Roberts declared a quorum and called the meeting to order at 9:34 a.m.

2. COMMENTS FROM THE CHAIR AND COMMITTEE MEMBERS

Noting the close of the terms of service for several of TPAC's citizen members, Chair Roberts thanked Mr. Sorin Garber, Mr. Keith Liden and Mr. John Reinhold for their work on the committee. Members stated their gratitude for the hard work and commitment demonstrated by those leaving TPAC. Chair Roberts also introduced new citizen members, Mr. Chris Banes, Ms. Marta Carrillo and Mr. Charlie Stevens, who will begin their terms in January.

Mr. Rian Windsheimer described the continuing review of ODOT's STIP draft project list, reminded the committee of their opportunity to comment on the list and noted an edited timeline for the selection process.

Mr. Alan Lehto requested an addition to the meeting's agenda to discuss the revised 2040 Growth Concept map, recently considered by MPAC.

Committee members commented on the agenda's brevity and inquired about the Regional Flexible Fund (RFF) Step 3 process. Metro staff indicated that the TPAC agenda was tied to JPACT's and that staff looked to fill out the agenda wherever possible. Mr. Ted Leybold of Metro noted that the RFF Task Force and the Environmental Justice work group have just began its series of meetings and that regular updates would be provided. Persons interested in receiving meeting notices and materials for the Task Force or the Environmental Justice work group can notify Mr. Leybold to be added to the interested parties' notification list.

Members also stated an interest in discussing High Speed Rail (HSR) and inviting Metro Council President-elect, Tom Hughes, to meet the committee.

3. CITIZEN COMMENTS ON NON-AGENDA ITEMS

There were none.

4. APPROVAL OF THE TPAC MINUTES FOR OCTOBER 29, 2010

MOTION: Ms. Tracy Ann Whalen moved, Mr. Lehto seconded, to approve the October 29 TPAC Minutes.

Discussion: Members gave direction to add language regarding requests made to staff during the meeting and additional detail regarding the discussion of ODOT's draft STIP project list. Staff will make the requested changes and bring the revised minutes to the January TPAC meeting.

ACTION TAKEN: No action was taken.

5. INFORMATION/DISCUSSION ITEMS

5.1 Region-wide Flexible Funds (Step 1) Review: Transit Oriented Development

Ms. Megan Gibb and Mr. Chris Yake of Metro provided an overview of Metro's Transit Oriented Development (TOD) program to the committee. Ms. Gibb described the program as a synthesis of land use and transportation planning, using public/private partnerships to invest in "brick and mortar" development, increase transit ridership and leverage additional investments. The program, active since 1996 with consistent funding since 1998, uses monetary incentives to offset the costs related to increasing density. Ms. Gibb cited several examples of projects that utilized TOD funds and several that were in planning or already under construction.

Mr. Yake briefed the committee on the status of the TOD Strategic Plan, the program's current initiative to better utilize and leverage limited TOD funding. Mr. Yake described the Strategic Plan as being focused on near-term implementation and noted the categories used to evaluate an area's readiness for TOD investment, along with a graph illustrating potential TOD projects based on the surrounding urban form and market activity.

Committee members posed a variety of questions related to the program. Members inquired about the ability of the program to increase transit use, provide affordable housing and its relationship to the 2035 Regional Transportation Plan (RTP). Members were also interested in the program's solicitation process and what types of predevelopment work were included in the program, if any.

5.2 2045 Household and Employment Forecast Update

Mr. Gerry Uba of Metro briefed the committee on the allocation process for the 2045 Household and Employment Forecast. In 2009, Metro released the population range forecast, which included 1.2 to 1.3 million new residents and 1.3 to 1.7 jobs. This project will provide data that is utilized in planning around the region, including local periodic review work and comprehensive plan updates, transportation system plan updates, corridor planning, MTIP project evaluation and Regional Transportation Plan updates. Currently, Metro staff is working to distribute the forecast to the Transportation Analysis Zone (TAZ) level by the end of 2011, build on the regional analysis completed for the Community Investment Strategy project and refine the land use supply information to include recent policy decisions, such as Urban and Rural Reserves. Mr. Uba indicated that Metro staff was looking at land inside the UGB and outside the UGB in exurban areas, in addition to the newly designated reserves. He also indicated that Metro staff will work with County staff to coordinate local reviews of key inputs of the Metroscope model and the allocation of dwelling units and jobs at TAZ level.

Members inquired about the impact of climate change on the modeling and possible input on TAZs.

5.3 2040 Growth Concept Map Update

Mr. John Williams and Mr. Tim O'Brien of Metro briefed TPAC on the updated 2040 Growth Concept map, stating that the changes were primarily graphical and not intended to reflect any changes in policy.

Committee members discussed the map and, while noting that it was primarily a land use document, indicated that the map still retained relevance for transportation issues. Members inquired about map designations, specifically related to neighborhood and employment areas. Mr. Lehto noted that Tri-Met uses the inner/outer neighborhood designation in some service decisions, and hoped that this designation would be retained on the 2040 map.
Staff stated that they would examine technical questions and bring TPAC's concerns to the Metro Council.

6. ADJOURN

Seeing no further business, Chair Roberts adjourned the meeting at 11:21 a.m.

Respectfully submitted,

Colin Deverell
Recording Secretary

ATTACHMENTS TO THE PUBLIC RECORD FOR NOVEMBER 19, 2010
The following have been included as part of the official public record:

ITEM	DOCUMENT TYPE	DOC DATE	DOCUMENT DESCRIPTION	DOCUMENT NO.
	Handout	n/a	Updated ODOT 2014-15 Draft STIP Timeline	111910t-01
5.1	Handout	n/a	TOD Program Brochure	111910t-02
5.1	Handout	n/a	TOD Program 2009-10 Annual Report	111910t-03
5.1	PowerPoint	11/19/10	Transit Oriented Development & Centers Program	111910t-04
5.2	Handout	10/27/10	Household and Employment Distribution Key Points	111910t-05
	Handout	11/12/10	2040 Growth Concept Map Preliminary Draft	111910t-06

Oregon SB 1059 Statewide Transportation Strategy To Reduce Greenhouse Gas Emissions in the Transportation Sector

Rationale

- Section 2 of SB 1059 requires the Oregon Transportation Commission to "adopt a statewide transportation strategy on greenhouse gas emissions to aid in achieving the greenhouse gas emissions reduction goals set forth in ORS 468A.205".
- A statewide strategy is needed to identify the general course needed to achieve the state's greenhouse gas emission reduction goals.
- A statewide strategy is also needed to provide the context for developing metropolitan area targets for reducing greenhouse gas emissions from light vehicles (also required by SB 1059).
- The strategy will provide a factual basis to inform the development of future policies and laws aimed at reducing greenhouse gas emissions from the transportation sector.

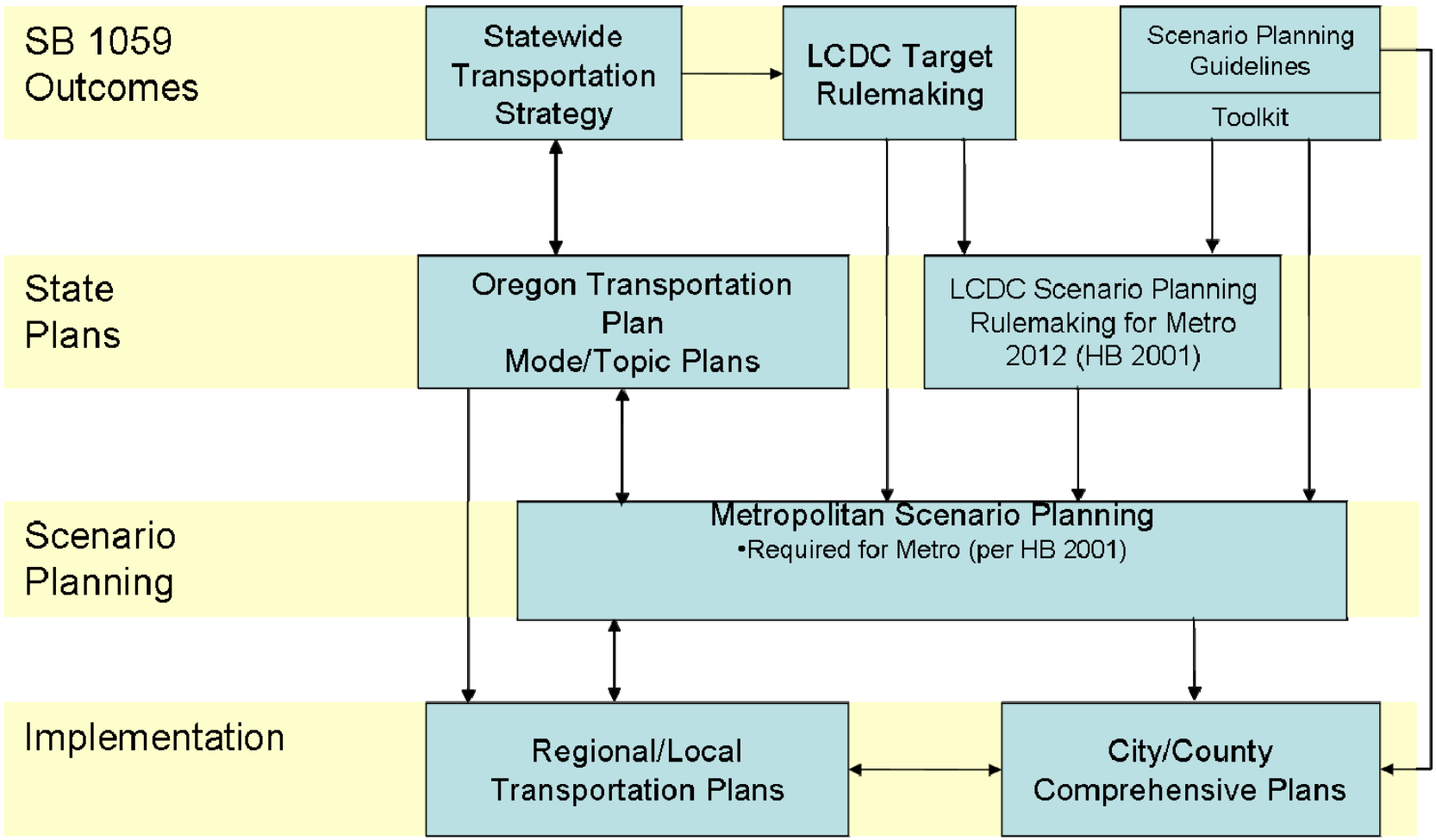
Description

- The Statewide Transportation Strategy will include a long-range vision (to 2050) for substantially reducing GHG emissions from the transportation sector to aid in achieving the GHG emission reduction goals set forth in ORS 468A.205.
- The strategy will describe the general characteristics of transportation systems, vehicle and fuel technologies and land use patterns (to the extent that land use patterns significantly affect transportation sector greenhouse gas emissions) anticipated to be necessary to achieve the reductions in transportation sector greenhouse gas emissions.
- The strategy will make recommendations regarding new policies or significant changes to existing policies that are anticipated to be necessary to carry out the vision, and will integrate into existing transportation planning processes *(as shown in the graphic on the reverse side)*.
- The strategy is not a deterministic plan, rather it plots out a general course for achieving goals based on current knowledge, analysis, and reflection. It is one step in an iterative management process that also includes the monitoring of transportation and land use system changes that affect greenhouse gas emissions, the evaluation of the relative success of policies and actions put into place to reduce emissions, and the improvement of methods and tools for evaluating prospective actions to reduce emissions.

Scope

- The strategy will address greenhouse gas emissions from the travel of Oregonians and movement of freight to support Oregon's economy by all modes of transportation.
- The strategy will identify approaches to achieve the state's greenhouse gas emission reduction goals, including measures that reduce emissions per mile and measures that reduce vehicle miles traveled.
- The strategy will consider the effects of characteristics of vehicle technologies, vehicle energy sources, travel demand and factors affecting travel demand, and transportation system operation on greenhouse gas emissions from the transportation sector.
- The strategy will consider the effects of actions that are being taken or that might be taken at the federal level, state level, and local level, as well as by the private sector.
- The strategy will have a broad focus and include general actions and potential policy recommendations that can be implemented at the state, regional, and local levels. Through this broad focus and the collaboration outlined by the legislation, the strategy will provide a framework which will be complimentary to greenhouse gas emission reduction efforts by other agencies.
- In evaluating prospective actions to reduce transportation sector greenhouse gas emissions, the strategy will also consider economic, social, environmental, and energy consequences.
- The strategy will consider uncertainties about future conditions and the efficacy of potential actions and the risks posed by the uncertainties and the potential consequences if more or less favorable outcomes occur.

Integrated Transportation Planning Reflecting GHG Considerations



Oregon Sustainable Transportation Initiative (SB 1059)
Key Activities and Decision Matrix
Through January 2012

Deliverable / Activity	Committees				Decision Maker	Estimated Completion
	STS TAC	STS PC	SP TAC	TRAC		
Statewide Transportation Strategy						
• Phase 1: Research and analysis of GHG emissions reduction from light vehicles	Review	Recommend	Brief	Brief		Mar-11
• Phase 2: Research and analysis of GHG emissions reduction from all vehicles. Adopt a Statewide Transportation Strategy to reduce GHG emissions from the entire transportation sector.	Recommend to PC	Recommend to OTC	SP TAC is done by Dec-11	TRAC is done by July-11	OTC	Jan-12
Agency Technical Report						Mar-11
• Estimate 1990 baseline VMT and GHG emissions in each metropolitan area	Review	Brief	Brief	Brief	ODOT ODOE/DEQ	Mar-11
• Estimate average GHG emissions of vehicle fleet in 2035					ODOE/DEQ	
• Estimate vehicle fleet turnover rate through 2035					ODOT	
• Recommend percentage reduction GHG & VMT reductions for 2035 for each metropolitan area needed to meet state 2050 GHG reduction goals					ODOE/DEQ	
Scenario Planning Guidelines						
• Draft Report on Scenario Planning Guidelines	Brief	Brief	Recommend	Brief	DLCD/ODOT	Apr-11
Toolkit						
• Draft GHG Reduction Toolkit (Data Base)	All committee members will be invited to meetings.				ODOT/DLCD	Apr-11
Public Education and Outreach						
• Plan Approach		Brief	Brief	Brief	ODOT/DLCD	2011 →
Target Rulemaking						
• 2035 GHG targets for each metropolitan area	Brief	Brief	Brief	Recommend	LCDC	Jun-11
Financing Report						
• Financing Report	All committees will receive the final report.				ODOT/DLCD	Jan-11

Committees:

- Statewide Transportation Strategy Technical Advisory Committee (STS TAC)
- Statewide Transportation Strategy Policy Committee (STS PC)
- Scenario Planning Technical Advisory Committee (SP TAC)
- Target Rulemaking Advisory Committee (TRAC)

Committee Responsibilities:

- Brief: Committee members are informed about the progress of the task.
- Review: Committee assists agency staff in developing the task analysis and is responsible for providing input and comments.
- Recommend: Policy and advisory committees are briefed on the work of the technical committees and staff. The committees will provide direction or comment as needed, and are responsible for making recommendations to the appropriate bodies.

Deliverables:

Statewide Transportation Strategy – The vision will describe the general characteristics of transportation systems, vehicle and fuel technologies and land use patterns likely to be necessary to achieve the reductions in the transportation sector greenhouse gas emissions. The strategy will recommend new policies or changes to existing policies which are necessary to carry out the vision. The 2050 vision is not a deterministic plan rather it plots out a general course of action. It is one step in an iterative process that also includes the monitoring of transportation and land use systems. There are two phases, with the first phase primarily in support of the technical report due to LCDC in March 2011. The second phase, development of the strategy is anticipated to be completed by January 2012.

Agency Technical Report – ODOT, DEQ, and ODOE will prepare estimates for 1990 light vehicle GHG emissions and forecast future 2035 vehicle fleet and fuel characteristics. This report provides the foundation for modeling of different policy scenarios. The report is due March 2011.

Scenario Planning Guidelines – The guidelines will provide a step by step guide for local governments' use in metropolitan area scenario planning. The guidelines will include goals and objectives and an image of how the transportation system and land use patterns would be organized so as to achieve the goal of reducing greenhouse gas emissions from light vehicles. It is anticipated that the first draft of this work will be completed by April 2011 and the final version by December 2011.

Toolkit - The toolkit is a database listing actions and programs local governments can implement to reduce transportation-related greenhouse gas emissions from light vehicles. It is anticipated the first draft of this work will be completed by April 2011 and the final version by March 2012.

Public Education and Outreach – SB 1059 identifies public education as a key component of the state's effort to address climate change. The legislation calls for educating the public about the need to reduce greenhouse gas emissions from motor vehicles with a gross vehicle weight rating of 10,000 pounds or less; and about the costs and benefits of reducing greenhouse gas emissions. Agency staff will develop the framework for a statewide public awareness program and work with local governments in metropolitan planning areas to support local communication and outreach efforts.

Target Rulemaking - LCDC is required to adopt rules setting greenhouse gas emission reduction targets for each of Oregon's metropolitan areas. The targets are to be used to guide land use and transportation scenario planning in metropolitan areas.

Financing Report – SB 1059 directed ODOT and DLCD to prepare a report to the 76th legislative assembly that outlines the cost to local metropolitan planning areas to conduct scenario planning.

Revision Date: 12/13/10

Description of 1st Round of Scenarios for Statewide Transportation Strategy for Reducing Greenhouse Gas Emissions

Brian Gregor
ODOT Transportation Planning Analysis Unit

Overview

The modeling of scenarios for reducing greenhouse gas (GHG) emissions from light vehicles will be done in at least three rounds. Additional rounds of modeling may be done if necessary to develop a final strategy. Summary descriptions and objectives of the three rounds are as follows:

1. The objective of the first round of modeling is to identify key features that appear to be necessary in order to approach the 2050 GHG reduction target. In order to do this, a large number of scenarios which reflect different combinations of urban growth, transportation, price, marketing, fleet, and technology characteristics are modeled. At the conclusion of this round of modeling, decisions will be made about what subset of characteristics need to be included in scenarios to be modeled in the 2nd round.
2. The objective of the 2nd round of modeling is to build upon the characteristics identified as necessary in the 1st round of modeling to achieve acceptable reductions in GHG emissions. The second scenarios will be evaluated using the full set of evaluation criteria that have been identified. At the conclusion of this round, a much smaller set of scenarios will be identified as leading candidates.
3. The objective of the 3rd round is to evaluate how the leading scenarios respond to various risk scenarios such as the large increases in gas prices and faster population growth rates. This evaluation will help to identify how resilient each scenario would be to such disruptions.

Building the 1st Round of Scenarios

Input variables fall into two groups. One group is composed of demographic factors that are not varied in order to achieve GHG emission reductions, but may be varied to test the resiliency of policy and technology scenarios to changes in conditions. These input factors include population growth, population age structure, per capita income growth, market price of fuel (not including taxes), and market price of electricity. The other factors are policy and technology variables that are defined for different scenarios.

The number of policy and technology factors affecting greenhouse gas emissions from light vehicles (autos and light trucks) is large. The number of combinations of factors is very large. This poses several substantial challenges:

- How to identify different factor combinations that could meet the GHG reduction goals;
- How to build an understanding of factor combinations that have synergistic effects and factor combinations that have contradictory effects; and
- How to organize scenarios made up of factor combinations so that they can be communicated fairly easily to decision makers, advisory groups and the public.

Six categories were identified to group the policy and technology factors. The categories and the factors that are included in each are as follows:

1. Urban
    a. Proportion of population growth occurring in urban areas
    b. Urban area growth rates
    c. Urban mixed use growth proportions
    d. Transit system growth
    e. Parking Pricing
    f. Growth in use of bicycles and other light weight vehicles
2. Roads
    a. Growth in freeway system capacity
    b. Growth in arterial system capacity
    c. Level of incident management
3. Marketing
    a. Employer-based demand management programs
    b. Household-based demand management programs
    c. Promotion of eco-driving and vehicle use optimization
4. Technology
    a. Fuel economy of internal combustion engines (ICE)
    b. Battery range, fuel economy, market share, and efficiency of plug-in hybrid electric vehicles (PHEV)
    c. Battery range, market share, and efficiency of battery electric vehicles (BEV)
    d. Mix and carbon intensity of vehicle fuels
    e. Carbon intensity of electrical power
5. Fleet
    a. Auto and light truck proportions
    b. Rate of fleet turnover
    c. Car-sharing participation rates
6. Prices
    a. Fuel use and emissions pricing (gas tax, carbon tax)
    b. Vehicle travel pricing (VMT tax, pay-as-you-drive insurance)

To carry out the first round of modeling, a limited number of levels were defined for each category and all combinations of levels were modeled. The base level in each category represents the reference case conditions for factors in the category. Therefore, one of the combinations of inputs represents the reference case. The other levels represent alternative conditions that increase factors from the reference case in order to test the effects of changes that are aimed at reducing GHG emissions. Three levels were defined for the urban and technology categories. Two levels were defined for each of the other categories. This required the development of 14 input datasets (2*3 + 2*4) and results in 144 combinations (3^2 * 2^4) that were modeled. This is a manageable number of model runs that will do a reasonable job of exploring the problem space.[1]

[1] It takes one to two hours to run GreenSTEP for the 2050 forecast year on the computers that are available in the Transportation Planning Analysis Unit. Therefore, running 144 scenarios takes from 144 to 288 computer hours.

Defining the Levels for Each Category and the Corresponding Factor Inputs

Urban (3 levels)

Level 1 (Reference Case)
This level has the following characteristics:

- The split of population between urban and rural areas reflects current policies and trends.
- All urban growth boundaries expand at the rate of population growth (no change in density).
- On average, about 10% of households live in mixed-use neighborhoods.
- Current per capita transit service levels are maintained.
- The extent of parking pricing reflects current conditions.
- Bicycle and light-weight electric vehicle usage is at the current level.

Level 2
This level is the same as Level 1 with the following exceptions:

- All urban growth boundaries expand at half the rate of population growth.
- On average, about 45% of households live in mixed use neighborhoods.

Level 3
The following changes are made to the reference case conditions in addition to the level 2 changes.

- Per capita transit service levels are increased by 3 times.
- The percentage of workers paying for parking triples and daily parking fees (in constant dollars) increases by a third.
- Between 20% and 25% of all single occupant vehicle trips having a round trip distance of 5 miles or less shifts to bicycles, electric bicycles, or similar conveyances.

Roads (2 levels)

Level 1 (Reference Case)
This level has the following characteristics:

- The per capita supplies (lane-miles) of metropolitan area freeways and arterials lane miles grow at rates consistent with the financially constrained metropolitan area regional transportation plans.
- Delay due to incidents is at current levels.

Level 2
Level 1 values are changed as follows:

- Equivalent lane-mile capacities of freeways and arterials grow by at least 85% of the rate of population growth. This could occur through physical expansion, bottleneck removal, and/or ITS improvements.
- Incident management programs are able to eliminate half of incident-caused delay.

Marketing (2 levels)

Level 1 (Reference Case)
This level has the following characteristics:

- Strong workplace oriented TDM programs reach 50% of workers in the Portland metro area, 5% in the Salem and Eugene metro areas, and 1% in other metropolitan areas.
- Household oriented individualized marketing programs are implemented only in the Portland metropolitan area and reach 1% of households.
- No households participate in eco-driving programs and no households optimize their use of vehicles to minimize fuel consumption.

Level 2
Marketing programs expand in the following ways:

- Strong workplace oriented TDM programs reach 75% of workers in all metropolitan areas.
- Individualized marketing programs reach 50% of households in all metropolitan areas.
- Two thirds of households participate in eco-driving and optimize their vehicle use to minimize fuel consumption.

Technology (3 levels)

Level 1 (Reference Case) (50 mpg by 2025 and 10% lower carbon)
This level assumes the following conditions:

- Efficiency of light-duty vehicles improves to 50 mpg by 2025, then stops. (Reductions due to either California's greenhouse gas limits (LEV III) or federal fuel efficiency (CAFE) standards).
- Low Carbon Fuel Standard decreases the carbon intensity of gasoline and diesel 10% by 2022 with no further reductions.
- Electric Vehicles (EVs) and Plug-in Hybrid Electric Vehicles (PHEVs) gain market at Business As Usual (BAU) rate through 2050.
- Carbon intensity of electricity decreases as provided by Oregon's Renewable Portfolio Standard

Level 2 (100 mpg by 2050 and 20% Lower-Carbon Fuel)
This level assumes the following conditions:

- Efficiency of light-duty vehicles improves to 100 mpg by 2050.
- Low Carbon Fuel Standard decreases the carbon intensity of gasoline and diesel 20% by 2035 with no further reductions.
- EVs and Plug-in Hybrids gain market share at BAU rate through 2050.
- Carbon intensity of electricity decreases as provided by Oregon's Renewable Portfolio Standard.

Level 3 (100 mpg by 2050, 20% Lower-Carbon Fuel, High EVRate and Low-Carbon Electricity by 2050)
This level assumes the following conditions:

- 100 mpg light-duty vehicles by 2050.
- Carbon intensity of gasoline and diesel decreases 20% by 2035 (no further reductions).
- EVs and Plug-in Hybrids adopted at high rate.
- No coal-generated electricity and large proportion renewable electricity by 2050.

Fleet (2 levels)

Level 1 (Reference Case)
This level assumes the following:

- No changes in the age distributions of the auto and light fleets.
- No changes in the composition (light truck vs. auto) of the vehicle fleet.
- Current levels of car-sharing (~0).

Level 2
The following changes are made with this level:

- The age structure of the fleet is similar to that of the northeastern U.S. (The 95% falls to about 75% of the current value.)
- The percentage of light trucks in the vehicle fleet falls to be similar to that of the northeastern U.S. (Between 40% and 45%)
- Carsharing rates achieve the maximum deployment levels estimated for the "Moving Cooler" study. (On vehicle per 500 persons in high density areas and one vehicle per 1000 persons in medium density areas.

Prices (2 levels)

Level 1 (Reference Case)
This level assumes only price (not including the market prices for fuel and electricity) to be the gas tax, which remains the same in constant dollars.

Level 2
This level assumes the following prices (in addition to the market prices for fuel and electricity):

- A VMT tax of 12 cents per mile. This is roughly equivalent to the difference between what Europeans and Americans pay in road taxes on a per mile basis.
- Pay as you drive insurance for all vehicles at a rate of 6 cents per mile.

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Metro | *Memo*

Date: December 27, 2010
To: TPAC & Interested Parties
From: Ted Leybold, Amy Rose, Dylan Rivera
Subject: Draft RFF Task Force Report

Attached is a draft report of the Regional Flexible Fund task force for their consideration at their next meeting. The committee will consider potential amendments to this report based on issues discussed and unresolved at their last meeting and any other issues members identify for consideration.

The task force is currently choosing between January 5th and January 13th for their last scheduled policy phase meeting. The meeting will be between 4:30 and 6:30 pm at Metro Regional Center. The meeting date will be notified to interested parties mailing list and posted on the Metro web site.

An update on the task force recommendation will be provided at this January 7th TPAC meeting. A discussion of the project nomination process and application of the criteria and technical measures is scheduled for the January 28th TPAC meeting.

Draft for Task Force Deliberation

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Regional Flexible Fund Task Force Report

Recommendations for the allocation of 2014-15 funds

January 2011

Metro | *Making a great place*

About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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INTRODUCTION

Every two years the Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council to decide how to spend federal transportation money known locally as the Regional Flexible Funds. This process historically allocated money to both regional programs such as the Transit Oriented Development program and to individual projects planned and built by local transportation agencies. In this cycle, JPACT and the Metro Council decided that money for individual projects should be more coordinated and focused.

To achieve this, JPACT created two project "focus areas": Green Economy & Freight initiatives and Active Transportation & Complete Streets. The committee also endorsed Chair Carlotta Collette to appoint a task force to provide more specific policy direction for the allocation of funds within these new project focus areas. The task force was charged with identifying: transportation needs within the focus areas, priorities for meeting regional needs with funds available, the strategies that should be employed to further development of these focus areas, and potential opportunities for collaboration between the two focus areas.

The task force met five times to develop policy recommendations for coordinating and focusing the impact of these funds. Staff helped it consider five ways it could direct staff to select projects within the two focus areas. First was to provide direction on what types of projects (e.g. sidewalks, traffic signal improvements) should be funded. Second was whether there were particular types of destinations (e.g. mixed-use centers, transit stops, industrial areas) that should be prioritized for access improvements. Third was whether projects should be dispersed or concentrated geographically. Fourth, was whether any funds should be set aside for the development of a regional strategy to advance long-term goals for facilities too expensive to be constructed with these funds. Finally, the task force considered what criteria staff should use to develop the project scopes (definition of project elements and location) and compare the relative priority of projects to receive funds.

Staff used a series of identification and prioritization exercises to gather input from the task force on these issues. Following is the task force's recommendation on how to achieve coordinated, focused and regionally significant results within the Green Economy & Freight Initiatives and the Active Transportation & Complete Streets project focus areas.

RECOMMENDATIONS

Active Transportation & Complete Streets

Recommended approach to developing projects

For this project focus area, the task force recommended an approach of selecting travel corridors and identifying project elements that would address the most critical barriers to completing non-auto trips in the corridor or a concentrated portion of the corridor. Examples of barriers could be the lack of direct pedestrian or bicycle facilities to key

destinations in the corridor, inability to safely cross streets to access destinations, or lack of access to transit stop improvements.

To implement this approach with available funding, the following parameters will be utilized:

- improvements will be concentrated geographically in a travel corridor or portion thereof,
- improvements will be limited to a few travel corridors within the region,
- potentially merge portions of several planned projects and several project types (bicycle, trail, pedestrian, transit stops) into a unified corridor wide project,
- project development will be allowed as an eligible activity for funding to address project readiness issues or as part of a strategy to phase implementation of projects.

Recommended criteria for scoping and prioritization of projects

To help define the scope (project elements and geographic reach) of projects to be considered for funds and to prioritize among candidate projects, the following criteria will be utilized.

Table 1: Active Transportation & Complete Streets criteria

Relative priority	Criteria
High	Improves access to priority destinations: o Mixed-use centers o Large employment areas (# of jobs) o Schools o Services for EJ/underserved
High	Improves safety o addresses site issue(s) documented in pedestrian/bike crash data o separates pedestrian/bike traffic from freight conflicts
Medium	Removes conflicts with freight and/or provides safety mitigation for any potential freight conflicts
Medium	Completes the "last mile"
Medium	Increase in use/ridership
Medium	Serves underserved communities
Medium	Serves high density or projected high growth areas
Low	Contracting opportunities for women, minority owned businesses

Low	Includes outreach/education/engagement component
Low	Can leverage funds
Low	Reduces need for highway expansion

Green Economy & Freight Initiatives

Recommended approach to developing projects

For this project focus area, the task force recommended an approach of allocating funds for two components: construction type projects and planning/strategy development type projects. Eligible project types and criteria that could be utilized to scope and prioritize potential projects are described below.

Construction focus:

Capital improvements will focus on system management, such as Intelligent Transportation Systems (ITS), on arterial freight routes. This could include upgrading traffic signal equipment and timing or provide travel information to inform freight trip decisions.

Planning/strategy development focus:

Project development for specific arterial freight routes would evaluate key barriers to the development of a green economy and freight movement and recommend operations and design improvements to address the barrier.

Funds may also be set aside to develop regional strategies for the following topics. These are areas that need further analysis and a policy development process to achieve a regional consensus on how to move forward on the issue. Potential topics include a strategy for how to pursue and accommodate higher speed inter-city passenger rail and improved freight rail facilities, and a strategy for the routing of hazardous materials in the region.

Criteria for scoping and prioritization of projects

To help define the scope (project elements and geographic reach) of projects to be considered for funds and to prioritize among candidate projects, the following criteria will be utilized.

Table 2: Green Economy & Freight Initiatives criteria

Relative priority	Criteria
High	Reduces freight vehicle delay
High	Project increases access to: o Help recruit/retain green industries o Industrial lands

- Rail facilities for regional shippers
- Economic opportunities for EJ/underserved populations

Medium	Removes conflicts with active transportation and/or provides adequate mitigation for any potential conflicts
Medium	Reduces air toxics or particulate matter
Medium	Reduces impacts to EJ communities e.g., reduced noise, land use conflict, emissions
Medium	Increases freight reliability
Low	Improves safety
Low	May not get funding otherwise
Low	Contracting opportunities for women, minority owned businesses
Low	Can leverage (or prepare for) future funds
Low	Reduces need for highway expansion
Low	Multi-modal component
Low	Storm water - addresses, reduces

NEXT STEPS

Metro staff will work with technical staff from transportation agencies in the region to design a collaborative project nomination process that utilizes these criteria to scope and prioritize projects to consider for funding. After this process has nominated projects for consideration, the task force will be reconvened to review and make a recommendation on the nominated projects.

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Metro | *Memo*

Date: Tuesday, December 28, 2010

To: Transportation Policy Alternatives Committee & Interested Parties

From: Deena Platman, Principal Transportation Planner

Subject: Regional Program Review: TSMO – Regional Mobility program

Purpose

This memorandum provides information to support TPAC's consideration of the proposed FY 2014-15 MTIP Step 1 funding for Transportation System Management and Operations (TSMO) as part of the Regional Mobility program.

Program description

The Regional Mobility program coordinates both the planning and implementation of the region's system management and operations strategies to enhance multimodal mobility for people and goods. Metro serves as the lead agency for this program. Its activities focus on proactive management of the multimodal transportation system through:

- Multimodal traffic management strategies to reduce travel times and vehicle emissions;
- Traveler information to help system users make informed decisions and avoid congestion; and
- Traffic incident management to reduce crashes and delay, and improve traveler safety

The program also supports the implementation of the region's Congestion Management Process (CMP) by implementing lower cost, high benefit operational improvements for congestion and safety; and by enhancing the region's real-time data collection capabilities in support of performance monitoring. The Regional Mobility program activities are guided by TransPort, the TPAC committee for system management and operations.

This program works closely with the Regional Travel Options program to enhance opportunities for coordination and collaboration on multimodal management strategies.

Regional funding context

At its May 2009 retreat, JPACT members recognized TSMO investments as an appropriate use of Regional Flexible Funds. Historically, the region has supported TSMO investments with its federal funding. Over the last decade, the average allocation for system management has been nearly $1.2 million per year, although prior to 2010, the year-to-year funding had been highly variable. The MTIP allocations have funded the development of local ITS plans, signal interconnect projects, and Advance Traffic Management Systems (ATMS) including cameras, signals and traffic operation centers, and data collection infrastructure.

Starting with the FY 2010 – 11 MTIP, the region allocated $3 million in Regional Flexible Funds to support a regional TSMO investment program, recognizing both the utility of TSMO solutions to enhance system mobility and the cross-jurisdictional nature of these types of investments. The region continued support for TSMO investment with a $3 million allocation for FY 2012 – 13.

Relationship to RTP performance targets

The 2035 Regional Transportation Plan includes performance targets that chart progress in creating and maintaining a quality transportation system. Strategic TMSO investments, both standalone and in combination with other infrastructure investments, directly contribute to the advancement of regional transportation goals and targets.

Safety – *reduce pedestrian, bicyclist, and motor vehicle fatalities and serious injuries*

TSMO strategies like enhanced traffic incident response and variable speed limits reduce primary and secondary crash rates and decrease the severity of crashes. By addressing safety concerns, the human and financial costs of incidents are reduced.

Congestion – *reduce vehicle hours of delay*

Investments such as traffic responsive signal systems reduce delays and travel times. The city of Gresham realized a 16% decrease in average travel time on E. Burnside Rd.

Freight reliability – *reduce vehicle hours of delay for trucks*

Priority truck signals extend green time for trucks on key freight routes to improve travel times and reduce idling at intersections.

Climate change – *reduce transportation-related carbon dioxide emissions*

Regular updates to traffic signal timing reap significant CO_2 reductions, resulting in health and environmental benefits across the region. The city of Portland retimed 145 traffic signals and within six years reduced 157,000 metric tons of CO_2, equivalent to taking 30,000 vehicles off the road.

Active transportation – *triple walking, biking and transit mode share*

Investments in bicycle detection and walk countdown timers can reduce travel times for cyclists and pedestrians. Transit riders benefit from transit signal priority that extends signal green time to maintain on-time performance.

Clean air – *ensure percent population exposure to at-risk levels of air pollution*

TSMO strategies better management roadways to reduce idling and optimize travel flow resulting in decreased vehicle emissions and fuel consumption.

Travel – *reduce vehicle miles traveled per person*

Good, multimodal traveler information helps people make better decisions about their mode of travel, route choice and what time they travel. An ODOT survey found that 80% of respondents changed their travel plans based on information provided on the TripCheck.org website.

Regional Mobility program strategic plan

The region adopted the Regional TSMO Plan in June 2010. The plan is a road map to guide transportation management solutions for the next 10 years. The strategic plan is focused on four investment areas – multimodal traffic management, traffic incident management, traveler information, and transportation demand management. It identifies both program and infrastructure investments under each focus area. The RTO program advances the transportation demand management investments.

With the completion of the Regional TSMO plan, TransPort has turned its attention to plan implementation. The Regional Mobility program is supported with a total regional flexible fund allocation of $6 million from fiscal year 2010 through 2013. These funds support region-wide initiatives such as the PORTAL data archive enhancement and operations concept development and targeted corridor investments like advance traffic signal systems. Looking ahead to 2014-15, there is an abundance of opportunities to advance management solutions that benefit the traveling public in the Portland region. Continued investment in creating a 21st century traffic management system means upgrading existing equipment that serves all modes, maintaining current signal timing, and maximizing the system's data collection capabilities. Enhancing traveler information means harnessing the region's data collection efforts to provide real-time travel information. Traffic incident management investments in surveillance for faster incident detection, active traffic management tools, and inter-agency communications can reduce incident-related congestion and restore system capacity.

Program accomplishments

- Adopted a 10-year strategic plan for investing in TSMO.
- Awarded a $3.37 million American Recovery and Reinvestment Act grant to upgrade 277 traffic control systems on across the region.
- Funded enhancements to PORTAL 2.0, the region's web-based transportation data archive.
- Ongoing support for the activities of TransPort and its subcommittees.
- Coordinated TSMO professional development and training opportunities. Since 2007, the region has benefited from eleven operations-focused FHWA workshops and trainings.

MTIP funded TSMO projects just getting underway include:

- Adaptive signal systems on Tualatin-Sherwood Rd, Beaverton-Hillsdale Hwy and Canyon Rd

- Traveler information and incident management improvements for I-84 and supporting arterials including Halsey, Glisan, Sandy and Powell.
- Regional Concept of Transportation Operations (RCTO) guide for arterial performance measurement
- Freight data collection infrastructure and archive pilot

Leverage benefits and resources

The greatest benefit of the Regional Mobility program is that it formalizes regional coordination for TSMO. The region has a long history of cooperation on TSMO investments. Partnering agencies have collectively invested in communications networks and software systems that provide the foundation for the intelligent transportation systems in place today. The development of those systems has been largely opportunistic. With the Regional Mobility program, the region has "seed money" to be strategic about investing in a vision for a 21st century multimodal traffic management system. The regional investment leverages local funds to implement corridor-level projects like traffic responsive systems or data collection. The regional funding also supports region-wide, multi-agency investments like the transportation data archive housed at Portland State University and replacement equipment for the ITS communications network. A strategic plan also makes it possible to identify opportunities to leverage TSMO investment as part of larger capital projects.

Looking ahead

Full implementation of the Regional TSMO Plan means investing about $725 million in capital, operations and program costs over the next 10 years. Of this amount, $400 million is specifically funding TSMO projects (the other $325 million supports RTO investments). While this number seems daunting, it is a relatively small percentage of the overall transportation spending in the region over that timeframe. Partner agencies augment regional flexible funding for TSMO with their own capital and operations investments. With federal transportation bill reauthorization on the horizon, the region has requested $12 million to support TSMO implementation. In addition, the Regional Mobility program will continue to support TransPort grant applications to fund plan implementation as opportunities arise.

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Metro | *Memo*

Date: December 28, 2010

To: Transportation Policy Alternatives Committee and Interested Parties

From: Dan Kaempff, Principal Transportation Planner

Re: **Regional Program Review: Regional Travel Options**

Purpose

This memorandum provides information to support TPAC's consideration of the proposed FY 2014-15 MTIP Step 1 funding for Regional Travel Options (RTO) as part of the Regional Mobility program.

Program description

The RTO program serves the region by providing education and outreach to various audiences about using the spectrum of available travel choices. It enhances our investments in transit, bicycle and pedestrian infrastructure by introducing people to these travel modes, or encouraging them to increase their use of them. "Build it, and they will come" is true to a point; the RTO program works to get people educated about how the region's system of travel options works, and how it benefits them. This in turn generates more transit, ridesharing, bicycle, and walking trips.

As recommended in the 2003-2008 RTO Strategic Plan, Metro serves as the lead agency for this regional effort. Several program elements are carried out by both Metro as well as regional partners and comprises the RTO program as a whole. RTO partners include state agencies, TriMet and SMART transit agencies, various cities and counties, Transportation Management Associations, and non-profit organizations. Metro's role is to chair the RTO Subcommittee of TPAC, coordinate policy and programs, administer grant funding for RTO initiatives conducted by partners, provide technical assistance to partners, and head up regional programs such as the Drive Less/Save More collaborative marketing campaign and the regional rideshare effort.

This program works closely with the Transportation System Management and Operations (TSMO) program to enhance opportunities for coordination and collaboration on multimodal management strategies.

Regional Funding Strategy Context

At its May 2009 retreat, JPACT members identified Regional Flexible Funds (RFF) as one of two appropriate sources of funding for the RTO program. There are limited sources of funds for which RTO activities are eligible; state operations funds cannot be used for this purpose. Federal Congestion Mitigation and Air Quality funds, through the RFF process, have been used to fund the region's RTO activities since the mid-1990s. The RTO program has well-documented success in encouraging people to make choices that reduce their dependence on cars, resulting in reduced vehicle trips.

The RTO program serves as the coordinator of the various transportation demand management (TDM) efforts conducted throughout the region and administers the RFF designated for this program. Most of the funding is sub-allocated to local partner agencies through either designated set-asides or competitive grants.

Relationship to performance targets

- Safety – *reduce fatalities and injuries:*
  The RTO program's traveler information tools, such as Bike There! and Walk There!, show residents safer routes for cycling and walking, and provide tips on safe riding and equipment to improve safety and comfort. RTO programs also shift trips from single occupant vehicle to transit, which according to Federal Transit Administration data, is far safer than automobile travel.[i] RTO efforts also reduce the number and length of trips (encouraging telecommuting and trip-chaining), reducing the exposure of customers to the likelihood of a crash.

- Congestion – *reduce vehicle hours of delay:*
  Several RTO programs address the problem of peak hour traffic congestion. These programs range from transit pass and vanpool programs, to ridematching assistance and promoting bicycling and walking as commute methods.

- Climate change – *reduce CO2 emissions:*
- Clean air – *eliminate exposure to at-risk levels of pollution:*
  By encouraging people to reduce their automobile use, the RTO program lowers the amount of vehicle emissions in the region. In particular, reducing peak hour auto trips in freeway corridors lowers the impact of pollutants on residents in these areas.

  Motor vehicles are one of the largest sources of greenhouse gases in the Portland region. The RTO program supports federal, state and regional air quality regulations and reduces the consumption of gasoline by increasing the share of trips made with less-polluting modes of travel.

- Active transportation – *increase walk, bike and transit mode share:*
  RTO programs such as Bike There! and Walk There! give people information and encouragement to try active transportation modes. A significant portion of RTO funding is targeted towards building transit ridership on the region's transit system. RTO grant funds are used to build more bicycle parking at transit centers and provide traveler information tools, helping to tie these various modes together into a seamless system.

- Travel – *reduce vehicle miles traveled:*
  The primary function of the RTO program is to encourage residents to reduce the use of their automobiles. Through providing information on the various travel options available to people, the RTO program shows people how to use these modes when appropriate instead of driving for every trip.

- Access to daily needs – *increase number of essential destinations accessible within 30 minutes by bike and transit:*

The RTO program supports the development of local downtown centers by increasing the share of trips made with travel options and decreasing drive-alone auto trips. RTO is one component in the effort to have half or more of all trips to centers be made by active transportation modes.

Program strategic plan or recent planning work completed to date

The RTO program works with regional partners to develop a 5-year strategic plan. The first plan was implemented in 2003 and the current plan was written in 2008. This plan guides the programs and projects and ensures partners are working in a coordinated manner. The strategic plan priorities and goals are derived from the Regional Transportation Plan and support regional land use goals. A regional survey was recently completed and the data will be used to further measure program effectiveness and guide future program development. Metro primarily acts in a coordinating and evaluative role, as well as managing region-wide initiatives such as the rideshare program and Drive Less/Save More Local partners, such as cities, transit agencies, TMAs and non-profits conduct the balance of the work.

Program performance to date

Every two years, the RTO program contracts with an outside party to conduct an independent evaluation of progress made toward strategic plan goals. The latest evaluation, based on work done up to January 2009, found that in 12 years, the overall percentage of drive-alone commute trips at businesses participating in RTO programs has decreased by nine percent from baseline survey data to present. Twenty-eight percent of adults in the region recalled seeing the Drive Less. Save More. message and taking action to reduce drive alone trips as a result. Overall, the RTO program achieves an annual estimated reduction of 18.9 million vehicle miles traveled throughout the region.[ii]

How does your program leverage other benefits or resources?

- Infrastructure – Despite significant regional investments in alternative modes, many residents are not fully aware of how to take advantage of these travel options. RTO programs aim to break down these barriers by providing information and incentives so people understand how the various systems work. For example, an individualized marketing project conducted in North Portland during the opening of the Interstate MAX light rail line focused on providing information about the new line as well as other non-auto travel options. Follow up surveys found that people who participated in the project took twice as many trips on transit compared to those who did not participate.
- Earned media – The Drive Less/Save More campaign has been supplemented with over $1 million in donated advertising and sponsor contributions, and nearly $1.5 million in earned media coverage (e.g. news reports on activities).[iii]
- Public-Private Partnerships – RTO funds are used by TMAs to leverage private investments in trip reduction strategies. In fiscal year 2011 alone, TMAs have provided matching funds representing 103% increase over funding received from Metro.

Do you have a strategy for growing the program and what additional outcomes would that growth achieve?

In order to reach the public more effectively and with new methods, Metro envisions the RTO program increasing its role as a regional resource for expanding partners' abilities to conduct and deliver local programs. In future years, a larger percentage of RTO funding will be targeted towards supporting staff and resources with our partners. Metro will continue to coordinate and evaluate regional efforts via the RTO Subcommittee, as well as support regional efforts such as Drive

Less/Save More and the rideshare program. But most of the direct contact with the public will be undertaken by partner agency staff.

The city of Wilsonville is a good example of this emerging strategy. Via a 2009 RTO grant, it has used the funds to create a new bicycle and pedestrian coordinator position. This in turn, enables the city to increase its program offerings to residents and encourage more active transportation use in Wilsonville. The city will host its first Sunday Parkways in 2012, modeled after Portland's successful events that offer residents a car-free and safe day to walk, bike, exercise and play in their streets.

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[i] Federal Transit Administration, *2009 Rail Safety Statistics Report*, 2009. Passenger fatality rates per 100 million passenger miles: Motor Vehicle = 1.42, Public Transit = 0.13

[ii] Portland State University, *2007-2008 RTO Evaluation*, 2009

[iii] Ibid, p. 3

Materials following this page were distributed at the meeting.

Port of Portland Considerations for Green Economy and Freight Initiatives

The Task Force has done a good job on the Green Economy and Freight Initiatives category. Including both construction projects and project development categories is a good strategy for dealing with the limited funds available. Allowing for development of freight focused regional strategies is also desirable.

We have some ideas about the recommendations based on our evaluation of the draft.

- While system management projects are important there are many freight construction projects in the RTP that can be constructed for $1M to $2 M, including roadway extensions and channelization projects. We think roadway construction projects should be included in the mix of projects available for funding.

- The recommendations for both construction and project development talk about arterial freight routes. Many important freight facilities are last mile improvements that are not arterials but are important for serving industrial lands. For this reason we suggest that the type of eligible facilities be expanded to include those that serve industrial lands.

- Regarding Table 2: Green Economy and Freight Initiatives criteria, we suggest that "improves safety" should not be ranked as Low. Improving safety should have at least a Medium rating.

Based on these considerations we recommend the following edits.

Green Economy & Freight Initiatives

Recommended approach to developing projects

For this project focus area, the task force recommended an approach of allocating funds for two components: construction type projects and planning/strategy development type projects. Eligible project types and criteria that could be utilized to scope and prioritize potential projects are described below.

Construction focus:

Capital improvements will focus on system management, such as Intelligent Transportation Systems (ITS) and other smaller capital projects, on ~~arterial~~ freight routes serving industrial lands. This could include upgrading traffic signal equipment and timing, ~~or~~ providinge travel information to inform freight trip decisions, and roadway channelization projects.

Planning/strategy development focus:

Project development for ~~specific arterial~~ freight routes serving industrial lands would evaluate key barriers to the development of a green economy and freight movement and recommend operations and design improvements to address the barrier.

Funds may also be set aside to develop regional strategies for the following topics. These are areas that need further analysis and a policy development process to achieve a regional consensus on how to move forward on the issue. Potential topics include a strategy for how to pursue and accommodate higher speed inter-city passenger rail and improved freight rail facilities, and a strategy for the routing of hazardous materials in the region.

Criteria for scoping and prioritization of projects

To help define the scope (project elements and geographic reach) of projects to be considered for funds and to prioritize among candidate projects, the following criteria will be utilized.

Table 2: Green Economy & Freight Initiatives criteria

Relative priority	Criteria
High	Reduces freight vehicle delay
High	Project increases access to: o Help recruit/retain green industries o Industrial lands o Rail facilities for regional shippers o Economic opportunities for EJ/underserved populations
Medium	Removes conflicts with active transportation and/or provides adequate mitigation for any potential conflicts
Medium	Improves safety
Medium	Reduces air toxics or particulate matter
Medium	Reduces impacts to EJ communities e.g., reduced noise, land use conflict, emissions
Medium	Increases freight reliability
~~Low~~	~~Improves safety~~
Low	May not get funding otherwise
Low	Contracting opportunities for women, minority owned businesses
Low	Can leverage (or prepare for) future funds
Low	Reduces need for highway expansion
Low	Multi-modal component
Low	Storm water - addresses, reduces

ARRA Transportation Reporting Summary: Oregon and Metro Region
Through November 30, 2010

Recipient	Recovery Act Funds Allocated	Recovery Act Funds Obligated	Recovery Act Funds Outlayed	Number of Projects put out to bid	Recovery act funds associated with projects put out to bid	Number of projects under contract	Recovery act funds associated with projects under contract	Number of projects in which work has begun	Recovery act funds associated with projects in which work has begun	Number of projects in which work has been completed	Recovery act funds associated with completed projects	Number of Direct, On-Project Jobs Created or Sustained by Recovery Act Funds	Total Job Hours Created or Sustained by Recovery Act Funds	Total Payroll of Job Hours Created or Sustained by Recovery Act Funds
ODOT (Statewide)	$275,293,718	$275,293,522	$212,280,209	319	$262,303,405	318	$261,769,405	316	$255,843,021	177	$60,971,619	78,930	1,549,428	$51,913,483
ODOT - Transit (Statewide)	$60,688,418	$60,688,418	$31,472,574	51	$58,757,809	51	$58,757,809	48	$58,757,809	30	$3,409,776	1,300	94,209	$2,666,386
Capital Assistance	$55,310,293	$55,310,293	$46,869,003	33	$37,451,287	33	$37,451,287	36	$55,126,293	23	$29,620,732	236	503,560	$26,726,197
TriMet - Fixed Guideway	$1,125,728	$1,125,728	$1,125,728	0	$0	0	$0	1	$1,125,728	1	$1,125,728	10	20,887	$1,125,728
City of Wilsonville - SMART Transit	$926,239	$926,239	$0	4	$824,622	3	$608,046	3	$608,046	3	$608,046	4	6,442	$437,485
Metro - Local Agencies	$32,463,898	$32,463,898	$19,609,776	62	$32,463,898	62	$32,463,898	60	$26,998,203	29	$1,924,627	9,825	172,381	$6,479,369

TriMet figures include TriMet ARRA funds and MPO ARRA funds assigned to transit projects administered by TriMet. Metro figures do not include $5,342,396 of MPO ARRA funding assigned to TriMet for project administration.

Climate Smart Communities: Scenarios

Addressing climate change with land use and transportation

Kim Ellis, project manager

Transportation Policy Alternatives Committee Briefing

January 7, 2011

1

Metro | *Making a great place*

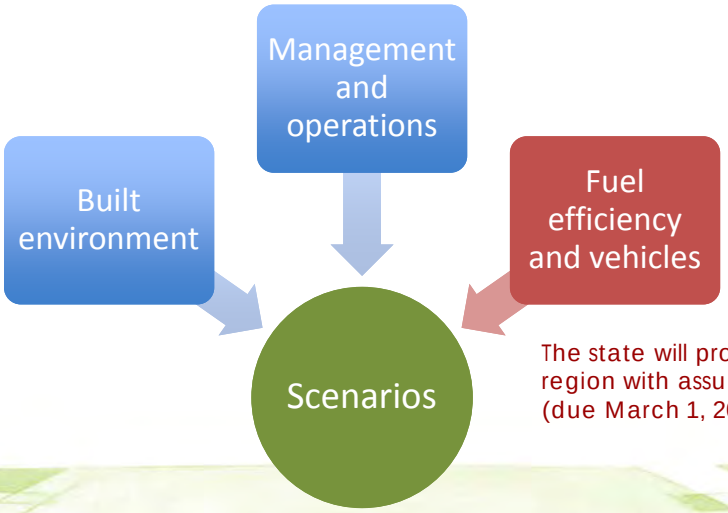
Making a Great Place

- Focus on outcomes
- Fine-tune policies to accelerate 2040
- Reinforce 2040 centers and mobility corridors
- Update investment priorities to achieve outcomes

2

Policy toolbox

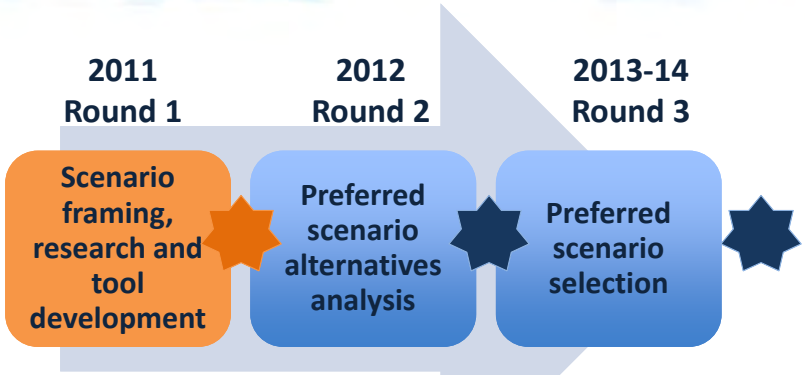
Scenarios = integrated packages of policies



The state will provide region with assumptions (due March 1, 2011)

3

Process



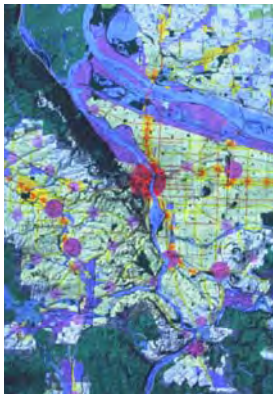
Jan. 2012 Report to Legislature on findings and rec'ds

Nov. 2012 Confirm preferred scenario elements

June 2014 Adopt preferred strategy; begin implementation

4

Scenario building – Round 1



- Testing and understanding choices
- Broad application of toolbox
- Reference case = 2040 under current tools and trends
- 2-3 alternative scenarios that build on reference case

Alternative scenarios will be designed to meet state GHG targets based on policy direction from MPAC and JPACT

5

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

6

Upcoming discussions

Jan. – March – Regular meetings
- Analysis approach and evaluation framework
- Policy toolbox elements

April 1 - Joint MPAC/JPACT workshop *(tentative)*
- Direction to staff on policies to test

April - May – Regular meetings
- Confirm workshop direction

May/June – Joint MTAC/TPAC workshop
- Develop & "test" scenarios based on policy direction

Fall – Regular meetings
- Report results, key findings and recommendations

7

Resources

- **Metro**
  www.oregonmetro.gov/climatechange
- **Oregon Sustainable Transportation Initiative**
  www.oregon.gov/ODOT/TD/TP/OSTI.shtml
- **Oregon Global Warming Commission**
  www.keeporegoncool.org
- **TGM Carbon Footprint**
  www.oregon.gov/LCD/TGM/carbonfootprint/index.shtml

8

Oregon Department of Transportation

TPAC Briefing on 1st Round of Scenarios for Statewide Transportation Strategy for Reducing Transportation GHG

1/7/2011

Brian Gregor, ODOT Trans. Planning Analysis Unit

Oregon Department of Transportation

Background

Statewide Transportation Strategy (STS)

What it is:

- The STS will be a broad vision for transportation systems, vehicle and alternative fuel technologies and land use patterns that reduce transportation sector greenhouse gas emissions.
- The strategy will recommend new policies or changes to existing policies which are necessary to carry out the vision.

Review committees:

- Policy Advisory Committee
- Technical Advisory Committee
- Core Tech Team

3

Phasing of STS

- **Two phases**
  - Phase 1: Light vehicles (< 10,000 lbs)
  - Phase 2: Long-distance travel and freight
- **Phasing is important to meet legislative deadlines while managing a complex project**
  - March 1 deadline for ODOT, DEQ & ODOE to submit technical report to LCDC on GHG emissions from light vehicles in metropolitan areas

4

The GreenSTEP model

- GreenSTEP = Greenhouse gas State Transportation Emissions Planning model
- Work started (2008) at the request of the Oregon Global Warming Commission (OGWC) for a model to evaluate a broad range of GHG policies
- Review
  - 1st round of Peer review during initial development (version 1) completed spring 2010
  - 2nd round of Peer review of version 2 model and of model application
  - Reviewed by Resource Systems Group under FHWA contract
  - Reviewed by consultants working on STS

5

GreenSTEP addresses a large number of factors affecting GHG emissions

- Demographic and income changes
- Relative amounts of development occurring in urban and rural areas
- Metropolitan and other urban area densities
- Urban form (i.e. mixed-use)
- Amounts of metropolitan area public transit service
- Highway capacity
- Vehicle proportions: autos, light trucks, EVs, PHEVs
- Vehicle ages
- Vehicle fuel efficiency
- Pricing of fuel, carbon, VMT, parking
- Use of bicycle & other light-weight vehicles
- TDM and eco-driving
- Effects of congestion on fuel economy
- Lifecycle carbon content of fuels
- CO2 production from electrical power use for transportation

6

1st Round of Scenarios Purpose and Organization

Purpose of 1st Round

- Better understand the potential magnitude of possible GHG emissions reductions.
- Better understand the amount of change necessary to reduce GHG emissions by 75%.
- Identify different pathways that might get Oregon to the reduction goal.
- Identify key factors and interactions that are important to reducing GHG emissions.
- Identify scenarios to carry on to the next round of modeling.

Types of Input Assumptions

Background Conditions: not treated as means for reducing GHG

- Population, income, electricity price, gasoline price (exclusive of taxes)

Policy and Technology Levers: treated as means for reducing GHG

- Examples: UGB growth, age of vehicle fleet, fuel economy ...

Background Assumptions

- Population: grows to almost 6 million persons by 2050
- Income: average per capita income increases at long-term linear growth rate (about $32K today to about $48K in 2050)
- Fuel price: increases to about $5 per gallon
- Electricity price: about 2.5 times present level

Approach to 1st Round Policy & Technology Assumptions

Run many scenarios to evaluate a large number of combinations of input assumptions

- Group input factors into categories to make scenarios easier to comprehend and to simplify the analysis of multiple scenario combinations;
- Establish several levels within each factor group; and
- Run all combinations of levels (144).

11

Input Factor Groupings

- **Urban**
  - Urban growth, mixed-use, transit, parking, bicycle
- **Pricing**
  - Fuel tax, carbon tax, VMT tax, PAYD insurance
- **Marketing**
  - Travel demand management, eco-driving
- **Roads**
  - Capacity, incident management
- **Fleet**
  - Vehicle age, vehicle type, car-sharing
- **Technology**
  - MPG, PHEVs, EVs, fuel type, power source

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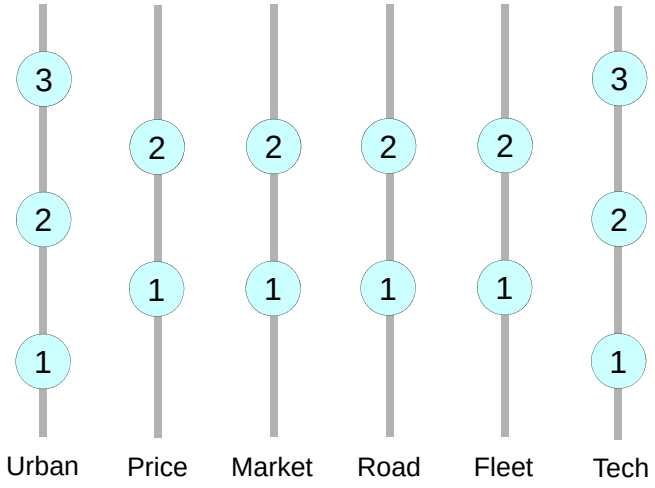
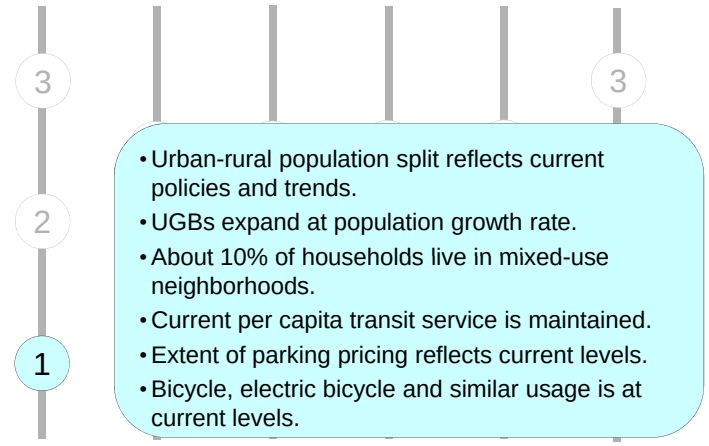
1st Round of Scenarios Input Assumptions

Levels for Each Factor Grouping



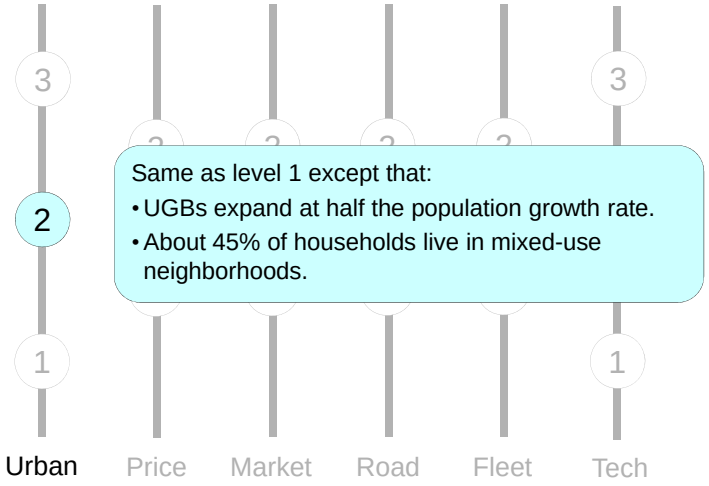
Urban Level 1 Assumptions



- Urban-rural population split reflects current policies and trends.
- UGBs expand at population growth rate.
- About 10% of households live in mixed-use neighborhoods.
- Current per capita transit service is maintained.
- Extent of parking pricing reflects current levels.
- Bicycle, electric bicycle and similar usage is at current levels.

15

Urban Level 2 Assumptions

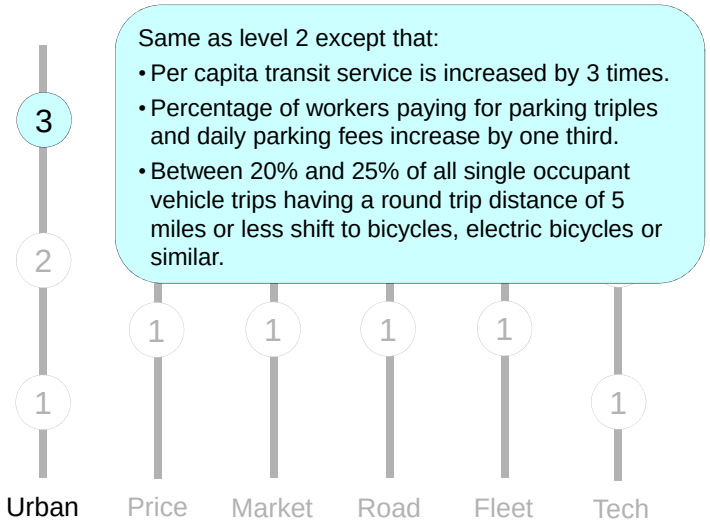


Same as level 1 except that:

- UGBs expand at half the population growth rate.
- About 45% of households live in mixed-use neighborhoods.

16

Urban Level 3 Assumptions



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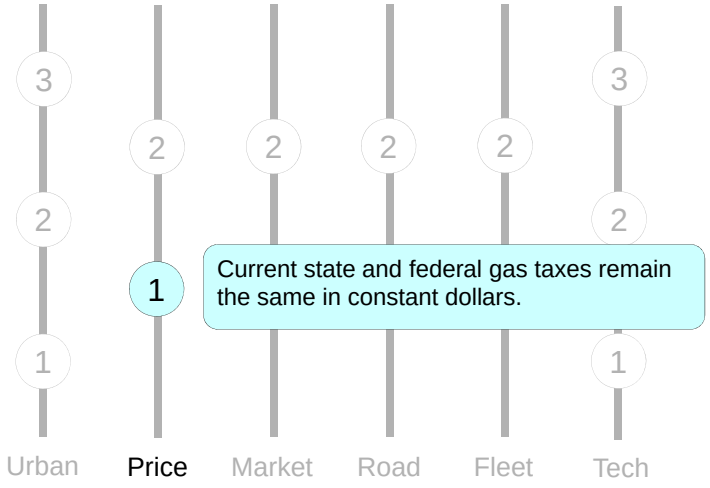
Price Level 1 Assumptions



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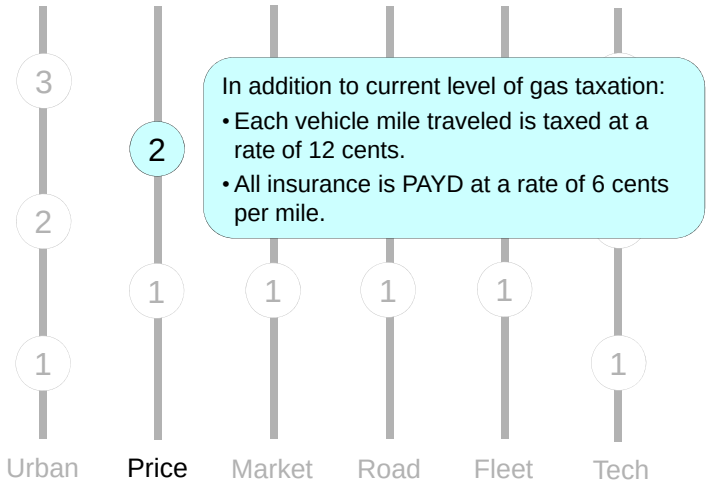
Price Level 2 Assumptions



In addition to current level of gas taxation:

- Each vehicle mile traveled is taxed at a rate of 12 cents.
- All insurance is PAYD at a rate of 6 cents per mile.

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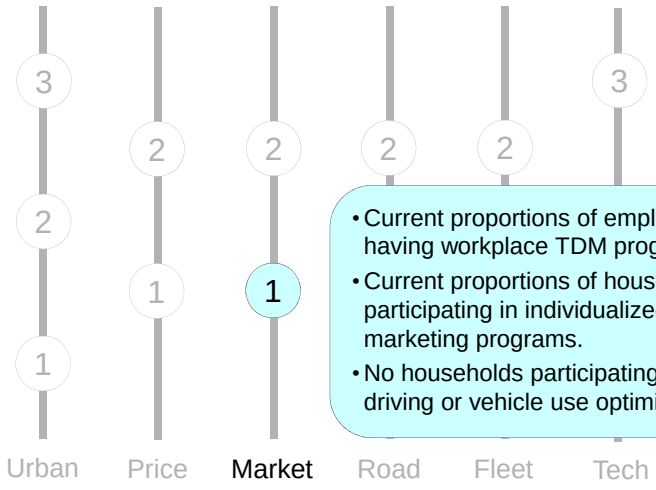
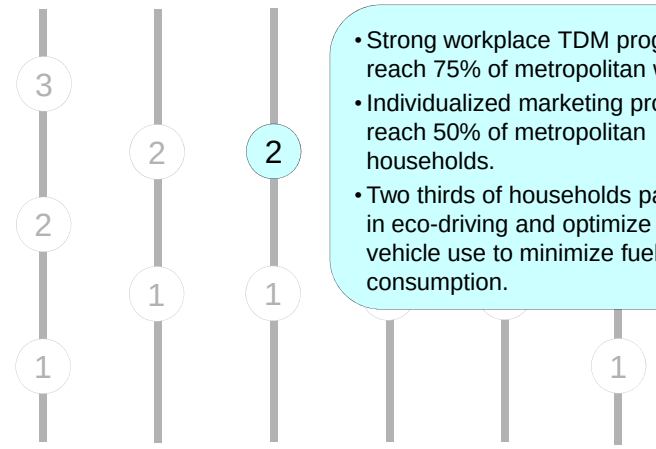
Marketing Level 1 Assumptions



- Current proportions of employers having workplace TDM programs
- Current proportions of households participating in individualized marketing programs.
- No households participating in eco-driving or vehicle use optimization.

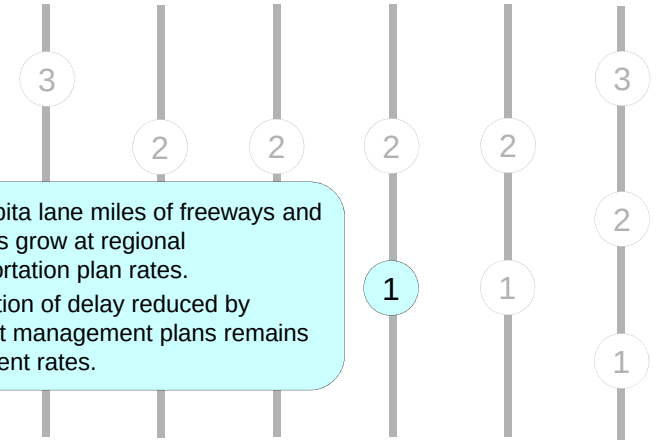
20

Marketing Level 2 Assumptions



- Strong workplace TDM programs reach 75% of metropolitan workers.
- Individualized marketing programs reach 50% of metropolitan households.
- Two thirds of households participate in eco-driving and optimize their vehicle use to minimize fuel consumption.

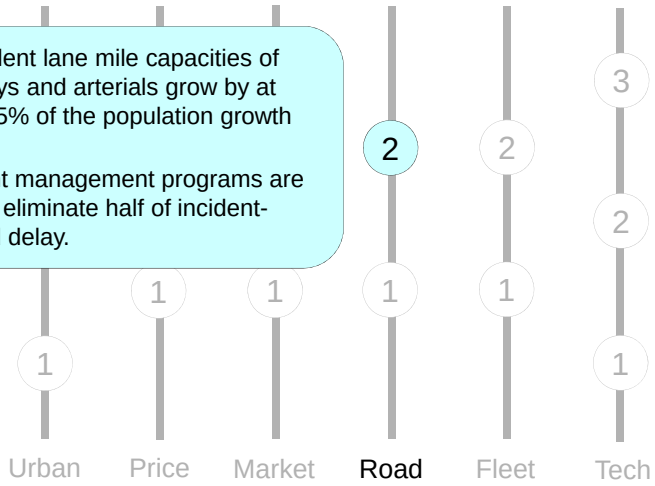
Road Level 1 Assumptions



- Per capita lane miles of freeways and arterials grow at regional transportation plan rates.
- Proportion of delay reduced by incident management plans remains at present rates.

Road Level 2 Assumptions

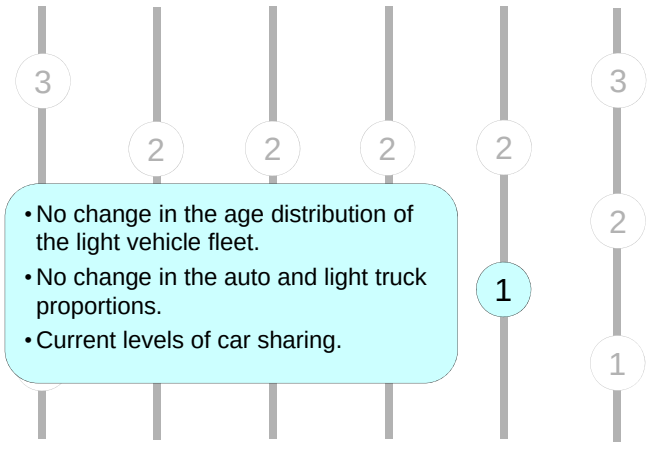
- Equivalent lane mile capacities of freeways and arterials grow by at least 85% of the population growth rate.
- Incident management programs are able to eliminate half of incident-caused delay.



23

Fleet Level 1 Assumptions

- No change in the age distribution of the light vehicle fleet.
- No change in the auto and light truck proportions.
- Current levels of car sharing.



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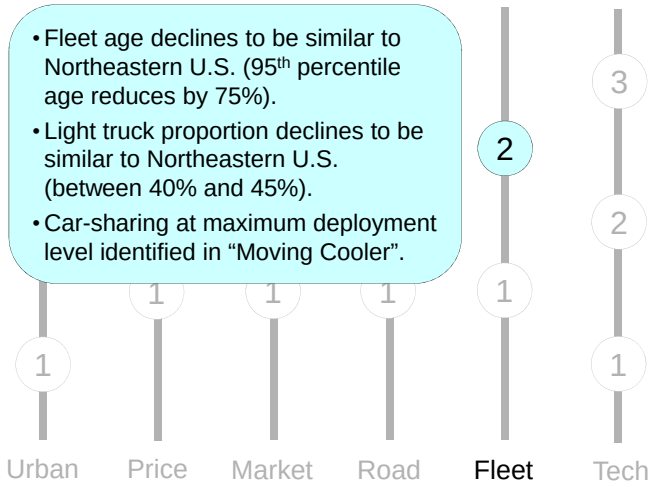
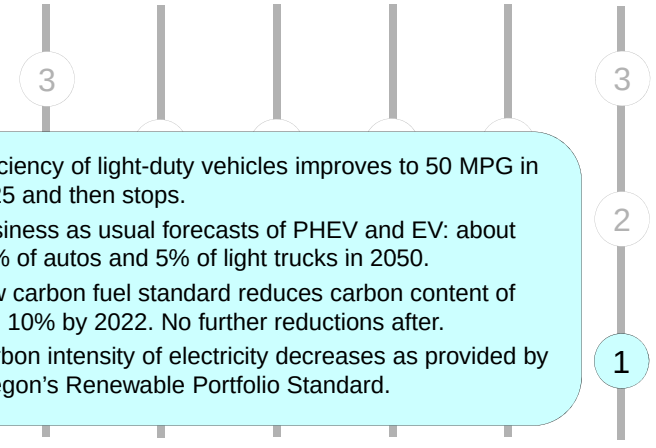
Fleet Level 2 Assumptions

- Fleet age declines to be similar to Northeastern U.S. (95th percentile age reduces by 75%).
- Light truck proportion declines to be similar to Northeastern U.S. (between 40% and 45%).
- Car-sharing at maximum deployment level identified in "Moving Cooler".



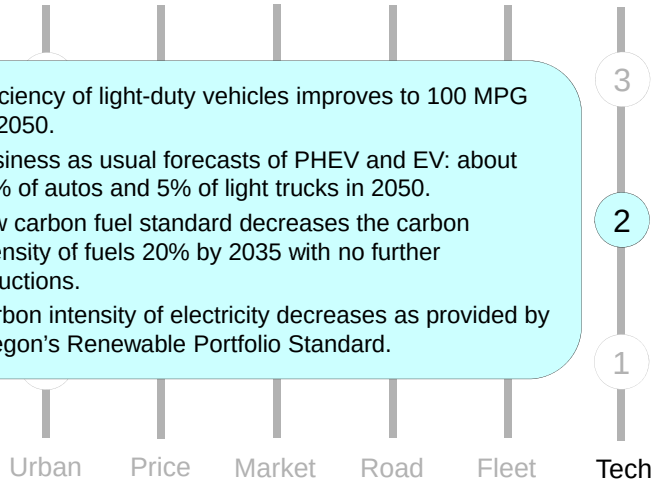
Technology Level 1 Assumptions

- Efficiency of light-duty vehicles improves to 50 MPG in 2025 and then stops.
- Business as usual forecasts of PHEV and EV: about 15% of autos and 5% of light trucks in 2050.
- Low carbon fuel standard reduces carbon content of fuel 10% by 2022. No further reductions after.
- Carbon intensity of electricity decreases as provided by Oregon's Renewable Portfolio Standard.



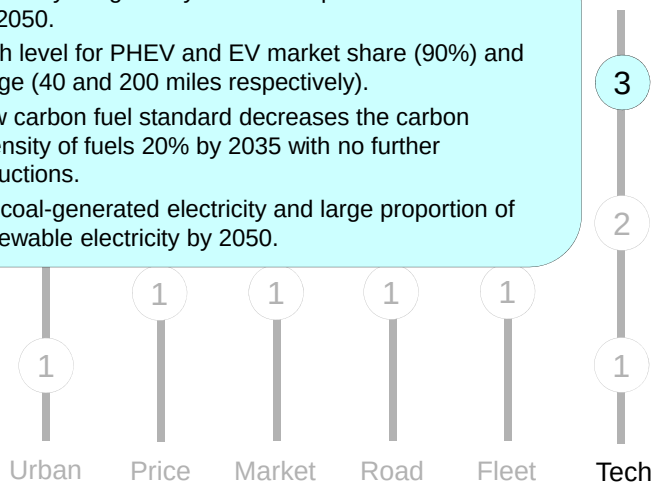
Technology Level 2 Assumptions

- Efficiency of light-duty vehicles improves to 100 MPG by 2050.
- Business as usual forecasts of PHEV and EV: about 15% of autos and 5% of light trucks in 2050.
- Low carbon fuel standard decreases the carbon intensity of fuels 20% by 2035 with no further reductions.
- Carbon intensity of electricity decreases as provided by Oregon's Renewable Portfolio Standard.



Technology Level 3 Assumptions

- Efficiency of light-duty vehicles improves to 100 MPG by 2050.
- High level for PHEV and EV market share (90%) and range (40 and 200 miles respectively).
- Low carbon fuel standard decreases the carbon intensity of fuels 20% by 2035 with no further reductions.
- No coal-generated electricity and large proportion of renewable electricity by 2050.



1st Round of Modeling Results

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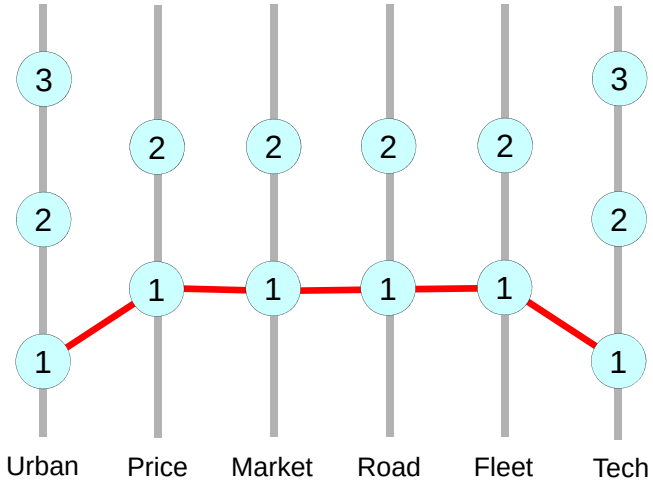
Reference case is the combination of 1st levels for all factors



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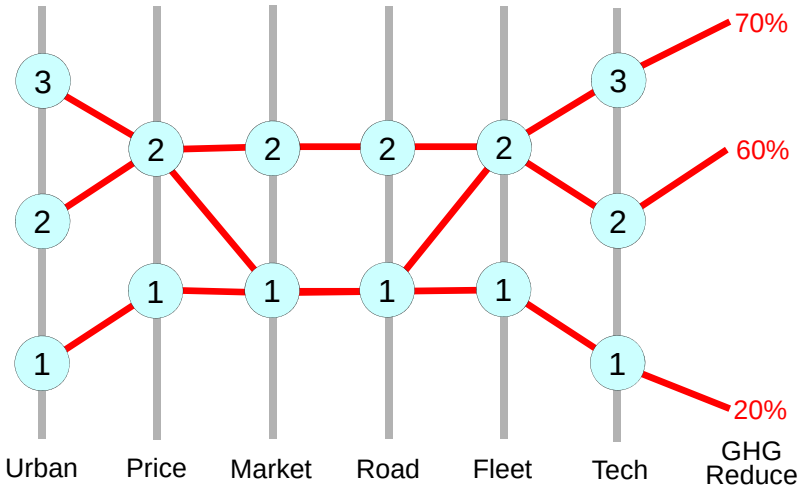
Summary measures have been calculated for each combination



Oregon Department of Transportation

Results Highlight

- The technology levels have the greatest effect
  - Reducing more than 55% requires 2nd or 3rd level
- The urban and price levels have the next greatest effect
  - Interchangeability: higher urban & lower price similar to lower urban & higher price
- Marketing levels have significant effect
- Fleet level effect affected by technology scenarios
- Road levels have least effect

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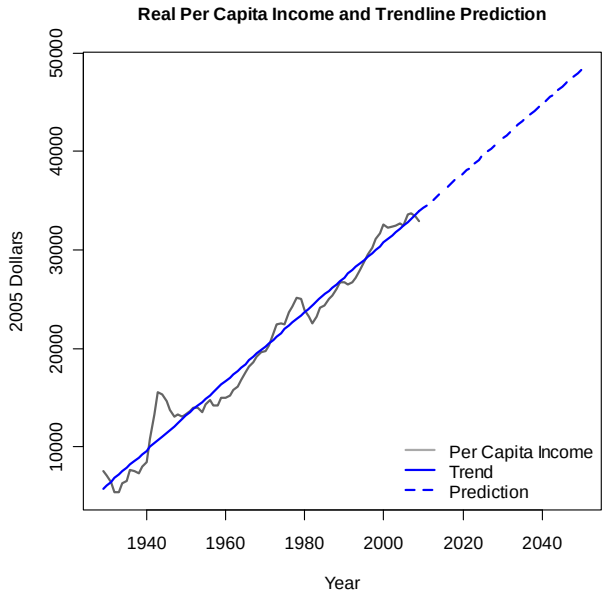
Interactive Presentation

STS Next Steps

1. Evaluating top scenarios (for 2050) and reference according to evaluation criteria
2. Based on evaluation, select a subset of scenarios, make adjustments to inputs
3. Model 2020, 2035 and 2050 for subset of scenarios
4. Evaluate results
5. Select subset of scenarios and make future adjustments
6. Develop final(?) light vehicle scenarios for phase 1

End


Real Per Capita Income and Trendline Prediction
2005 Dollars
10000
20000
30000
40000
50000
1940
1960
1980
2000
2020
2040
Year
Per Capita Income
Trend
Prediction

2010

a check-up on the

PORTLAND-REGION'S ECONOMIC HEALTH

Vision Statement

Portland-metro* is Oregon's largest community, and its economic health impacts the economy of the entire state. Because of its central role, the five organizations sponsoring this report decided to take a careful look at the health of the Portland economy in a number of studies to identify the region's strengths and weaknesses. This report contains the findings of the first of those studies.

Portland-metro has many economic assets: a strategic location on the Pacific Rim, a robust transportation system, a relatively low cost of living and a quality of life that is attractive to young, well educated individuals. Over the past four decades, however, **Portland-metro's economic performance has not kept pace with a number of its peers across the nation,** and the differences have become most stark over the last decade. For example, where we were once virtually an economic twin to Seattle, our falling incomes now make us more like Pittsburgh and Cleveland.

The region's per capita income has declined relative to peer regions, and private-sector jobs have disappeared in some areas. These declines impact the financial well-being of the region's families. Further, it limits funding for important public programs like schools and human services. Our quality of life ultimately depends on our ability to provide public services funded through taxes on income. If incomes decline and jobs are lost, quality of life will also decline.

This report is a call to action for all Oregonians. We must recognize that our valued quality of life will erode if the region's economy does not support healthy family incomes, quality schools and key public services. **It is time to make private-sector job creation our immediate and top priority.**

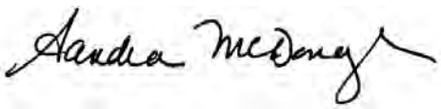
It would be tempting to conclude that the concerns identified in this report are the result of the national financial downturn. That would be incorrect. In fact, **the economic challenges facing Portland-metro have been building for more than a decade.**

In the 1990s Portland-metro was experiencing significant economic growth and capital investment. Jobs were growing so quickly that some local jurisdictions signaled that they couldn't accommodate more. But in the late-1990s the region's wages and income declined relative to peers like Denver, Minneapolis and Seattle. **What happened, and how do we fix it?**

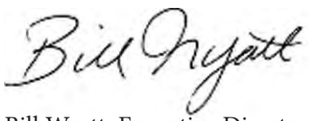
Oregon and Portland-metro have shown that we can adopt a bold, nation-leading vision and then bring it to reality. We've built a world-class public transportation network and created a visionary land-use system. Now we need to focus that innovative ability on the economic crisis facing our region and what is needed to **retain the private-sector jobs we currently have and create new jobs** through growth of existing firms and recruitment of new ones.

Through this report, we hope to start a conversation among public and private leaders to map a course through this crisis. It will take all of us to create an economically healthy region.

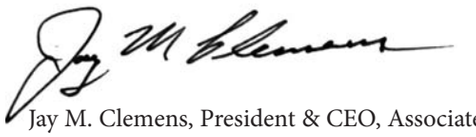
Now is the time to start the work.



Sandra McDonough, President & CEO, Portland Business Alliance



Bill Wyatt, Executive Director, Port of Portland



Jay M. Clemens, President & CEO, Associated Oregon Industries

Ryan Deckert, President, Oregon Business Association

Duncan Wyse, President, Oregon Business Council

* Portland-metro, Seattle-metro, Denver-metro and Minneapolis-metro refer to the Metropolitan Statistical Areas of Portland-Vancouver-Hillsboro, OR-WA MSA, Seattle-Bellevue-Everett MSA, Denver-Aurora MSA, and Minneapolis-St. Paul-Bloomington MSA respectively unless otherwise noted. This report looks at a wide array of data to analyze the economic performance of the Portland metropolitan region. Using an array of data gives us the broadest possible base from which to draw conclusions. For a thorough discussion of the various databases used in this report, please see the full report at www.valueofjobs.com.

BY THE NUMBERS:

198th out of 199.

Ranking of Multnomah County in private-sector job creation out of the 194 counties and 5 multi-county areas in the five Western* states from 1997 to 2009.

26,463.

Number of private-sector jobs lost in Multnomah County from 1997 to 2009.

16% to 21%.

Amount by which per capita income in Seattle, Denver and Minneapolis metros exceeds Portland-metro.

$86.8 million.

Amount of additional funding that would be available to Multnomah County schools each year if Portland-metro had the same per capita income as Seattle-metro.

25%, 15% & 9%.

Percent by which Portland-metro residents' per capita interest, dividend and rent income lagged those of Seattle, Minneapolis and Denver-metros' respectively in 2008.

66%.

Percent of net job creation in Oregon from small businesses between 1977 and 2005.

44th.

Oregon's college affordability rank out of 50 states.

29th & 26th.

Oregon's rank in the *U.S. News* ranking of college undergraduate and graduate programs respectively, out of 50 states.

* Includes Oregon, Washington, Idaho, Nevada and California.

Key Facts

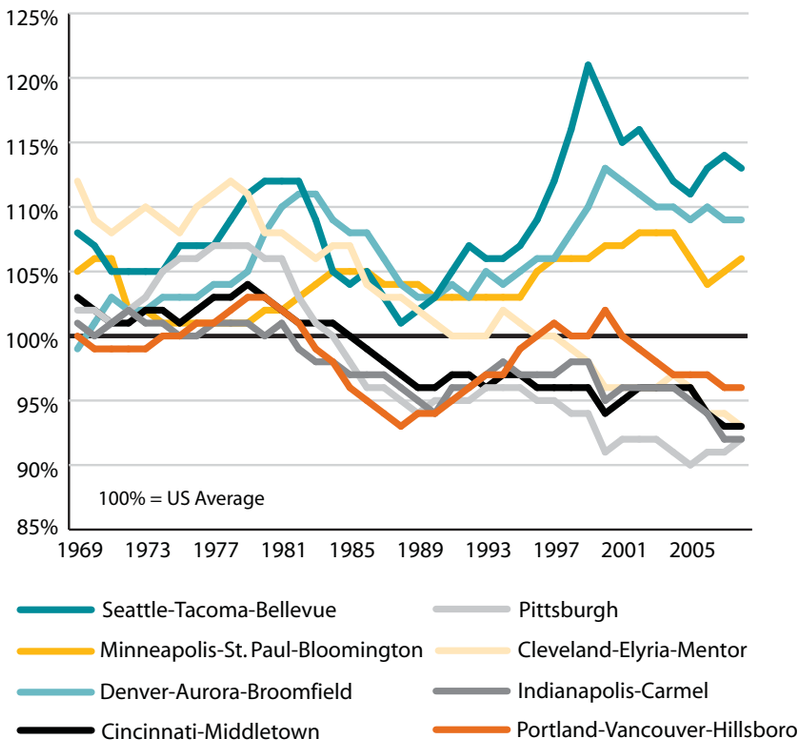
- Multnomah County has **lost 26,463 private-sector jobs** since 1997. It ranks **second to the bottom** in job creation among 194 counties and 5 multi-county areas in the West* over the last decade.
- Portland-metro residents have lower wages and incomes than residents of peer regions. Because Oregon is an income-tax dependent state this means **fewer resources for schools, law enforcement and other important public services.**
- Forty years ago Portland-metro wages and incomes looked more like our peer regions, but since then our peers have steadily outperformed the region's economy. Today, our **average incomes are 16 to 21 percent lower** than those of our peers.
- In the 1990s, the growing gap between Portland-metro's economic fortunes and its peers widened significantly. **Private-sector job growth stalled after 1997 and has declined since 2000.** Meanwhile, our peer regions have been more resilient, replacing jobs and wages lost in the late 1990s' recession with new firms and industries, especially knowledge-based industries like software and professional services.
- The Portland-metro area does not notably out-perform our peers on "compensating" characteristics such as cost of living or quality of life. **Our peers are achieving high quality of life AND higher wages and incomes.**
- The region has characteristics that bode well for future economic growth such as a relatively low cost of living compared to other west coast cities; strategic position on the Pacific Rim; transportation infrastructure; a strong entrepreneurial and small business climate, and a healthy international trade sector. But those characteristics alone do not constitute a successful economic strategy.

What the numbers show

Portland-metro vs. peer metros

This study compares Portland-metro to three other major metropolitan areas: Seattle, Denver and Minneapolis. These three regions were selected because they frequently serve as benchmarks for Portland-metro on a variety of metrics. In the early 1970s, Portland's per capita income compared favorably to these peer regions. Today, we look markedly different. There is no one reason that fully explains the differences between the economies of Portland-metro and our peers; however, the following analysis paints a picture of the relative strengths of the four economic regions.

Average wage by select US Metro areas, 1969-2008

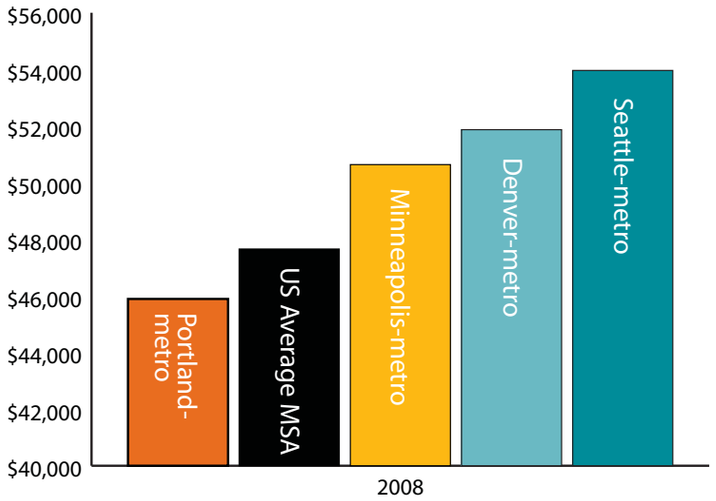


Source: ECONorthwest analysis in terms of MSA wages versus USA MSA average from the Bureau of Economic Affairs.

Wages

The ECONorthwest analysis shows that in the early 1970s Portland-metro's wages were similar to those in Seattle, Denver and Minneapolis metros. But since then the metro areas have diverged on average wages. Today Portland-metro wages are 4 percent below the national average for all metropolitan areas, 10 percent below Minneapolis-metro, 13 percent below Denver-metro and 17 percent below Seattle-metro. Currently, Portland-metro wages are more like Cleveland, Pittsburgh and Indianapolis metros than they are like Seattle, Denver, or Minneapolis metros.

Average wages and salaries



Source: MSA wages from Bureau of Economic Affairs data.

Why compare Portland-metro to these other metro areas?

Seattle, Denver and Minneapolis are common cities for Portland to benchmark against for livability, transportation systems and economic development. All of the cities have exchanged "best practices" visits with Portland for benchmarking purposes. Our falling incomes now make us more like Pittsburgh or Cleveland, as illustrated in the graph above.

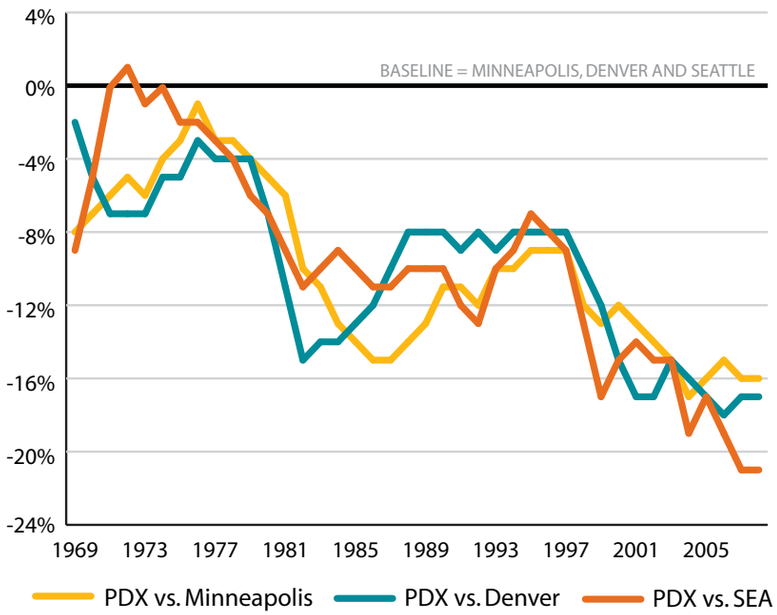
Per Capita Income

Since the 1970s, Portland-metro's per capita income has been declining relative to peers and since 2007 has fallen below the national average. Portland-metro is 21 percent behind Seattle-metro on per capita income, a $10,000 per year difference. Per capita income in Denver and Minneapolis-metros are both more than 16 percent higher than Portland-metro.

Investment Income

Wages are an important component of per capita income. But investment income is also a significant source of income, including taxable income that supports public services. Portland-metro residents reported 9 percent less per capita investment income than Denver-metro residents, 15 percent less than Minneapolis-metro residents and 25 percent less than Seattle-metro residents. Had investment income kept pace with Seattle-metro over the last 10 years, total personal income in Portland-metro would have been nearly $6.4 billion higher in 2008. Investment income is important not only for providing more resources for public services, but also for seed money for start-ups and other entrepreneurial activity, which spurs more economic growth.

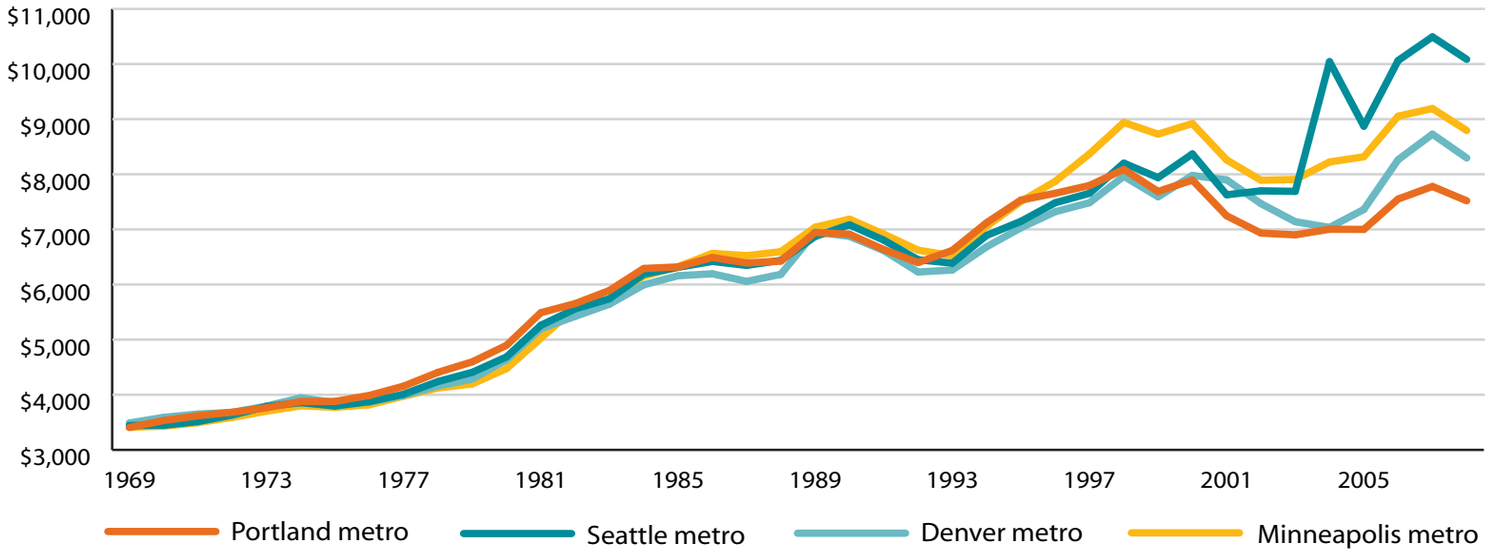
Percent difference in per capita income, 1969-2008



Source: ECONorthwest analysis of Bureau of Economic Analysis data.

This graph shows Portland-metro per capita income as a percent of per capita income in Seattle, Denver and Minneapolis metros. Portland-metro per capita income started only a few percentage points below the other three metros, but by 2008 was well below them.

Per capita income from "dividends, interest and rental income" (2008 dollars), 1969-2008



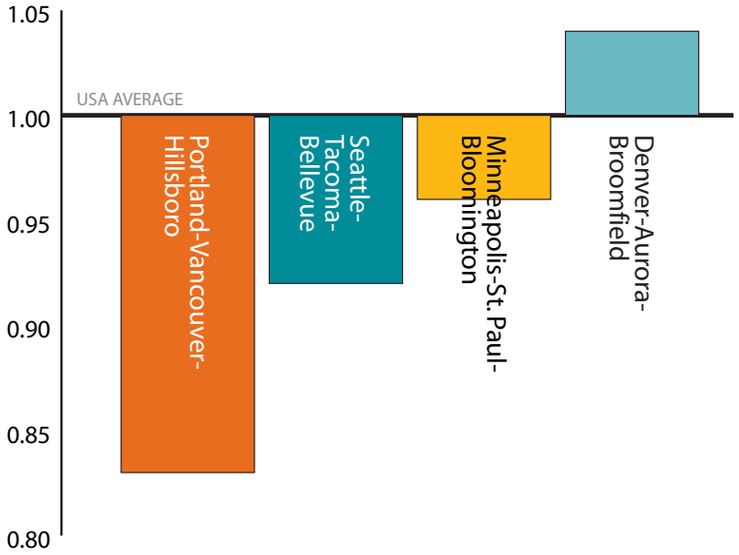
Source: ECONorthwest analysis of Bureau of Economic Analysis data.

This graph shows that Portland-metro per capita income from investments started almost equal to that of our peer metros, but stalled in 1994, and now lags significantly behind them.

Affordability

Portland-metro's cost of living is lower than Seattle-metro's and, indeed, is lower than any other major west coast metro-area. However cost of living tells only part of the story because it doesn't take our relatively low wages into consideration. When wages are considered, Portland-metro is less affordable than Seattle, Denver or Minneapolis. The reason is that our wages are lower relative to housing and other costs than in our peer cities. Improving wages while keeping housing costs stable would significantly improve the affordability of our region.

Affordability of select US metro areas, 2008



Sources: ECONorthwest calculated ratio of BEA average wage to the cost of living indices of the Council for Community and Economic Research.

This graph shows that Denver has higher wages and lower costs. So, comparitively, Denver residents have the greatest buying power and Portland's the least.

Quality of Life

The Portland region continues to command a high quality of life that helps to attract young, skilled workers and potentially somewhat compensates for the region's lower wages and income. However quality of life is not enough. Other communities have also increasingly focused on improving their quality of life while, at the same time, providing higher wages and income. Communities such as Denver and Seattle-metro have achieved both higher incomes and higher quality of life than Portland-metro.* The link between wages, income and quality of life is significant. If we have lower incomes than our peers we will also have fewer public dollars to provide services such as quality schools, parks and social safety nets.

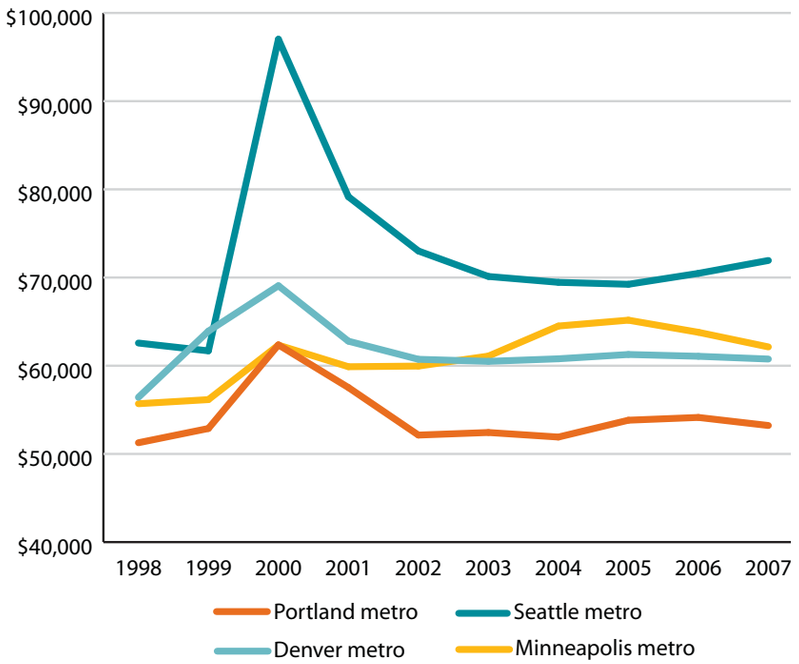
* David Albouy, Working Paper 14472, National Bureau of Economic Research

Traded Sector

Traded-sector firms are those that sell goods or services outside the local geographic area. The state and regional economies benefit tremendously from the existence of traded-sector firms that bring additional income into the community, which tend to raise the standard of living for all residents. The Portland-metro economy has a number of strong traded-sector industries with clear prospects for growth.* While our traded-sector jobs pay better-than-average wages for the region, Portland-metro traded-sector wages still lag significantly behind the traded-sector wages of our peers, and the region's share of payroll from the traded sector is declining.

* See 2008 Greater Portland Prosperity; A Regional Outlook, Greenlight Greater Portland.

Metro area traded sector annual wages, (2007 dollars), 1998-2007



Source: ECONorthwest analysis of data from the Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School. Copyright © 2010 by the President and Fellows of Harvard College. All rights reserved.

Multnomah County Employment

Multnomah County, Portland-metro's urban center, has suffered from a long-term loss of jobs that began well before the current economic downturn. Ranking the 194 counties and five multi-county areas in five western states, Multnomah County is second from the bottom in job creation from 1997 to 2009, having lost more than 26,000 private-sector jobs during that period. (King County, which includes Bellevue and Redmond, added nearly 68,000 jobs in the same time period.) While Multnomah County saw an increase of 10,000 public-sector jobs over that same period, the erosion of private-sector employment in the region's largest economic center is not sustainable. Significantly, high-wage, high-skill jobs in the manufacturing sector, as well as professional-sector jobs that support other businesses, accounted for most of the job losses in Multnomah County. The loss of professional-sector jobs can be linked to a long-term loss of large headquarter companies in Portland-metro.

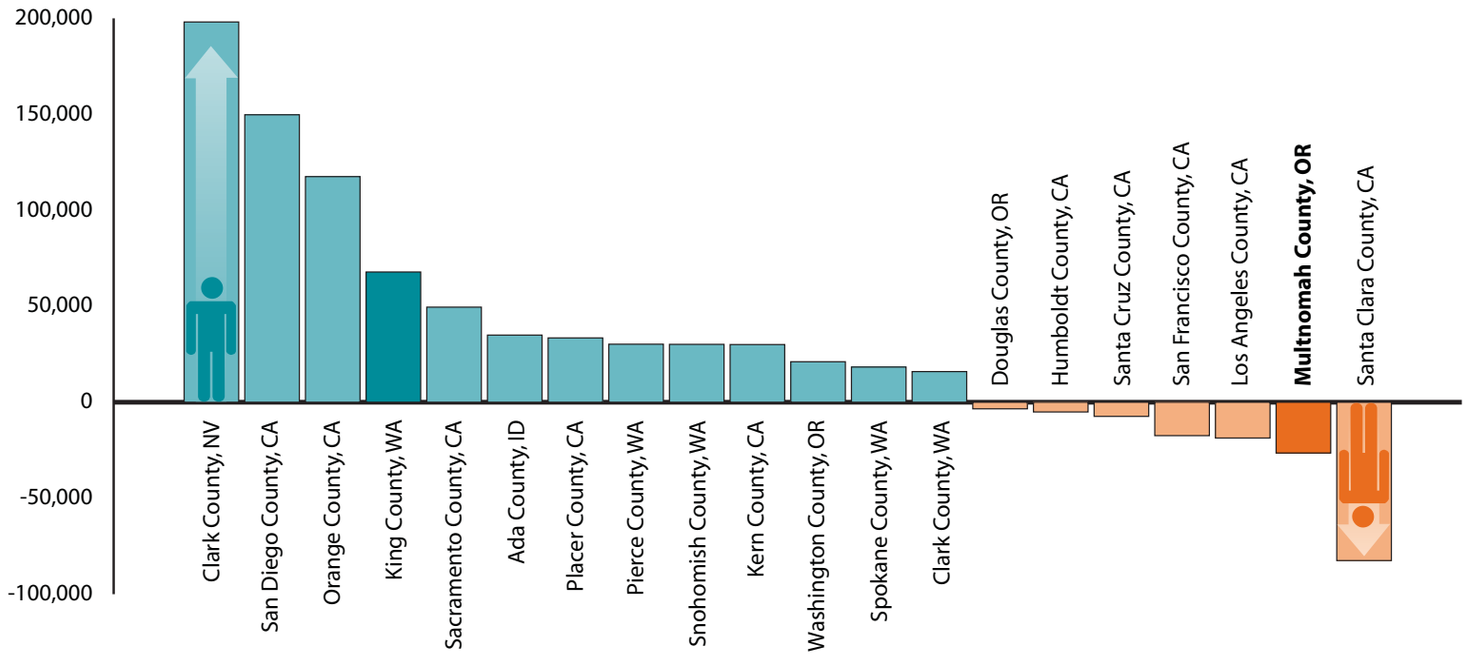
Change in employment by industry in Multnomah County, 1997-2009

Sector/Industry	1997-2009
Private sector:	
Construction	**-3,816**
Education & Health	12,293
Finance	**-2,043**
Leisure & Hospitality	5,877
Management of Companies	1,908
Manufacturing	**-16,858**
Professional & Business Services*	**-10,508**
Retail	**-3,344**
Other private	**-9,942**
Total Private	**-26,463**
Public sector jobs	10,447
Total Employment	**-16,016**

Source: ECONorthwest analysis of US Bureau of Labor Statistics, covered employment and payrolls.

**Excludes management of companies, which are reported separately in this table.*

Private sector employment growth from a sample of 199 western state counties, 1997-2009



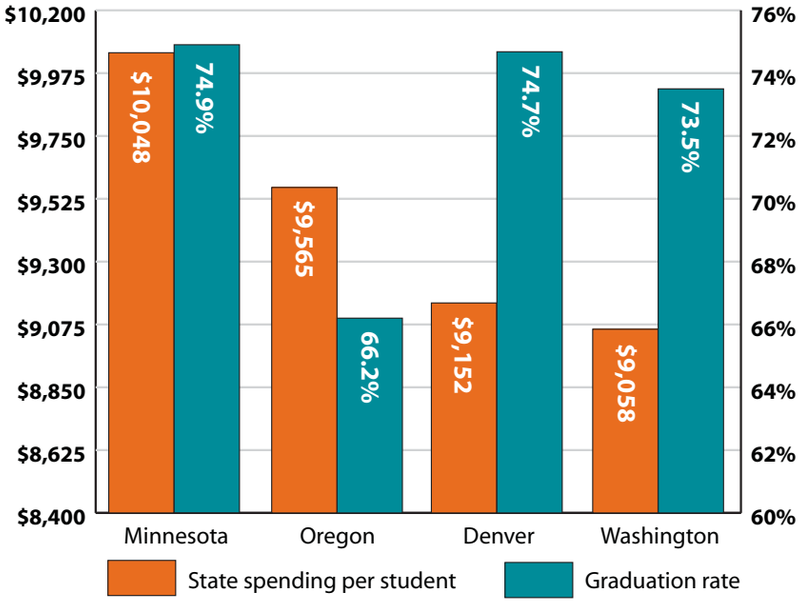
Source: ECONorthwest analysis of U.S. Bureau of Labor Statistics, covered employment and payrolls.

Santa Clara County, CA, home to Silicon Valley, lost tens of thousands of jobs in the high tech bust beginning in 2008. In the graph above multiple counties are not graphed due to space limitations. To see full list of counties, read full report at www.valueofjobs.com.

Education

Oregon's four-year high school graduation rates fall well below those of Washington, Colorado and Minnesota according to the National Center for Education Statistics. At the same time, Oregon spends more per student than both Colorado and Washington (although still less than the national average), while achieving poorer graduation rates. Minnesota spent the most of the four states, but they also achieved a very high graduation rate. Beyond high school, Oregon ranks 44th among the 50 states on college affordability, while Colorado, Minnesota and Washington rank 25th, 32nd and 34th, respectively. A strong, efficient education system is particularly important for producing a workforce for the higher-wage, knowledge-based industries that help drive the higher incomes in our peer regions.

State spending per student compared to high school graduation rates by metro area, 2007-08



Sources: ECONorthwest analysis of National Center for Education Statistics, Oregon Dept. of Education, Washington Office of Superintendent of Public Instruction, Colorado Department of Education and Minnesota Department of Education.

International Trade

International trade is a bright spot in the regional economy. A recent national study by the Brookings Institution finds that Portland is one of the most trade-dependent communities in the country, and our economy benefits tremendously from international trade. Eighty-eight percent of Oregon's exporting companies were small and medium enterprises as of 2008. Exports boost wages as well. Studies show workers at exporting firms earn wages 9 to 18 percent above those wages for workers at non-exporting firms.*

* These findings are from an analysis of international trade in Oregon and the Portland-metro region commissioned by the partners in this study.

Small Business

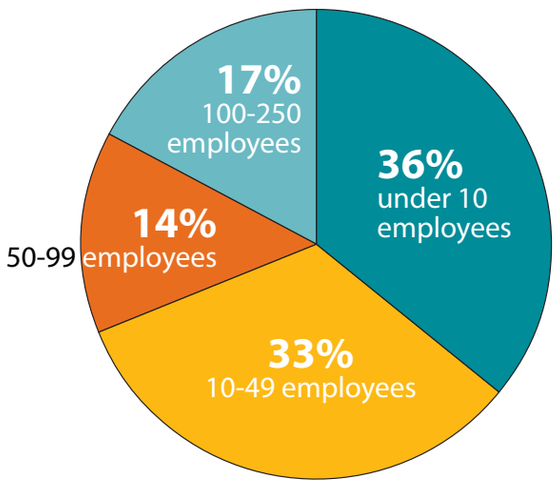
Oregon has a vibrant small business sector with more than half the state's workers employed by small businesses. Businesses that have fewer than 250 employees accounted for 66 percent of the net job creation in Oregon between 1977 and 2005. Small businesses, however, have lower wages and benefits, on average, than large businesses. While Oregon has a strong small business presence in international trade and the traded sector, these businesses nevertheless rely to a great degree on the presence of large national and international traded-sector firms for their success. A successful job-creation strategy must seek to retain and grow both small businesses and larger businesses to ensure long-term economic stability.

Percentage of employees in small businesses, state rankings, 2005

Rank	State	% of Total Employment
1	Montana	66.2%
2	Wyoming	64.5%
3	South Dakota	59.2%
4	Vermont	56.9%
5	North Dakota	56.6%
6	Maine	54.9%
7	Idaho	53.2%
8	New Mexico	52.4%
9	Alaska	52.2%
10	**Oregon**	**51.6%**
12	Washington	50.8%
23	Colorado	47.5%
30	Minnesota	45.9%
	National Average	**45.5%**

Source: ECONorthwest analysis of U.S. Census business dynamics database.

Net job creation in Oregon from small business by size, 1977-2005



Source: ECONorthwest analysis of U.S. Census business dynamics database.

Why this matters to Oregon families

First and foremost, Portland-metro families suffer the negative impacts of the region's sluggish economy. Fewer jobs and lower wages mean it is harder for families to get by economically year after year.

But there are broader impacts as well. Oregon is an income-tax-dependent state. The state's schools, community colleges, universities, social and human services and corrections services all depend largely on revenue derived from taxes on personal income. The region's low wages and declining per capita income translate into anemic state income tax revenues, which directly impacts the state's ability to deliver social services. Economists have predicted that Oregon faces a decade of state budget deficits and is likely to fall about $3 billion short of the funds needed to maintain current services in every two-year budget cycle.

There are those who argue that we could simply increase taxes and fees to fix the state's budget problems. However, Oregon Business Plan research indicates that, since the 1970s, Oregonians have established a ceiling for the percentage of personal income they are willing to devote to state and local government services.* This research strongly suggests that efforts to simply raise taxes or fees on the existing economy will fail, and the only sustainable solution to increasing resources for public services is to increase the size and strength of the economy and grow quality private-sector jobs.

For example, if the 2008 per capita personal income in Portland-metro had equaled that of Seattle-metro, there would have been an additional $23.4 billion of income generated in the region. That would have generated approximately $1.3 billion in state revenue for schools, human services and other critical state and local programs.

Additionally, the Portland-metro's land-use and transportation strategies are predicated on robust job growth in Portland and the rest of Multnomah County. The region's most important environmental strategy is to reduce carbon emissions and land consumption by encouraging a more compact urban form. The declining employment figures for Multnomah County call into question whether this strategy can be successful if the trend of private-sector job losses over the past decade is not reversed.

* Oregon Business Plan, Oregon's Challenge: Breaking out of a Circle of Scarcity, 2010.

CALL TO ACTION

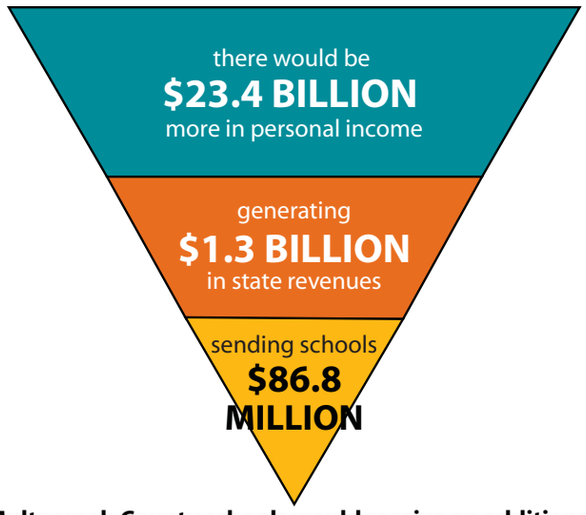
The Portland-metro region faces a crisis. If unstopped, the loss of jobs in Multnomah County and the stagnant-to-declining wages and incomes across the region will erode our quality of life, not just in Portland-metro, but across Oregon because of the region's key role in the overall state economy.

At the end of the day, if our incomes are 20 percent below those of our peers, our schools, universities, parks, ports and human services will be funded at levels below those of our peers. Is that the future that we want for our community? Our conclusion is a resounding NO!

Our goals in the coming months will be to work with Oregon's public and private leaders to generate solutions that:

- ✓ Make quality private-sector job creation the top priority for all of Portland-metro, achieved by retaining and growing jobs at existing businesses and attracting new jobs.
- ✓ Focus on the jobs crisis in Multnomah County, stop the loss of private-sector jobs and then begin the process of growing new jobs.
- ✓ Reverse the trend of declining Portland-metro wages and incomes relative to our peer regions and begin to make up ground.

If Portland-metro per capita income equaled Seattle-metro's:



Multnomah County schools would receive an additional $86.8 million per year from the state

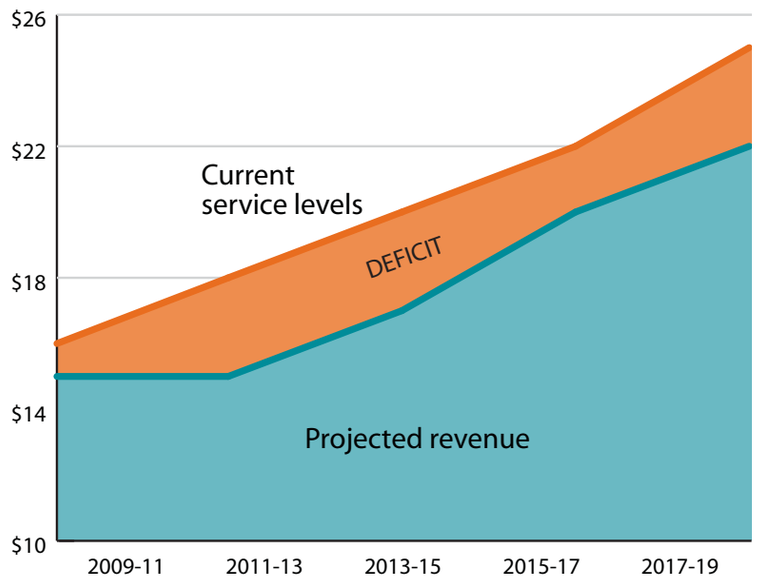
What are our next steps?

For any economic development strategy to be successful, we must create an environment that supports private-sector job retention and creation. In the coming months, we believe we must address the policy issues that drive our economic environment, including:

- **Does our community truly welcome business and job creation, particularly as it relates to the large, internationally traded firms that offer higher wages?**
- **Can the region's leaders come together and agree on a unified economic strategy – and then implement it?**
- **When we must make trade-offs between competing interests, how do jobs and economic growth fare? Can we institute a 'jobs impact analysis' for every policy consideration?**
- **Do we have an educational system, especially a higher education system, which is graduating the talent we need to be competitive in the knowledge-based industries of the future?**
- **Are our land use, transportation and tax policies supportive of growing jobs and incomes?**
- **Can we nurture our small businesses – our entrepreneurial class – so that they have the opportunity to grow and thrive, generating more jobs?**
- **Do we believe a strong urban core in Multnomah County is essential to the long-term economic health of the region and are we willing to act now to reverse the decline in private-sector jobs?**

We must act on these questions boldly and quickly. In January 2011, the Portland Business Alliance board of directors will host a jobs summit to begin the process of answering these questions and starting the conversations. All of the partners in this report will participate, and we stand ready to work with elected and other leaders to chart a new course for the region's economy.

Projected Oregon state budget (dollars in billions)



Source: Oregon Department of Administrative Services.

This graph shows that Oregon's projected state revenues will fall short of the level needed to cover the state expenditures at the current service level over the next 10 years, resulting in further service cuts.

This report, compiled by ECONorthwest for the Portland Business Alliance, Associated Oregon Industries, Oregon Business Association, Oregon Business Council and Port of Portland is a comprehensive examination of the region's economic performance over the past 40 years. It is a component of a larger project looking at the statewide economic performance of Oregon and Portland-metro compared to peer regions. The objectives of the report are to identify key differences between the Portland, Seattle, Denver and Minneapolis metro economies; examine why the Portland-metro economy under-performs relative to these peers; and begin a conversation with public and private leaders to define strategies to restore public service funding and spur economic growth.

The mission of the Portland Business Alliance is to promote and foster an environment in the Portland region that attracts, supports and retains private sector jobs, spurs economic vitality and enables quality educational opportunities for the region's residents.

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Leading the way

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www.valueofjobs.com

2010

INTERNATIONAL TRADE STUDY

Summary

Overview

This report, compiled by The Trade Partnership for the Portland Business Alliance, Associated Oregon Industries, Oregon Business Association, Oregon Business Council, Port of Portland and the Pacific Northwest International Trade Association examines how international trade impacts job creation and the economy of Oregon and the Portland-metro area.* A companion analysis, **A Check-up on the Portland Region's Economic Health,** identified some alarming economic challenges facing the Portland-metro region including sagging wages and incomes and, in Multnomah County, significant job losses. However, international trade stood out as an area of economic strength for both the region and the state.

This report looks at ways international trade benefits the regional and state economy. As the analysis makes clear, international trade is a significant net generator of jobs and income for Oregon workers. It is one of the few areas of the economy that, despite the recession, is growing. It is also an area where Oregon and Portland have substantial competitive advantages relative to U.S. and international competitors.

This report confirms the findings of a 2010 national analysis conducted by the Brookings Institution, which found that Portland was one of the top twenty U.S. metropolitan areas in exporting strength and one of only four metropolitan areas in the country that doubled the real value of their exports between 2003 and 2008.** The rise in value of exports was led by the computer and electronics sector, but includes both manufactured goods and, increasingly, service exports.

However, our success as an international competitor is not a foregone conclusion in coming years. Other ports, states and nations are investing heavily in improved transportation facilities, making land available and implementing public policies to promote their competitiveness in attracting international trade and employment.

A thriving economy and good jobs are the foundation of our quality of life. Taxes on incomes support critical public services like schools, health care and law enforcement. As with the other studies in this series, we hope this information will start a conversation among public and private leaders to help move public policy in a direction that enhances our quality of life by improving and creating good paying jobs.

* International Trade: A Driver of Output and Employment in Oregon and Portland/Vancouver, The Trade Partnership, December 2010. For a full copy of the report, please see www.valueofjobs.com. Portland-metro refers to the Portland-Vancouver-Hillsboro, OR-WA MSA.

** Export Nation: How U.S. Metros Lead National Export Growth and Boost Competitiveness, Brookings Institution, Metropolitan Policy Program, July 2010. www.brookings.edu/metro.

BY THE NUMBERS:

470,000.
Number of Oregon jobs supported by international trade, including imports and exports.

268,000.
Number of jobs in the Portland-metro area supported by international trade

113,000.
Number of Oregon jobs associated with exporting manufactured goods.

$15 billion.
Value of exports and imports of goods and services to the Portland region in 2008.

2nd.
Rank of Portland among all U.S. metro areas in terms of export value growth between 2003 and 2008.

12%.
Proportion of Oregon's Gross State Product that comes from exports, making Oregon 7th highest among all U.S. states in the value of exports as a percent of Gross State Product in 2008.

9th.
National ranking of Oregon in per capita value of exports in 2009.

Key Facts

- One quarter of Oregon's total manufacturing jobs in 2008 depended on exporting. Oregon manufacturers and their workers depend on foreign customers for one in four sales dollars.
- During 2008, foreign companies in Oregon were responsible for some 44,300 jobs, one-quarter of which were in the manufacturing sector.
- With its deep-water marine terminals and international air service, the Portland-Vancouver region exported one-fifth of its economic output in 2008, ranking second among U.S. metro areas.
- A number of studies show that workers at export-oriented firms in the U.S. earn between 9 and 18 percent more than their counterparts at non-export-oriented firms.
- Most Oregon exporters are small- and medium-sized businesses. Eighty-eight percent of Oregon's exporting companies were small and medium enterprises as of 2008.
- Free Trade Agreements benefit Oregon workers. Trade with the 17 countries covered by Free Trade Agreements is a growing portion of total trade, up 24 percent between 1996 and 2009.

DID YOU KNOW?

Intel employs more than **15,000 employees** at its seven Hillsboro facilities. Three-quarters of their manufacturing is in the U.S. but three-quarters of Intel's revenue comes from outside the U.S.

What the numbers show

Oregon, and the Portland-metro area in particular, has traditionally been trade-oriented. Located on the Pacific Rim, Portland-metro has one of the best multi-modal transportation hubs on the West Coast for connecting domestic and international markets. Thousands of jobs in the state and the region directly depend on international trade and will continue to do so in the future. International trade is one of the few sectors of the state and regional economy that is growing jobs and economic activity. It's also raising average wages even as the recession continues to impact the overall economy.

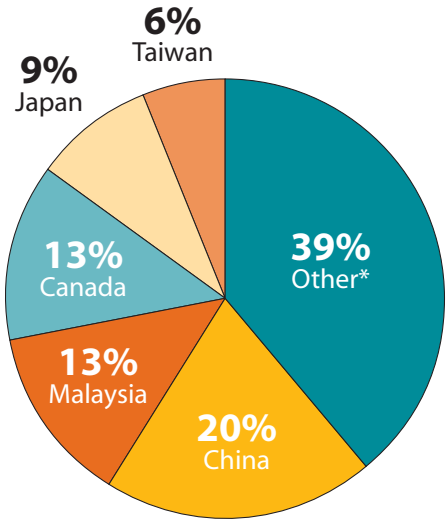
Jobs and Wages

Most studies of the impact of international trade look only at imports or exports and generally only at manufactured goods. While trade of manufactured goods is - and will remain - a critical component of international trade, trade jobs and income are increasingly also associated with the export of services and the import of foreign capital investment. Our analysis estimates that **470,000 Oregon jobs** are associated with all exporting and importing activities in both the manufacturing and non-manufacturing sectors. Portland-metro accounts for **268,000** of those jobs.

> "Global demand is the most fundamental driver of our business."
>
> Tamara Lundgren
> President & CEO
> Schnitzer Steel Industries

Recent studies have found that **workers in export industries and firms earned substantially more** than those in non-exporting industries and firms. One report found that the average wage of workers at exporting firms was 9-18 percent higher than non-exporting firms.

Top Oregon Exports Markets, 2009



* Other category includes more than 230 countries, with the largest markets including South Korea, Costa Rica, The Netherlands and Germany.

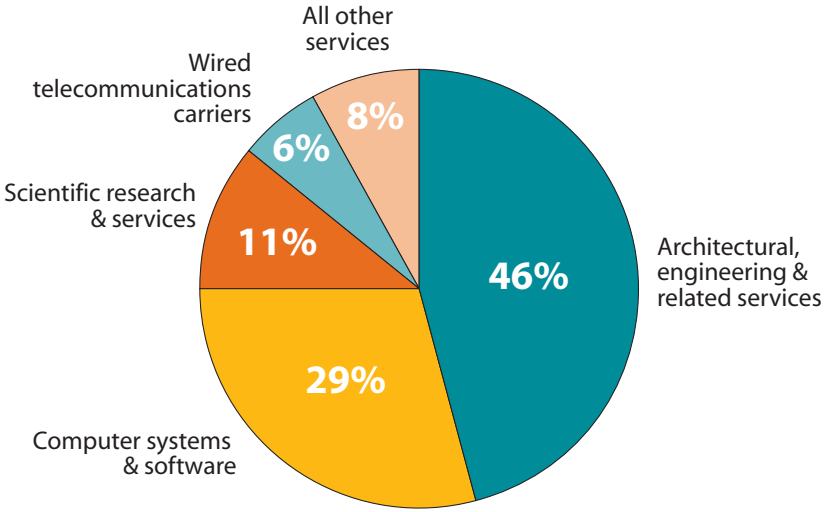
Exports - Merchandise

Oregon and the region are strong centers for the export of goods, including manufactured goods, food, agricultural products and transportation equipment. **In 2008, Oregon's merchandise exports exceeded $19 billion** before the global recession hit. Prior to the recession, exports of Oregon goods were rising at an average annual rate of more than 16 percent. The manufacturing sector is particularly dependent on international trade, with one in four dollars of sales and a quarter of the sector's jobs tied to foreign customers.

Exports - Services

Exports of services to international markets make up a significant share of Oregon business sales. Architectural, engineering, computer systems, software, scientific research and telecommunications are increasingly finding markets internationally. In 2002, architectural, engineering and related services registered the largest value of Oregon's service exports to the world, and those exports accounted for over **10 percent of the industries' total revenue** that year.

Percent of Revenue, Service Exports, 2002



Imports

Contrary to popular belief, most U.S. imports are not finished goods, but raw materials, components and machinery used by U.S. farmers, manufacturers and others to produce goods and services in the United States. Sixty percent of the imports into Oregon in 2008 fall into this category. Imports enable regional manufacturers or service providers and their employees to compete for sales to increasingly cost-conscious consumers in global as well as national and regional markets.

Foreign investment

Foreign investment in Oregon also contributes to the region's economy and job base. **Majority-owned affiliates of foreign firms employed 44,300** Oregon workers, or about three percent of Oregon workers, in 2007. Twenty-six percent of those jobs were at manufacturing firms owned by subsidiaries of foreign-owned firms.

Small Business

Small- and medium-sized firms account for the bulk of Oregon's exporters. In 2008, 88 percent of Oregon's 4,640 exporters were small- or medium-sized firms. That statistic only counts firms that are direct exporters, it does not include the many related small- and medium-size firms which indirectly exported by selling parts or components that were subsequently incorporated into an export shipment.

> "The growth of Oregon Steel into what it's become simply would not have been possible without the foreign acquisition and investment by Russia's Evraz Group."
>
> Mike Rehwinkel
> President & CEO, Evraz Inc. NA.

Exporting Oregon Values

Oregon's international firms are carrying the ethic and technology of sustainability across the globe. They export concepts such as sustainability and environmental stewardship with requirements in their purchasing or sales contracts or with tools that their suppliers use to identify sustainable practices. **Rejuvenation,** a manufacturer of period lighting, is working with its suppliers in China, India and Taiwan to green their supply chain by monitoring waste water and recycling. **Glumac,** an engineering consulting firm, employs more than 80 LEED accredited professionals to promote environmental practices in countries like India and China. The Oregon electronics industry helped create a program that enables buyers of computers and monitors to measure their environmental impact. **Nike** recently announced the creation of its Environmental Apparel Design Tool which allows companies to assess the footprint of their products during the design phase.

Athletic & Outdoor Industry

While manufacturing and distribution of the goods created by Oregon athletic and outdoor companies occurs largely outside the state and country, the research, design, marketing and global management occurs in Oregon. These jobs tend to pay higher wages because they represent the value of the intellectual property associated with a brand. According to the Oregon Employment Department, the average wage in the state's athletic and outdoor industry in 2009 was $82,700 per year, 79 percent higher than the average wage for all workers. A recent Portland Development Commission report found that 700 firms in this sector employ more than 14,000, with a combined payroll of nearly $1.2 billion. The report estimates that another 3,200 self-employed individuals provide services to the athletic and outdoor sector, generating another $100 million in annual revenue.

> "Open trade and markets are critical to the success of Columbia Sportswear. Our highly skilled workforce in the Portland area includes world-class designers, marketers and many other professions."
>
> Peter Bragdon
> Senior Vice President of
> Legal & Corporate Affairs
> Columbia Sportswear

DID YOU KNOW?

Oregon receives more patents for footwear than any other state. Portland-metro contains the nation's largest concentration of athletic and outdoor companies. Nike, Columbia Sportswear, Adidas, Danner, Keen, Pendleton and Leatherman are just a few of the companies in this sector that call the Portland-metro region home.

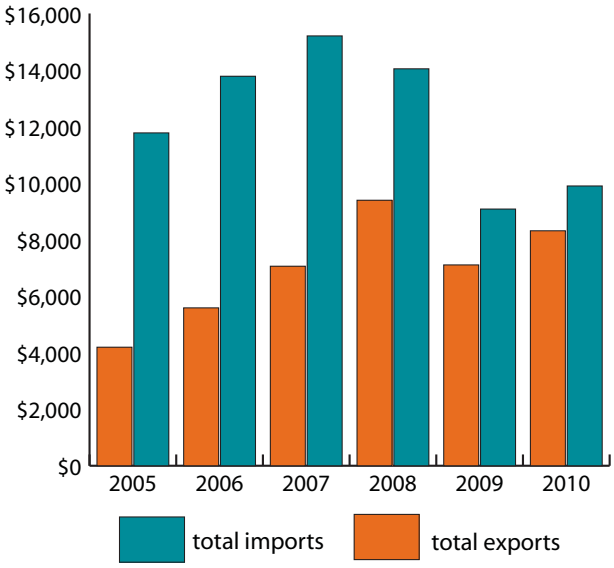
Portland-metro

Portland-metro in particular benefits from international trade and the presence of the ports of Portland and Vancouver. The companies and workers at the two ports are operating around the clock and knit together into a network of ocean shippers, transcontinental railways, truck lines, river barging, and international airports.

Although the recession did not spare international trade, **for the first eight months of 2010, exports through the ports were up 17 percent,** driven by increases in raw materials destined for strongly growing Asian markets. In addition, the ports have recently seen a 23.4 percent increase in transportation equipment imports.

Overall, the ports have a significant impact on the regional economy. The two ports combined **directly and indirectly supported more than 34,000 jobs** in 2006.

U.S. Trade Value Ports of Portland & Vancouver (millions)



> “As the world has become smaller, ZGF Architects has seen a definite increase in the number of international opportunities, and our company is focusing more on those projects.”
>
> Nancy Fishman
> Principal
> Zimmer Gunsul Frasca Architects

Federal Trade Agreements

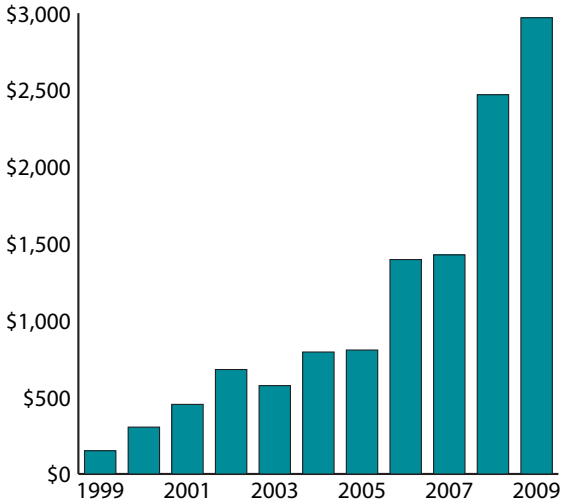
The ports have also seen a noticeable increase in traffic, as U.S. Free Trade Agreements are implemented.

Prior to U.S. extension of Permanent Normal Trade Relations for China and their subsequent accession to the World Trade Organization, Oregon exports to China amounted to $150 million per year. Since enactment of Permanent Normal Trade Relations with China in 2000, Oregon exports have exploded. In 2009, Oregon exported $2.9 billion worth of goods to China; this statistic doesn't measure exports of services such as engineering and architecture, so this understates the real importance of China as a trading partner. Exports from Oregon to China through June 2010 have nearly doubled compared to 2009, putting us on pace to export $4.5 billion in goods to China in 2010, making China Oregon's largest export market.*

Enactment of bilateral Free Trade Agreements have also benefited Oregon exports. The proportion of non-China merchandise trade with the 17 countries the U.S. has Free Trade Agreements with increased 24 percent between 1996 and 2009. For example, since passage of the Chile Free Trade Agreement, Oregon's exports of goods to Chile have increased 50 percent. The U.S. recently entered into a Free Trade Agreement with Singapore. As a result, Singapore is on pace to purchase $340 million worth of Oregon goods this year, making it Oregon's 11th largest export market.

* Source: International Trade Administration, U.S. Department of Commerce

Total Merchandise Exports to China, 1999-2009 (millions)



Source: International Trade Administration, U.S. Department of Commerce.

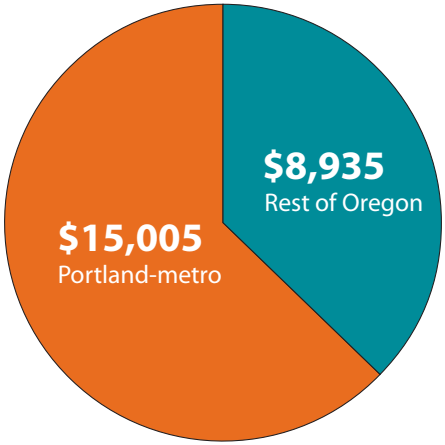
Why this matters to the Portland region

International trade brings a wide variety of benefits to the region: jobs, higher wages and investment. These benefits are distributed across a number of industries, to workers with varying educational backgrounds, and to residents throughout the metro area and across the state. Early 2010 export figures show strong growth in trade. Therefore, an improving international trade environment will be a critical factor in economic recovery in Oregon and the Portland region. Increased international trade could play a significant role in reversing or at least slowing a loss of jobs from Multnomah County and boosting the region's lagging wages.

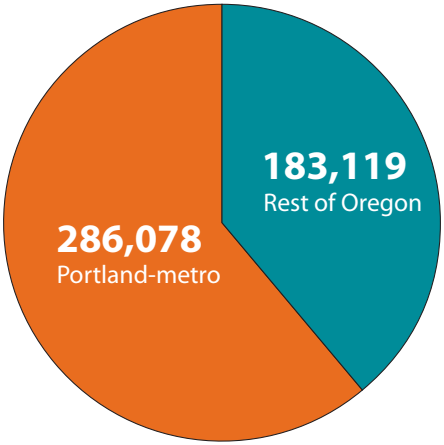
International trade throughout the world is competitive. Other states and nations are working hard to advance their international trade sectors. Continued investment in transportation facilities, reduced barriers to the development of industrial land, and supportive state and federal tax and trade policy will ensure the competitiveness of Oregon's trade-based economy and the retention and creation of family-wage, trade dependent jobs.

International trade is an important key to a healthy economy, in Oregon and in the Portland-metro region. Oregon's leaders, public and private, should focus closely on retaining and expanding policies and practices that support international trade as they strive to create and retain jobs for Oregon families.

Economic Value of Trade, 2008 (millions)



Jobs Associated with Trade, 2008



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Pacific Northwest International Trade Association

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The mission of the Portland Business Alliance is to promote and foster an environment in the Portland region that attracts, supports and retains private sector jobs, spurs economic vitality and enables quality educational opportunities for the region's residents.