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Metro | *Agenda*

Meeting: Joint Policy Advisory Committee on Transportation (JPACT)
Date: Thursday, Feb. 13, 2014
Time: 7:30 to 9 a.m.
Place: Metro Regional Center, Council Chamber

7:30 AM	**1.**		**CALL TO ORDER, DECLARATION OF A QUORUM & INTRODUCTIONS**	**Craig Dirksen, Chair**
7:32 AM	**2.**		**CITIZEN COMMUNICATIONS ON JPACT ITEMS**	**Craig Dirksen, Chair**
7:35 AM	**3.**		**UPDATES FROM THE CHAIR & COMMITTEE MEMBERS** · Update on JPACT Annual Washington, DC Trip · ID Southwest Kick Off Meeting · Update on STIP Enhance Projects · Oregon Transportation Commission (OTC) Membership · ACT Study Now Available · Joint MPAC/JPACT Meeting Dates Selected	**Jason Tell, ODOT** **Jason Tell, ODOT**
7:45 AM	**4.**	**	**CONSIDERATION OF THE MINUTES FOR JAN. 9, 2014**	**Craig Dirksen, Chair**
7:47 AM	**5.**	*	**Resolution No. 14-4501**: Endorsing the Federal Transportation Revenue Proposal Introduced by Transportation for America – APPROVAL REQUESTED	**Andy Cotugno, Metro**
8 AM	**6.**	*	Oregon Statewide Transportation Strategy Vision and Short-Term Implementation Plan (Reducing greenhouse gas emissions) – INFORMATION	**Amanda Pietz, ODOT** **Anne Russett, ODOT**
8:20 AM	**7.**		Climate Smart Communities Scenarios Project: Review recent opinion research compiled by DHM and suggest topics to include in upcoming public opinion research – INFORMATION/DISCUSSION	**Adam Davis, DHM Consulting**

Continued on back…

8:40 AM	**8.**	*	Climate Smart Communities Scenarios Project: Approving the process for shaping and adoption of the preferred approach in 2014 – APPROVAL REQUESTED	**Kim Ellis, Metro**
9 AM	**9.**		**ADJOURN**	**Craig Dirksen, Chair**

Upcoming JPACT meetings:

- **March 5 – 6** – JPACT Annual Washington, DC Trip
- **March 13** – regular JPACT meeting
- **April 10** – regular JPACT meeting

* Material available electronically.
** Material will be distributed in advance of the meeting.

For agenda and schedule information, call 503-797-1700. To check on closure or cancellations during inclement weather please call 503-797-1700.

2014 JPACT Work Program
1/28/14

January 9, 2014	**February 13, 2014**
• Active Transportation Plan work group refinements and Regional Transportation Plan edits – Comments from the Chair • Powell Boulevard east of I-205: UPWP amendment to add a planning study and a subsequent TIP amendment for a Preliminary Engineering phase for funding received from the legislature to study and engineer street design changes – Action • 2014 Regional Transportation Plan process update and share draft project list – Information • Climate Smart Communities Scenarios Project: First Look at Results (Part 3) and discussion proposed process for shaping preferred approach in 2014 – Information / discussion • Powell-Division project approach and roster – Information / action • Permission to Use Federal Streamlining Provision for Regional Air Quality Conformity	• Review agenda for JPACT trip to Washington, DC – Information/ Discussion • Resolution No. 14-4501: Endorsing the Federal Transportation Revenue Proposal Introduced by Transportation for America – Action • Oregon Statewide Transportation Strategy Vision and Short-Term Implementation Plan (Reducing greenhouse gas emissions) – Information • Climate Smart Communities Scenarios Project: Review recent opinion research compiled by DHM and suggest topics to include in upcoming public opinion research – Adam Davis - Information/Discussion • Climate Smart Communities Scenarios Project: Approving the process for shaping and adoption of the preferred approach in 2014 – Approval requested FYI: Final Prep Meeting for those attending the 2014 Annual JPACT Lobby Trip, Metro Regional Center, 370A/B, Monday, Feb. 24, 5 – 6 p.m.

March 13, 2014	**April 10, 2014**
• Preview of public review draft 2014 Regional Transportation Plan – Information • Preview of the public review draft of the Active Transportation Plan work group refinements and Regional Transportation Plan edits – Information • Draft 2015-18 Metropolitan Transportation Improvement Program – Information • Regional Travel Options program evaluation – Information • Regional Flexible Fund retrospective findings – Information/discussion • Climate Smart Communities Scenarios Project – Discuss Step 3 background information – Information/Discussion FYI: Public comment period on draft 2014 Regional Transportation Plan and draft Active Transportation Plan, March 21 – May 5 FYI: 2014 Annual JPACT Lobby Trip, Washington, DC, March 5-6 FYI: National Assoc. of Counties (NACo) Congressional Conference, Washington, DC, March 1-5 FYI: National League of Cities, Washington, DC, March 8-12	• Findings from the 2014 RTP and 2015-2018 MTIP Environmental Justice and Title VI analysis – Information/ discussion • Climate Smart Communities Scenarios Project – Discuss findings and recommendations from Health Impact Assessment – Oregon Health Authority - Information/Discussion • Review of Oregon Consensus Study of Transportation decision making in ODOT Region 1 HOLD: Early April: Joint MPAC/JPACT Meeting FYI: April 21 – 22, Oregon Active Transportation Summit, Portland, OR

May 8, 2014 • Air Quality Conformity Determination Comment Period – Comments from the Chair • Preliminary approval of the 2014 Regional Transportation Plan pending air quality conformity determination and public comment period – Action • Preliminary approval of the draft Active Transportation Plan per public comment received – Action • Regional Travel Options grant program – Information • Climate Smart Communities Scenarios: Preview of draft public engagement report and emerging ideas for draft preferred approach – Information/ discussion HOLD: Mid-May: Joint MPAC/JPACT Meeting *Climate Smart Communities Scenarios Project: Approval of draft preferred approach, subject to final evaluation and public review (Step 5) – Recommendation to the Metro Council* FYI: May 14-17, WTS International Annual Conference, Portland OR	**June 12, 2014** • Streetcar Evaluation Model: Discuss preliminary results of FTA funded research project focused on developing tools to better understand economic impacts of streetcar investments – Seek JPACT input on next steps in work program FYI: Public comment period on Air Quality Conformity results for the draft 2014 Regional Transportation Plan, May 16 – June 15
July 10, 2014 • Adopt the Active Transportation Plan – Action • Adopt the 2014 Regional Transportation Plan – Action • 2015-18 Metropolitan Transportation Improvement Program – Action FYI: National Assoc. of Counties (NACo) Annual Conference, New Orleans, LA, July 11-14	**August 14, 2014** • Climate Smart Communities Scenarios Project: Discuss draft Regional Framework Plan amendments and near-term implementation recommendations (Step 6)– Information/Discussion
September 11, 2014 • Climate Smart Communities Scenarios Project: Discuss evaluation results and public review draft preferred approach (Step 7) – Information/Discussion FYI: A 45-day comment period is planned from Sept. 5 to Oct. 20, 2014 on the public review draft preferred approach. FYI: 2014 Rail~Volution, Minneapolis, MN, September 21 – 24 HOLD: Sept./Oct.: Joint MPAC/JPACT Meeting, if needed	**October 9, 2014** • Climate Smart Communities Scenarios Project: Review public comments received to date and begin discussion of recommendation to Metro Council on adoption of the preferred approach (Step 7)– Discussion

November 13, 2014	**December 11, 2014**
• Climate Smart Communities Scenarios Project: Adoption of the preferred approach (Step 8) – Recommendation to the Metro Council requested FYI: National League of Cities Congress of Cities and Exposition, Austin, TX, November 18 - 22	

Parking Lot:

- Regional Indicators briefing
- Presentation by the Oregon Trucking Association
- Oregon Resiliency Plan

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE FEDERAL TRANSPORTATION REVENUE PROPOSAL INTRODUCED BY TRANSPORTATION FOR AMERICA	)))	RESOLUTION NO. 14-4501 Introduced by Councilor Dirksen, Chair of the Joint Policy Advisory Committee on Transportation

WHEREAS, Moving Ahead for Progress in the 21st Century (MAP-21) was adopted by Congress in 2012 for the period encompassing federal fiscal years 2013 and 2014;

WHEREAS, MAP-21 is scheduled to expire at the end of federal fiscal year 2014 (September 30, 2014);

WHEREAS, MAP-21 has a significant policy effect on transportation planning and decision-making and funding in the Portland metropolitan region; and

WHEREAS, the Joint Policy Advisory Committee on Transportation (JPACT) approved and the Metro Council adopted Resolution No. 13-4489 establishing a regional position on federal transportation policy; and

WHEREAS, the most important issue called for by Resolution No. 13-4489 is for a significant increase in federal transportation user fees to support reauthorization of MAP-21 both to eliminate the need for a subsidy of the Highway Trust Fund from the General Fund and to increase the level of federal transportation investment; and

WHEREAS, it is in the interest of Metro and JPACT to work with leaders of other regions responsible for addressing transportation needs; and

WHEREAS, the advocacy organization Transportation for America is comprised of interest groups, business, local governments and transit agencies that share a common interest in transportation investment; and

WHEREAS, Transportation for America has called on the US Congress to increase federal transportation user fees by $30 billion per year to both eliminate the need for a subsidy of the Highway Trust Fund by the General Fund and increase the level of federal transportation investment; and

WHEREAS, the Joint Policy Advisory Committee on Transportation recommended adoption of the resolution at its _____ meeting; now therefore

BE IT RESOLVED that the Metro Council:

1. Endorses the proposal from Transportation for America to increase federal transportation user fees by $30 billion per year to displace the dependence of the Highway and Transit Trust Funds on the General Fund and support growth in federal transportation investment.

2. Recognizes that other funding options may be considered that merit endorsement as well.

ADOPTED by the Metro Council this [insert date] day of [insert month] 2013.

Tom Hughes, Council President

Approved as to Form:

Alison R. Kean, Metro Attorney

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 14- 4501, FOR THE PURPOSE OF ENDORSING THE FEDERAL TRANSPORTATION REVENUE PROPOSAL INTRODUCED BY TRANSPORTATION FOR AMERICA

Date: January xx, 2014 Prepared by: Andy Cotugno, xt. 1763

BACKGROUND

Metro and the Joint Policy Advisory Committee on Transportation (JPACT) have consistently engaged in advocacy with the US Congress on matters of federal transportation policy. In December 2013, JPACT approved and the Metro Council adopted Resolution No. 13-4489 calling for an increase in federal transportation user fees and establishing a position on the use of those fee increases. The most significant priority called for in Resolution No. 13-4489 is to increase transportation user fees to both eliminate the need for a general fund subsidy and provide the resources for an increased federal investment in transportation.

Transportation for America (T4America) is an advocacy organization of interest groups, businesses, and governments and has proposed a $30 billion per year increase in federal transportation user fees (Attachment 1). They have suggested any of the following as options to raise the $30 billion per year:

- A 17-cent addition to the existing 18.3 cent federal gas tax; or
- Replacing the existing 18.3 cent federal gas tax with an 11% federal sales tax on gasoline; or
- Imposition of a $4 fee on each barrel of oil; or
- Addition of a 5.5% federal sales tax on gasoline; or
- Indexing the gas tax to construction costs and raising one of the options above but at a lower rate.

Attachment 2-A to this Staff Report provides information describing the current and expected General Fund subsidy to the Transit and Highway Trust Funds based upon continuing the practice established in MAP-21 to incorporate a modest inflation factor (1.8-2%) and subsidize the Trust Fund deficit with the General Fund. In addition, Attachment 2-B shows the consequence of eliminating this subsidy and drastically reducing the program **and** the impact of increasing transportation user fees by $30 billion per year with the resulting increased investment in transportation. As shown in Attachment 2-A, the General Fund subsidy for the decade leading up to the current fiscal year (FFY 2014) has been over $53 billion and it is expected this will balloon to over $140 billion for the next decade. This is in addition to General Fund commitments of $45 billion for transportation projects funded through the American Recovery and Reinvestment Act of 2009 (aka the Stimulus Bill), $3.6 billion for the past five years of funding for the TIGER Program (Transportation Investment Generating Economic Recovery) and $17.6 billion for the past decade of New Starts/Small Starts funding.

Overall, there has been an increasing dependence on this funding subsidy from the General Fund, placing continued reliance at great risk. If the practice were to **not** continue and the general fund subsidy were eliminated, on average it would result in a 28% reduction of the program (Attachment 2-A). This would translate into an average annual reduction of funding from the Highway Trust Fund to State of Oregon of over $130 million per year. A reduction of that magnitude is equivalent to nearly double the annual amount ODOT allocated for their entire statewide "Enhance" program as part of their recent 2015-2018 STIP update process. Attachment 2-C is the project list recently approved by the Oregon Transportation Commission for projects in the Metro region, all of which would be in jeopardy. Conversely, increasing transportation user fees by $30 billion per year in addition to displacing the need for a General Fund subsidy would allow

the Highway Trust Fund program to grow by an average 26% per year. This would produce an increase to Oregon of funding from the Highway Trust Fund of an average $145 million per year.

Furthermore, a portion of the FHWA funding to the State of Oregon is sub-allocated to Metro/JPACT and is the source for the recent 2016-2018 Regional Flexible Funding allocation. Elimination of the General Fund subsidy would pass through a portion of the Highway Trust Fund reduction to the State of Oregon resulting in a nearly $10 million per year decrease in Regional Flex Funds (from about $40 million per year to about $30 million per year). Attachment 2-D is the full project list recently approved by Metro/JPACT or which nearly one-third would be in jeopardy. The Transportation for America proposed increase would produce an approximate $12 million per year increase in Flex Funds. This potential reduction (of $10 million per year) or increase (of $12 million per year) is roughly equivalent in size to the 3-year Regional Economic Opportunity Fund which allocated $34 million to projects region-wide in the FY 2016-18 Regional Flex Fund Allocation.

Finally, the impact on programs funded through the federal Transit Trust Fund is even more significant. While the New Starts/Small Start program has always been funded with General Funds (which is expected to continue), bus and bus-related and rail rehab programs have been funded through the Transit Trust Fund using the federal gas tax and other federal user fees. However, like the Highway Trust Fund, the General Fund has subsidized the Transit Trust Fund. Projected revenues to transit districts could be reduced an average of 43% per year, translating to an average reduction of $24 million per year to TriMet and similar impacts to SMART and C-TRAN.

ANALYSIS/INFORMATION

1. **Known Opposition:** Increasing federal transportation funding is controversial and intertwined with the broader federal budget debate.

2. **Legal Antecedents:** Planning and policy conclusions developed through corridor and area plans must be adopted into the Regional Transportation Plan as a prerequisite for implementation. Federal funding to implement specific projects must be included in the Metropolitan Transportation Improvement Program.

3. **Anticipated Effects:** This action provides for the Portland region collaborating with other region's with a similar federal policy objective.

4. **Budget Impacts:** A portion of Metro's transportation planning budget is funded through the federal transportation program.

RECOMMENDED ACTION

Recommend adoption of Resolution No. 14-4501

ATTACHMENT 1

Transportation for America

SAVING THE NATION'S TRANSPORTATION FUND

An investment plan for the 21st century

We must act—now—to fix the transportation trust fund, so that we can **maintain** our existing infrastructure, **reward** local innovation and **prepare** for the future.

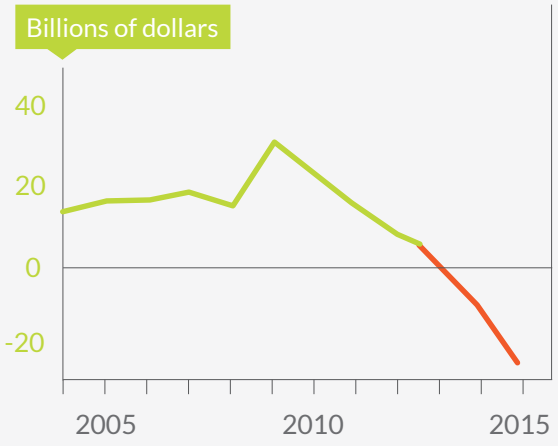
Trust Fund headed for insolvency

Our nation's ability to build and maintain our transportation network is nearing a crisis. Without action from Congress in 2014, our Highway Trust Fund will be in a deep deficit that could require **halting the federal program for fiscal year 2015**.

— Highway Trust Fund balance

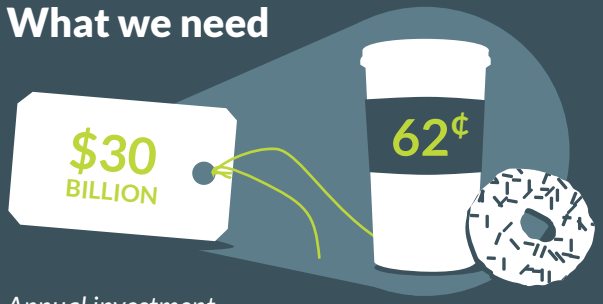
*2012-2020 numbers are based on CBO projections from August 27th, 2012

**DOT requires a minimum $6 billion cushion, hence the HTF hits the red before crossing zero. fhwa.dot.gov/policyinformation/statistics/2010/fe210.cfm



PAYING FOR PROGRESS

What we need



Annual investment needed to make the transportation fund solvent and effective

Daily cost per commuter. About as much as a cup of coffee and a doughnut per week.

How to raise it

The simplest way: Add 17 cents per gallon to the federal gas tax. Other possibilities (choose one):

- *Replace the existing per-gallon tax with a sales tax of 11%; or*
- *Introduce a fee of $4 on each barrel of oil; or*
- *Add a sales tax of 5.5% to fuel purchases; or*
- *Index the gas tax to construction costs and raise one of the above taxes/fees a lesser amount.*

Can we count on your support?

✓ ***Stabilize funding for the MAP-21 program Congress adopted in 2012 and protect all modes of transportation from draconian budget cuts;***

✓ ***Raise additional revenue for locally-driven projects that spur economic growth and innovation.***

OUR ECONOMY & COMMUNITIES DEPEND ON **TRANSPORTATION INVESTMENT**

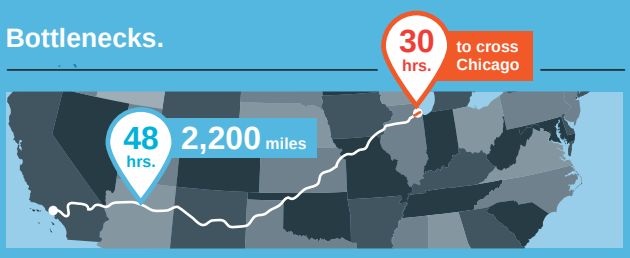
Across the country, our cities, towns and suburbs—the local centers of commerce that form the backbone of America's economy—are in a serious bind: They know they must have top-notch networks of roads and transit to compete on a global scale and preserve their quality of life. They know they need to get workers of all wage levels to their jobs. They also know they need to eliminate crippling bottlenecks in freight delivery. These local communities are stretching themselves to raise their own funds and to innovate, but without a strong federal partner the twin demands of maintaining their existing infrastructure and preparing for the future are beyond their means. Even as the transportation trust fund faces insolvency, existing federal programs too often put a damper on innovation rather than stoking it.

This cannot stand. The federal government must become a strong partner in a 21st century investment plan for transportation that invests in strong local economies and rewards smart, homegrown, locally-driven transportation innovations.

Just as our national economy depends on strong local economies, our national transportation program should invest in and reward smart, home grown, locally driven transportation solutions.

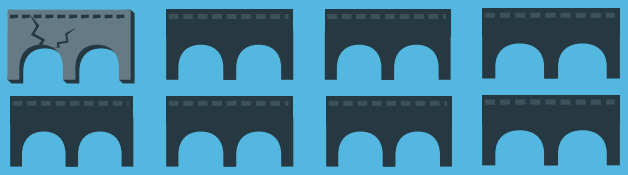
THE COSTS OF INACTION

Bottlenecks.



Freight takes almost as long to get across Chicago on the rails as it does to get there from Los Angeles.

Hazardous conditions.



1 in 9 **bridges in the U.S. is structurally deficient,**

requiring significant repairs, maintenance or replacement.

Unmet demand.

Even as transit ridership is surging and people are returning to work, ambitious local plans to invest in transportation to grow their local economies would stall if the federal support disappears.

A 21st century transportation plan

Investors know you must put money in today to get returns in the future. Raising an additional $30 billion per year would allow us to invest to accomplish critical goals at only a small cost per commuter:

Reverse the decline of the transportation trust fund. Fully fund the existing highway and transit programs that preserve our aging infrastructure, without taking money from other important programs or adding to the deficit;

Spur the innovation our economy needs to meet population growth and rising demand by funding competitive grants to local communities that come up with smart solutions.

Fixing what we need to fix.

- *Repair **46,508** bridges*
- *Replace **16,000** aging buses and **5,000** rail cars*
- *Meet our ongoing commitments.*

Improving communities & expanding opportunity.

- *Based on the average cost of construction, the investment fund would support **70 new transit projects**, providing new **access to jobs** and potential workers in dozens of cities, towns and suburbs.*

Spurring local innovation.

*The federal government plays a key role in promoting innovation, by providing capital for locally driven **path-breaking initiatives**, whose success can be shared nationwide.*

- *Fund competitive grants, such as a freight grant program and the popular TIGER grant program, for groundbreaking projects with **significant economic pay-off.***

Increasing accountability and local control.

*By providing more funding and control to the local level, Americans will more easily **see the impact** and be better able to hold officials accountable.*

SPURRING LOCAL **INNOVATION**: FEDERAL DOLLARS AT WORK

Regional investments, national benefits
*The rail improvements in Chicago's CREATE project will provide **$3.6 billion** annually in national economic benefits.*

High rate of return in Utah
*For every $1.00 spent on the state's unified transportation plan, an estimated **$1.94 is returned** to the state in value.*

Access to jobs in Minnesota
*Building the planned transit network will allow Twin Cities employers to recruit from an additional **500,000 potential workers**.*

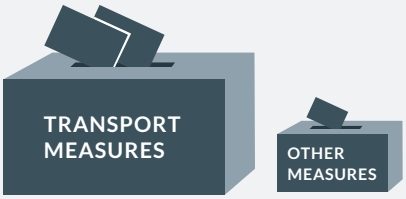
Local accountability: the best way to ensure a return on investment

While this level of investment is a modest request from taxpayers, they have a right to expect a guaranteed return on it. Opinion polls and ballot results show what American voters want—a system that is:

- *In good repair;*
- *Rewards locally driven innovation;*
- *Keeps the nation in the economic forefront; and*
- *Connects all Americans to economic opportunity.*

They want to know the money will flow to their communities for improvements in their daily life—making travel easier, more affordable and safer. And they trust the levels of government closest to them because they can hold them accountable.

American workers and businesses will willingly pay a little more to achieve these goals, if the expected results—and accountability for them—are clearly articulated.



Transportation ballot measures pass at **twice** the rate of all other ballot measures.

Raleigh, NC: **70%** approve
Mesa, AZ: **56%** approve
Kansas City, MO: **64%** approve
Salt Lake City, UT: **64%** approve
Seattle, WA: **58%** approve
St. Louis, MO: **63%** approve
Alameda & Contra Costa County, CA: **72%** approve

PLEASE JOIN US!

We are business, civic and elected leaders from across the country, united to ensure our nation invests to keep our cities, towns and suburbs strong and economically competitive. Because our future prosperity depends on it.

Americans are eager to return to world leadership in the quality of our transportation networks. And we want to leave our children with a legacy of lower deficits and an infrastructure suited to our future economy and quality of life. This investment plan is a significant down-payment toward fulfilling those desires.

Transportation for America

t4america.org @t4america

		General Fund Subsidy to the **Highway** and **Transit** Trust Funds		
		General Fund Subsidy to the Transit and Highway Trust Funds	Transit and Highway Trust Fund Spending[1]	General Fund Share
	2005	$0.0	$39.9	0.0%
	2006	$0.0	$35.9	0.0%
	2007	$0.0	$39.2	0.0%
	2008	$8.0	$43.0	18.6%
	2009	$7.0	$44.9	15.6%
	2010	$19.5	$39.4	49.5%
	2011	$0.0	$44.5	0.0%
	2012	$0.0	$49.3	0.0%
MAP	2013	$6.2	$49.4	12.6%
21	2014	$12.6	$50.2	25.1%
	2015	$14.0	$51.1	27.4%
	2016	$14.0	$52.3	26.8%
	2017	$13.7	$53.4	25.7%
	2018	$14.3	$54.7	26.1%
	2019	$15.0	$55.9	26.8%
	2020	$16.0	$57.3	27.9%
	2021	$17.0	$58.6	29.0%
	2022	$17.6	$60.0	29.3%
	2023	$18.7	$61.5	30.4%
	2015 to 2023 Average	$15.6	$56.1	27.7%

		General Fund Subsidy to the **Highway** Trust Fund		
		General Fund Subsidy to the Highway Trust Fund	Highway Trust Fund Spending[1]	General Fund Share
	2005	$0.0	$33.1	0.0%
	2006	$0.0	$33.9	0.0%
	2007	$0.0	$35.0	0.0%
	2008	$8.0	$37.0	21.6%
	2009	$7.0	$37.6	18.6%
	2010	$14.7	$32.0	45.9%
	2011	$0.0	$37.3	0.0%
	2012	$0.0	$41.1	0.0%
	2013	$6.2	$40.9	15.2%
	2014	$10.4	$41.6	25.0%
	2015	$10.7	$42.3	25.3%
	2016	$10.6	$43.3	24.5%
	2017	$10.2	$44.2	23.1%
	2018	$10.5	$45.3	23.2%
	2019	$10.8	$46.3	23.3%
	2020	$11.5	$47.5	24.2%
	2021	$12.3	$48.6	25.3%
	2022	$12.7	$49.7	25.6%
	2023	$13.6	$51.0	26.7%
	2015 to 2023 Average	$11.4	$46.5	24.6%

		General Fund Subsidy to the **Transit** Trust Fund		
		General Fund Subsidy to the Transit Trust Fund	Transit Trust Fund Spending[1]	General Fund Share
	2005	$0.0	$6.8	0.0%
	2006	$0.0	$2.0	0.0%
	2007	$0.0	$4.2	0.0%
	2008	$0.0	$6.0	0.0%
	2009	$0.0	$7.3	0.0%
	2010	$4.8	$7.4	64.9%
	2011	$0.0	$7.2	0.0%
	2012	$0.0	$8.2	0.0%
	2013	$0.0	$8.5	0.0%
	2014	$2.2	$8.6	25.6%
	2015	$3.3	$8.8	37.5%
	2016	$3.4	$9.0	37.8%
	2017	$3.5	$9.2	38.0%
	2018	$3.8	$9.4	40.4%
	2019	$4.2	$9.6	43.8%
	2020	$4.5	$9.8	45.9%
	2021	$4.7	$10.0	47.0%
	2022	$4.9	$10.3	47.6%
	2023	$5.1	$10.5	48.6%
	2015 to 2023 Average	$4.2	$9.6	43.0%

[1]2005 - 2012: Actual Outlays
2013 - 2023: Expected spending Authority assuming 1.8-2% inflation

Historical and Proposed Federal Transit and Highway Trust Fund Spending Levels ($ billions)

		General Fund Subsidy to the Transit and Highway Trust Funds	Transit and Highway Trust Fund Spending **without** General Fund Subsidy	Percent Reduced Spending Level **without** General Fund Subsidy	Status Quo Transit and Highway Trust Fund Spending[1] **with** General Fund Subsidy	Proposed Increase in Transportation User Fees to the Trust Fund	Elimination of General Fund Subsidy to the Trust Fund	Net Increase in Trust Fund Supported Programs	Increased Trust Fund Spending Level with Increased User Fees	Percent Increased Spending Level above Status Quo with inflation
	2005	$0.0	n.a.		$39.9					
	2006	$0.0	n.a.		$35.9					
	2007	$0.0	n.a.		$39.2					
	2008	$8.0	n.a.		$43.0					
	2009	$7.0	n.a.		$44.9					
	2010	$19.5	n.a.		$39.4					
	2011	$0.0	n.a.		$44.5					
	2012	$0.0	n.a.		$49.3					
MAP	2013	$6.2	n.a.		$49.4					
21	2014	$12.6	n.a.		$50.2					
	2015	$14.0	$37.1	-27.4%	$51.1	$30.0	$14.0	$16.0	$67.1	31.3%
	2016	$14.0	$38.3	-26.8%	$52.3	$30.0	$14.0	$16.0	$68.3	30.6%
	2017	$13.7	$39.7	-25.7%	$53.4	$30.0	$13.7	$16.3	$69.7	30.5%
	2018	$14.3	$40.4	-26.1%	$54.7	$30.0	$14.3	$15.7	$70.4	28.7%
	2019	$15.0	$40.9	-26.8%	$55.9	$30.0	$15.0	$15.0	$70.9	26.8%
	2020	$16.0	$41.3	-27.9%	$57.3	$30.0	$16.0	$14.0	$71.3	24.4%
	2021	$17.0	$41.6	-29.0%	$58.6	$30.0	$17.0	$13.0	$71.6	22.2%
	2022	$17.6	$42.4	-29.3%	$60.0	$30.0	$17.6	$12.4	$72.4	20.7%
	2023	$18.7	$42.8	-30.4%	$61.5	$30.0	$18.7	$11.3	$72.8	18.4%
			2015-2023 Average Reduction	-27.7%					2015-2023 Average Increase	26.0%

[1]2005 - 2012: Actual Outlays 2013 - 2023:
Expected spending Authority assuming 1.8-2% inflation

ODOT 2016 - 2018 Enhance Project Allocation
Metro Region

E9	OR47:OR8 Intersection Improvements	$2,341,382
E11	US 26: Cornelius Pass Road to NW 185th Avenue*	$1,794,600
E13	King City Sidewalk Infill	$913,839
E15	Boones Ferry Rd: Oakridge Rd/Reese Rd - Madrona St	$4,000,000
E21	Connected Cully	$2,994,624
E22	Downtown I-405 Pedestrian Safety and Operational Improvements	$2,009,952
E32	St. Johns Truck Strategy Phase II	$3,002,357
E48	Kinsman Road: Boeckman Rd - Barber Street	$2,230,000
E60	Willamette Grnwy Trail: Chimney Park/Kelley Pt Park	$1,580,511
E61	NE 238th Dr: Halsey St to Glisan St Freight and Multimodal Improvements	$6,549,187
E64	Historic Columbia River Highway State Trail: Shellrock Mountain Crossing	$5,473,530
	Historic Columbia River Highway State Trail: Summit Creek to Lindsey Creek	$5,000,000
E70	I-5 NB: Lower Boones Ferry Exit-ramp	$1,129,168
E71	I-5 SB: Lower Boones Ferry Exit to Lower Boones Ferry Entrance Auxiliary Lane	$3,953,303
E81	Columbia_Alderwood_Cully**	$4,959,856
E84	Barbur-99W Corridor Safety & Access to Transit	$3,234,767
E86	Highway 8 Corridor Safety & Access to Transit	$1,448,242
E87	Powell-Division Corridor Safety & Access to Transit	$2,512,440
E94	OR217: Allen-Denney Southbound Split Diamond	$5,330,744
	I-205 SB Auxiliary Lane: I-84 to Stark/Washington	$700,000
	US 26: NW 185th to Cornelius Pass Road	$8,000,000
	I-5 Rose Quarter Development	$1,500,000
	Total	$70,658,502

2016-18 RFFA project and program recommendations

Local projects						
Sub-region	**Project**	**Lead agency**	**Focus area**	**Phase**	**RFF request**	**Total Project Cost**
Washington County	Canyon Road Streetscape and Safety Project	Beaverton	AT/CS	CONS	$3,535,000	$3,939,579
	Fanno Creek Trail: Woodard Park to Bonita Road and 85th Avenue to Tualatin River Bridge	Tigard	AT/CS	CONS	$3,700,000	$4,600,000
	Beaverton Creek Trail Crescent Connection: Westside Trail to SW Hocken Avenue	THPRD	AT/CS	PD	$800,000	$4,733,812
	Tonquin Road/Grahams Ferry Road Intersection	Washington County	GE/FI	CONS	$2,132,000	$3,352,154
	Pedestrian Arterial Crossings	Washington County	AT/CS	PD	$636,000	$3,979,350
	US 26/Brookwood Interchange – Industrial Access Project	Hillsboro	REOF	CONS	$8,267,000	$35,000,000
City of Portland	N. Going to Swan Island Freight Improvements	Portland	GE/FI	CONS	$500,000	$557,227
	South Rivergate Freight Project	Portland	GE/FI	CONS	$3,222,000	$4,164,507
	OR 99W: SW 19th Avenue to 26th Avenue - Barbur Boulevard Demonstration Project	Portland	AT/CS	CONS	$1,894,600	$2,111,445
	Foster Road: SE Powell 90th Pedestrian/Bicycle/Safety Phase II	Portland	AT/CS	CONS	$2,063,400	$5,313,400(1)
	Southwest in Motion (SWIM) Active Transportation Strategy	Portland	AT/CS	PLAN	$272,000	$303,132
	Portland Central City Multimodal Safety Project	Portland	AT/CS	PLAN/CONS	$6,000,000	$6,686,727
	East Portland Access to Employment and Education Multimodal Project	Portland	REOF	CONS	$8,267,000	$9,213,195
E. Multnomah County	Sandy Boulevard: NE 181st Avenue to East Gresham City Limits	Gresham	AT/CS	CONS	$3,644,000	$4,644,318
	NE 238th Drive: Halsey Street to Glisan Street Freight and Multimodal Project	Multnomah County	REOF	PD	$1,000,000	$8,421,944(2)
	Troutdale Industrial Access Project	Port of	REOF	CONS	$8,000,000	$14,797,827

Notes: AT/CS - Active Transportation & Complete Streets, GE/FI - Green Economy & Freight Initiatives, REOF –Regional Economic Opportunity Fund; PD - Project Development, CONS – Construction, PLAN – Planning

(1) Foster Road total cost includes Phase I costs.

(2) NE 238th total cost includes ODOT Enhance project award for construction costs.

(3) Element of the Green Economy and Freight Initiatives that was inadvertently left off Exhibit A presented to TPAC on September 27, 2013.

		Portland				
Clackamas Coounty	Jennings Avenue: OR 99E to Oatfield Road Sidewalk and Bikelane Project	Clackamas Co	AT/CS	CONS	$1,901,092	$3,806,673
	SE 129th Avenue Bikelane and Sidewalks Project	Happy Valley	AT/CS	CONS	$2,485,016	$3,105,644
	Clackamas County Regional ITS Project - Phase 2B	Clackamas Co	GE/FI	CONS	$1,230,000	$1,370,799
	Trolley Trail Historic Bridge Feasibility Study: Gladstone to Oregon City	Gladstone	AT/CS	PLAN	$201,892	$235,000
	Sunrise System: Industrial Area Freight Access and Multimodal Project	Clackamas Co	REOF	CONS	$8,267,000	$8,268,563
				Sub-total:	**$68,018,000**	**$128,605,296**
Region-wide programs						
Transit Oriented Development					$9,190,000	N/A
High Capacity Transit					$48,000,000	N/A
Transportation System Management & Operations					$4,640,000	N/A
Regional Travel Options					$7,010,000	N/A
Corridor & Systems Planning					$1,540,000	N/A
Regional Planning					$3,630,000	N/A
Regional Freight Analysis and Project Development(3)					$500,000	N/A
				Sub-total:	**$74,510,000**	**N/A**
				Grand Total:		**$142,528,000**

Notes: AT/CS - Active Transportation & Complete Streets, GE/FI - Green Economy & Freight Initiatives, REOF –Regional Economic Opportunity Fund; PD - Project Development, CONS – Construction, PLAN – Planning

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(3) Element of the Green Economy and Freight Initiatives that was inadvertently left off Exhibit A presented to TPAC on September 27, 2013.

Oregon
John A. Kitzhaber, M.D., Governor

Department of Transportation
Transportation Planning Unit
555 13th Street NE, Suite 2
Salem, OR 97301
Phone: (503) 986-4121
Fax: (503) 986-4174

DATE: February 5, 2014

TO: Metro's Joint Policy Committee on Transportation (JPACT)

FROM: Amanda Pietz, Transportation Planning Manager

SUBJECT: Statewide Transportation Strategy Short-Term Implementation Plan

Purpose:
The staff from the Oregon Department of Transportation (Department) provided Metro's JPACT with a briefing on the *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction* on June 14, 2012. The purpose of this memo is to provide JPACT with another status update on the Statewide Transportation Strategy (STS) and the associated STS Short-Term Implementation Plan.

Action Requested:
No action is requested. The staff from the Department will provide JPACT with an informational presentation.

Background:
The Statewide Transportation Strategy (STS), developed in response to Senate Bill 1059 (2010), establishes a general course of action to reduce transportation-related greenhouse gas (GHG) emissions and help the state achieve its goal of reducing emissions to 75 percent below 1990 levels by 2050.

A policy and technical committee guided the development of the STS over the course of a two-year period. Committee members represented a wide-range of transportation stakeholders, including other state agencies, regional and local governments, the business sector, and advocacy groups. Based on extensive research and technical analyses using the best available data, the committees crafted the vision and strategies. The STS identifies the most effective GHG emissions reduction strategies in transportation systems, vehicle and fuel technologies, and urban land use patterns. For additional information on the STS, please refer to the STS Executive Summary **[Attachment 1]**.

On March 20, 2013, the Oregon Transportation Commission (OTC) accepted the STS and requested that the Department staff examine the strategies further and move forward with the development of an implementation plan. In accordance, the Department developed the STS Short-Term Implementation Plan **[Attachment 2]**. As an internal work plan, the STS Short-Term Implementation Plan identifies seven programs for the Department to pursue over the next 2-5 years.

In developing the STS Short-Term Implementation Plan, the staff reached out to a variety of internal and external stakeholders to provide information, address concerns, and discuss initiatives that align with the STS. Although the programs included in the implementation plan represent a small number of potential actions identified in the STS, they build upon the Department's existing work at relatively low costs and within existing budgets. Furthermore, these programs will help the Department achieve some early successes before considering the more ambitious strategies necessary to achieve the STS vision.

The stakeholder outreach process also helped in the development of two supporting documents: 1) the STS Summary Sheets **[Attachment 3]**, and 2) the economic considerations discussion paper **[Attachment 4]**. The summary sheets outline the intent of all 18 strategies included in the STS, identify potential opportunities and challenges to implementation, and include a sampling of other initiatives from across the state that help move the STS vision forward. In addition, the economic discussion paper considers how the programs in the implementation plan may impact the state's economy.

Next Steps:

In addition to JPACT, the Department staff will provide updates to Metro's Transportation Policy Alternatives Committee, Technical Advisory Committee, and Policy Advisory Committee in February. On February 20, 2014, the Department will take the STS Short-Term Implementation Plan to the OTC. After the OTC's review, the Department will commence implementation and begin tracking the statewide change in GHG emissions from the transportation sector. By tracking progress, the Department will identify when to begin exploring other STS strategies for inclusion in future implementation plans. More specifically, beyond the STS Short-Term Implementation Plan, the Department will develop a mid-term (5-20 year) implementation plan and a long-term (20-40 year) implementation plan.

Attachments:

1. STS Executive Summary
2. STS Short-Term Implementation Plan
3. STS Summary Sheets
4. Economic Considerations: STS Short-Term Implementation Plan

Oregon Statewide Transportation Strategy

A 2050 Vision for Greenhouse Gas Emissions Reduction

Executive Summary

Oregon Sustainable Transportation Initiative (OSTI)

Accepted March 20, 2013

Oregon Department of Transportation

Dedicated to the legacy of Gail Achterman's leadership for Oregon's natural resources and sustainable transportation.

For more information, contact:

Oregon Department of Transportation
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www.oregon.gov/ODOT/TD/OSTI/STS.shtml

Oregon Department of Transportation

Why was the STS developed?

The Statewide Transportation Strategy (STS) was developed in response to legislative direction. In 2010, the Oregon Legislature passed Senate Bill 1059 (Chapter 85, Oregon Laws 2010, Special Session) which requires:

> "...the Oregon Transportation Commission, after consultation with and in cooperation with metropolitan planning organizations, other state agencies, local governments and stakeholders... shall 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 75 percent reduction below 1990 levels by 2050]..."

What is the STS?

In accordance with the legislative direction, the Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas (GHG) Emissions Reduction describes what it would take for the transportation sector to get as close to the 2050 goal as is plausible. The STS, itself, is neither directive nor regulatory, but rather points to promising approaches for further consideration by policymakers at the national, state, regional, and local levels. Policymakers will need to decide if all or select strategies are to be pursued, how, and when. Many of the strategies in the STS require further analysis and consideration before the right approach can be chosen or action taken.

The STS examines all aspects of the transportation system including the movement of people and goods, and identifies transportation system, vehicle and fuel technology, and urban land use pattern strategies. Based on policy discussions and analysis, the STS 2050 Vision results in a future with 60 percent fewer GHG emissions than 1990.[1] The broad 40 year course of action charted in the STS is agile and can be adapted to an evolving future and unforeseen opportunities. Progress will be monitored over time and the course adjusted accordingly. The STS allows flexibility in what strategies and actions may be pursued and points to those projected to be effective at achieving

The STS is flexible to allow for solutions that work best for communities, businesses, and individuals. It is neither directive nor regulatory.

"We are not talking about forcing people out of their cars. This is about a clear economic opportunity – creating industry, creating jobs, reducing costs for families. Oregon's leadership will be essential."

— Ken Williamson, Oregon Environmental Quality Commission

[1] The 60 percent reduction in emissions is projected to occur from the implementation of the entire STS, meaning, to reach even this level, all of the strategies would need to be considered.

"It is a challenging undertaking, but it will complement a lot of the other work ODOT is committed to doing."

— Gail Achterman, Oregon Transportation Commission

the intent of the legislation. The STS does not assign responsibility for implementation. By mandate, the STS focus is on prevention and mitigation of climate impacts rather than adaptation.[2]

How was the STS developed?

A Policy Committee and a Technical Advisory Committee guided the development of the STS over a two year period. Committee members represented a wide range of transportation stakeholders including state, regional and local governments, other state agencies, businesses, and advocacy groups. Based on extensive research, technical analysis using the best available data, and issue papers, the committees crafted the vision, strategies and strategic priorities.[3]

To inform the process, staff and consultants used analysis tools to model the outcome of plans and trends to determine what the future would potentially look like if the state continued on the current path (business as usual). Alternative scenarios were then created that represented different configurations of technology, pricing, land use, and transportation system conditions. Indicators were used to provide information on the amount of GHG reduced as a result of a scenario, as well as to understand other potential impacts on important societal considerations like health, economic costs, air quality, and transportation system performance. Scenarios were compared to the business as usual projection to understand differences in outcomes. Those strategies included

ODOT worked with national experts and citizen leaders on developing effective GHG reduction strategies. To further inform the process, staff and consultants utilized advanced analysis tools to model various GHG emissions reduction scenarios.

www.pedbikeimages.org /Laura Sandt

[2] Separate from the STS, ODOT has engaged in adaptation planning activities which are further described on the following site: http://www.oregon.gov/ODOT/TD/CLIMATECHANGE/Pages/cc_adaptation.aspx.

[3] A two year extensive analysis process was conducted using a peer-reviewed and nationally recognized tool, GreenSTEP, and assumptions were reviewed by and agreed to by various state agencies, industry and technical experts. The advisory committees assessed the plausibility of assumptions and decided what to include in the STS and how hard things needed to be pushed. Additional details on the STS technical analysis and development process are detailed in the Oregon Statewide Transportation Strategy Volume II: Technical Appendices, which can be accessed at: http://www.oregon.gov/ODOT/TD/OSTI/docs/sts/STS_TechAppendices.pdf.

in the STS represent the mix of options with the largest GHG reductions and greatest potential positive impacts on the other goal areas.

Because there are many unknowns about the future, there will be a need to monitor and adapt the strategies as the work moves forward. However, it was also recognized that it is important that the state start exploring or working on what can be achieved; the key to this is an agile and iterative process that responds to and takes advantage of what is learned along the way.

The STS establishes a broad vision for reducing GHG emissions from transportation sources, which will help the state achieve its goal of a 75% reduction in GHG emissions from 1990 levels by 2050.

What does the STS call for?

In line with the legislative direction, the STS identifies a possible path forward for the transportation sector to aid the state in achieving its GHG emissions reduction goal. Transportation and land use strategies are included that modeling and analysis have shown to have measurable results. Those chosen for inclusion reflect the mix of options that advisory committees and researchers considered to be plausible and that had the fewest apparent negative impacts. Decision makers will need to agree on which strategies to pursue, and when, given economic considerations, resource implications, and political will. The Oregon Transportation Commission (OTC) is an important decision making body in the effort, for those strategies falling under the authority of the Oregon Department of Transportation, and their approval is required before strategies are further explored or action taken. Additionally, many other strategies will require buy off and commitment by other decision making bodies at the national, state, regional, local, and private sector levels.

Many of the strategies in the document are about providing low carbon transportation options which allow individual choice of the alternative that works best for the situation. Some strategies may be well

"The STS is a great start. What I really like about it is the flexibility. What works in Portland or what people in Portland want for their community might be different than what works in Bend or what the people of Bend want. The STS gives us a good starting point and tools to help determine what each community wants to do in their effort to reduce greenhouse gases."

— Mark Capell, Bend City Council

understood and have the support to move directly into implementation (e.g. eco-driving), while others will require further analysis to determine economic impacts (e.g. pricing) and the appropriate course of action, if any. In total, the STS contains 18 distinct strategies[4], with 133 potential elements that generally fall into the following categories:

Vehicle and Engine Technology Advancements – Strategies in this category increase the operating efficiency of multiple transportation modes through transition to more fuel-efficient vehicles, improvements in engine technologies, and other technological advances.

Fuel Technology Advancements – Strategies in this category increase the operating efficiency of fuel-powered transportation modes through transitions to fuels that produce fewer GHG emissions or have a lower lifecycle carbon intensity.

Enhanced System and Operations Performance – Strategies in this category improve the efficiency of the transportation system and operations through technology, infrastructure investment, and operations management.

The STS examines all aspects of the transportation system including the movement of people and goods, and identifies ways to reduce GHG emissions through transportation system, vehicle and fuel technology, and urban land use pattern strategies.

Transportation Options – Strategies in this category increase opportunities for travelers and shippers to use transportation modes that are more energy efficient and produce fewer emissions.

Efficient Land Use – Strategies in this category promote more efficient movement throughout the transportation system by supporting compact growth and development. This development pattern reduces travel distances and increases opportunities for using lower energy and zero- energy transportation modes.

Pricing and Funding Mechanisms – Strategies in this category support a transition to more sustainable funding sources to maintain and operate the transportation system, pay for environmental costs of climate change and provide market incentives for developing and implementing efficient ways to reduce emissions.

"We need to reach for the economic opportunities that will come from improved technologies, products associated with a low carbon economy. This will create new economic sectors."

— Rex Burkholder, Portland Metro Council

[4] For a list of all 18 strategies, please refer to page 12.

While a given strategy will fall into one of the categories above, it is often interdependent, and will achieve its greatest potential for GHG emissions reductions when implemented in conjunction with complementary strategies. For example, strategies that facilitate greater use of transportation options such as public transportation, personal electric vehicles, bicycling, and walking will be far more effective if implemented in conjunction with land use efficiency strategies such as compact, higher-density mixed-use developments that provide proximate destinations and "complete streets" that accommodate multiple modes safely and efficiently.

The STS found that substantial reductions are plausible, but actions by the transportation sector alone cannot reduce transportation emissions enough to meet Oregon's 75 percent reduction goal. Since the demands for transportation services are derived from demands from other needs and desires of people and businesses, solutions for effectively reducing transportation emissions will require cooperative efforts across sectors. This was found to be particularly the case for freight emissions. Much work will be needed to move forward and significant breakthroughs will be required in a number of disciplines. The STS notes and stresses that some of the most effective elements require state and national cooperation.

Many of the strategies in the STS are not new concepts but rather continue the direction brought forward in the Oregon Transportation Plan.[5] Additionally, the Governor's 10-Year Energy Action Plan[6] calls for many of the same strategies highlighted in the STS including: increasing the proportion of fuel efficient vehicles; continuing investment in compact, multimodal, mixed use communities; implementing intelligent transportation system (ITS) technology; and innovatively financing a cleaner transportation system.

" The STS was developed in the Oregon way: staff and citizens together crafting a strategy that is equal parts data and sensible, pragmatic choices."

— Angus Duncan, Oregon Global Warming Commission

The elements of the STS will likely have benefits beyond GHG reductions. These approaches look to: strengthen our communities by creating reliable, flexible transportation options; enhance energy independence; and create a healthier natural environment for generations of Oregonians to come.

[5] The Oregon Transportation Plan, adopted by the Oregon Transportation Commission, is the statewide policy document guiding transportation decisions and investments. For additional information, visit the Plan website at: http://www.oregon.gov/ODOT/TD/TP/pages/otp.aspx.

[6] The Governor's 10-Year Energy Action Plan can be accessed at the following website: http://www.oregon.gov/energy/pages/ten_year/ten_year_energy_plan.aspx.

"This is also about protecting Oregon businesses. Can the public sector and private sector work together to develop practical energy sources? Will we have energy options? Can we be nimble enough to avoid energy price shocks?"

— Onno Husing, Oregon Coastal Zone Management Association

How will the future be different as a result of the STS?

The STS represents an aspirational vision for a cleaner future that would greatly aid Oregon in achieving its 2050 GHG emission reduction goal, and achieve other benefits. Performance indicators were used to help understand the impacts of the STS Vision on travel and system performance, land use and natural resources, public health, and the economy, in addition to GHG emissions. Results were compared to what Oregon's future would look like if the trends and plans of today continue and nothing changed. Overall, the STS Vision shows Oregonians better off than the status quo. However, the STS will produce greater benefits for some activities and greater costs for others. Analysis showed that the STS Vision would be likely to produce the following benefits relative to today and the trends of tomorrow:

Improved public transportation service, bicycling and walking – Throughout the state, Oregonians would have better access to a range of transportation options (e.g., transit, carpool, bicycling, walking). Communities would have good walking paths, bicycle facilities, and transit service. Improvements in bicycling and walking facilities would increase physical activity and help improve public health and reduce obesity rates. These transportation options, along with carsharing services, would improve mobility while enabling many households to save money by owning fewer cars.

Big challenges call for innovative solutions. The STS points to promising approaches for further consideration by policymakers at the national, state, regional, and local levels.

Fuel-efficient / alternative energy vehicles – Great strides in technology would allow for the widespread adoption of cleaner and more efficient vehicles by Oregonians. Automobiles powered by electricity would be able to travel hundreds of miles without recharging and an extensive network of recharging stations would extend across the state. Other vehicles would run on compressed natural gas (CNG) and locally-produced biofuels that would be readily available. Most heavy-duty trucks would run on liquefied

natural gas (LNG), and commercial aircraft would run largely on biofuels. These changes would improve air quality dramatically while reducing dependency on foreign oil.

Enhanced information technology – People would be able to use technology to easily plan and update their travel routes combining modes as needed such as public transportation, bicycling, and walking in addition to personal vehicles. Improved communication systems would enable individuals and organizations to meet and collaborate virtually, while reducing the need for physical travel. In-vehicle communications technologies and collision avoidance systems in cars and trucks would greatly reduce the number and severity of crashes, resulting in saved lives, reduced damage, improved travel time reliability, and elimination of hundreds of hours of roadway delay each year. New vehicle-to-vehicle communications advancements allow cars and trucks to drive closer together and use less space on the roadway, resulting in more efficient use of existing infrastructure.

More efficient movement of goods – Fewer personal vehicles on Oregon roadways frees up capacity for the transportation of goods that support a growing economy. When possible, goods are moved by more efficient modes such as rail and water. New technologies allow freight vehicles to emit lower emissions. Urban consolidation centers allow for more efficient distribution of freight deliveries to final destinations in urban areas.

Walkable mixed-use communities – Within Oregon cities, a large share of residents live in walking distance of jobs, stores, services, entertainment, and transit stops. Because of this mix of uses in a geographically small area, commute times are shorter, limiting time spent in traffic. Residents of such communities are afforded increased opportunities to "buy local," supporting local businesses. Communities across the state are recognized for vibrancy, livability, and safety.

"Interagency collaboration is one of the highlights of the Statewide Transportation Strategy. This effort has led to greater agency coordination in helping to reduce energy costs for Oregonians."

— Diana Enright, Oregon Department of Energy

Although we can achieve substantial reductions through the STS, the transportation sector alone cannot meet the state's goal. The STS is one piece of a broader effort needed to address climate change at the local, state, and national level.

"We have a history of doing a lot of good for our community. The STS now gives us additional reasons and tools to do more good things on a larger scale."

— Ali Bonakdar, Corvallis Area Metropolitan Planning Organization

While there are benefits of the STS Vision, there are also costs. For example, building infrastructure and providing services necessary to make multimodal travel options available would be costly. The total magnitude and effect of the various costs on Oregon's economy could not be predicted because of the uncertainty of economic changes across the nation and world and technological and social changes that occur. These things are very uncertain. For example, who 40 years ago would have predicted the impact of the internet and cell phones today? Because of this uncertainty, the pathway forward to implement the STS will include continued monitoring and evaluation of trends that affect the validity of the vision and its implementation. In addition, as implementation of STS strategies moves forward, the potential economic effects of candidate implementation measures will be analyzed to determine the likely effects during the implementation timeframe and to develop programs that minimize adverse effects.

How does the STS move forward?

Through acceptance, the OTC agrees with the findings of the advisory committees, that the general course of action presented in the STS for reducing transportation related emissions is in line with fulfilling the legislative requirements and that the strategies should be further considered. Before any one strategy or group of strategies move forward, however, further buy-in may be required from appropriate decision making groups, including not only the OTC but other public and private sector bodies as well.

By accepting the STS, the OTC agreed that the strategies in the STS have demonstrated value and should be "on the table" as we move forward to the next step of determining what to implement, how, and when.

Some strategies are well understood and are likely to have a high-degree of political acceptance, which can then be acted on quickly. Other strategies, however, will require additional exploration to better understand economic and societal impacts, and if, when, or how it should be pursued. A work plan will be developed detailing potential next steps. Required throughout the decision making process are inclusive and collaborative efforts at the federal, state, and local levels, as well as with businesses and individuals.

Oregon is already pursuing some of the strategies in the STS but the STS identifies ways to augment and build on the good work already being done and planned, and provides additional and new approaches to consider. Current local and regional plans provide a strong foundation for achieving GHG emissions reductions. Additionally, cities and counties in Oregon are already implementing many of the elements to achieve other economic, social or environmental goals. Lastly, industries and companies are making business-driven decisions that have an added co-benefit of emissions reduction. The work that has been done and ongoing efforts provide a foundation to build on as Oregonians move forward to further reduce transportation related GHG emissions.

In developing the STS implementation plan and undertaking actions to realize the STS Vision, the following strategic priorities should be the first considered by decision makers to assess what to pursue, how, and when:

The key to achieving the STS Vision is an iterative and collaborative implementation process that ensures ongoing coordination between local, regional, state, and federal governments, as well as the private sector.

Funding – Successful implementation of the STS relies on adequate funding to maintain and improve system performance, provide transportation options, and enhance operations. Projections show gas tax revenues falling short of the money needed to maintain and operate the current transportation system, let alone fund new infrastructure. The lack of sustainable and adequate funding is an issue across all states and current local and national efforts can be built on to find appropriate mechanisms. In addition to a sustainable funding source, the STS points to charging users the true cost of travel including transportation systems costs and social costs. The costs, benefits, and impacts of true cost pricing will need to be assessed.

Efficient Vehicles and Clean Fuels – State and national programs and incentives that encourage the use of more efficient vehicles and cleaner fuels are important mechanisms for lowering emissions and should be investigated and supported. Technological advancements that result in more efficient designs of vehicles and ability to use less carbon intensive fuels or alternative propellants, such as electricity, help to achieve the STS Vision. Infrastructure that supports such advancements, like electric vehicle charging stations, should be explored.

"Towns of all sizes can reap the benefits of many of these strategies."

— Chris Hagerbaumer, Oregon Environmental Council

Low Carbon Transportation Options – The least carbon intensive mode of transportation is not always desirable or practical. However, when it is feasible to take a trip by transit, walking or biking, or to ship freight by barge or rail, it is important to have viable options available. Work can be done to identify potential barriers and opportunities to those modes.

Land Use – The configuration of land uses to transportation systems can support reduced trips and fewer miles driven. Careful siting of industrial lands and provision of mixed use areas can make for more efficient land uses and livable communities. Potential for sites can be assessed at the regional and local level and state policies investigated.

Each of these priorities is supported in the short term by the Governor's 10-Year Energy Action Plan, which sets out actions for the next decade. Additionally, other ongoing work will help advance the strategic priorities, including: efforts by the Road User Fee and Non-Roadway Funding Task Forces, and the Oregon Legislature to secure sustainable transportation funding; work by the Departments of Energy and Environmental Quality on standards and incentives for efficient vehicles and clean fuels; and through the Department of Land Conservation and Development (DLCD) management of land uses. Upcoming work on modal plans, such as the Rail Plan, Bicycle and Pedestrian Plan, and eventually the Public Transportation Plan, will look to support the STS through provision of transportation options.

As the Agency and others move forward there will be additional opportunities to incorporate the STS into existing work, such as eco-driving messages into driver education curriculum and public outreach messages, and to consider STS concepts as the future is planned, such as supporting infrastructure technology to allow vehicle to infrastructure communications. To fully aid in achieving the STS Vision, the full array of the strategies, not just the strategic priorities or the other strategies mentioned here, will have to be explored further in order to provide a diversity of choice for the Legislature and other policymakers.

As some of the strategies may be controversial, especially in the short-term, a key to success of the STS will be public acceptance and support that results from participation in implementation planning.

Transportation related GHG emissions reduction will require strong partnerships and close collaboration between jurisdictions at the local, regional, state and national levels, as well as with businesses and individuals.

How does the STS affect transportation and land use planning?

At this stage, the STS contains no specific policies or goals and was not developed to be a policy document like the Oregon Transportation Plan (OTP). The OTP is the umbrella policy plan that fulfills the statutory planning requirement for the OTC. As strategies in the STS are further considered, the timing and breadth of any needed update or amendment of the OTP and related modal (e.g. Rail) or topic (e.g. Freight) plans will be assessed. The STS furthers and supports the OTP and its goal to provide a safe, efficient and sustainable transportation system that enhances Oregon's quality of life and economic vitality. Many of the strategies in the STS align with the broad policies and strategies in the OTP, particularly Goal 4: Sustainability. The OTP Goal 4 includes strategies that support creation of an environmentally responsible transportation system (including development and use of technologies that reduce GHG), a more diversified and cleaner energy supply, and compact and mixed use development.

Integrating the STS into regional and local planning processes is important to the successful implementation of the STS. For those areas required (Portland Metro and Central Lane) or choosing to undertake scenario planning for GHG emission reduction, the STS provides information on potential actions that can be undertaken to aid metropolitan areas in meeting their GHG emission reduction targets set by the DLCD. Additionally, the STS will point to efforts that may be engaged in at the state or national level that help the metropolitan areas meet their targets.

"This strategy is the critical next step forward in Oregon's emissions reduction efforts that began ten years ago. It is precisely the detailed, evidence-and-analysis based focus on transportation emissions that we called for in the Global Warming Commission's Roadmap to 2020, and that I expect we will incorporate into the next iteration of that Roadmap."

— Angus Duncan, Oregon Global Warming Commission

STS Strategies

Vehicle and Engine Technology Advancements

Strategy 1 – More Efficient, Lower-Emission Vehicles and Engines

Transition to lower emission and fuel-efficient vehicles, enhanced engine technologies, and efficient vehicle designs.

Fuel Technology Advancements

Strategy 2 – Cleaner Fuels

Support the development and use of cleaner fuels, including reduction of the carbon intensity of fuels.

Systems and Operations Performance

Strategy 3 – Operations and Technology

Enhance fuel efficiency and system investments, and reduce emissions by fully optimizing the transportation system through operations and technology.

Strategy 4 – Airport Terminal Access

Increase efficiency in all airport terminal access activities, including shifting to low- and zero-emission vehicles and modes for passengers, employees and vendors.

Strategy 5 – Parking Management

Promote better management and use of parking in urban areas to support compact, mixed-use development and use of other modes, including transit, walking and bicycling.

Strategy 6 – Road System Growth

Design road expansions to be consistent with the objectives for reducing future GHG emissions by light duty vehicles.

Transportation Options

Strategy 7 – Transportation Demand Management

Support and implement technologies and programs that manage demand and make it easier for people to choose transportation options.

Strategy 8 – Intercity Passenger Growth and Improvements

Promote investment in intercity passenger public transportation infrastructure and operations to provide more transportation options that are performance and cost competitive.

Strategy 9 – Intracity Transit Growth and Improvements

Investing in public transportation infrastructure and operations to provide more transportation options and help reduce single-occupancy vehicle travel.

Strategy 10 – Bicycle and Pedestrian Network Growth

Encourage local trips, totaling twenty miles or less round-trip, to shift from single-occupant vehicle (SOV) to bicycling, walking, or other zero-emission modes.

Strategy 11 – Carsharing

Enhance the availability of carsharing (short-term self-service vehicle rental and/or peer-to-peer) programs to reduce the need for households to own multiple vehicles and to reduce household vehicle miles traveled.

Strategy 12 – More Efficient Freight Modes

For the commodities and goods where low-carbon modes are a viable option, encourage a greater proportion of goods to be shipped by rail, water, and pipeline modes.

Efficient Land Use

Strategy 13 – Compact, Mixed-Use Development

Promote compact, mixed-use development to reduce travel distances, facilitate use of zero- or low-energy modes (e.g., bicycling and walking) and transit, and enhance transportation options.

Strategy 14 – Urban Growth Boundaries

Create full-service healthy urban areas to accommodate most expected population growth within existing Urban Growth Boundaries (UGB) through infill and redevelopment.

Strategy 15 – More Efficient Industrial Land Uses

Encourage and incentivize more efficient use of industrial land through closer proximity of shippers and receivers, consolidated distribution centers, and better access to low-carbon freight modes.

Pricing, Funding and Markets

Strategy 16 – Funding Sources

Move to a more sustainable funding source that covers the revenue needed to maintain and operate the transportation system and accounts for the true cost of travel.

Strategy 17 – Pay-As-You-Drive Insurance

Promote Pay-As-You-Drive Insurance (PAYD) programs that allow drivers to pay per-mile premiums, encouraging less driving through insurance savings.

Strategy 18 – Encourage a Continued Diversification of Oregon's Economy

Maintain economic prosperity through an increase in the value per ton (the "value-density") of goods produced in the state, which is projected to reduce shipping costs and GHG emissions for any given level of economic output.

A special thank you to the following committee members for their contributions during the development of the STS. We also wish to thank the citizens of Oregon, including policy board members and their staff who provided valuable comments and assistance on the STS.[7]

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Gail Achterman *Oregon Transportation Commission*
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[7] The affiliations listed here represent those held at the time of STS development.

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Oregon Statewide Transportation Strategy

www.oregon.gov/ODOT/TD/OSTI/STS.shtml

Oregon Department of Transportation

Statewide Transportation Strategy
Short-Term Implementation Plan

February 2014

Oregon Department of Transportation

Produced by:

Oregon Department of Transportation

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IMPLEMENTING THE STS

A number of actions have been identified from the suite of elements in the Statewide Transportation Strategy (STS)[1] that help to move Oregon closer to a cleaner and more sustainable future, and support the Governor's 10-Year Energy Plan. The Oregon Department of Transportation (ODOT) will pursue these actions in the short-term (next 2-5 years).

This ODOT work plan includes seven programs, and multiple corresponding actions, that enhance existing initiatives, incorporate consideration of the STS into ODOT business, and push technological advancements in ways designed to provide multiple benefits to Oregonians. The programs and actions identified in this plan only represent a sampling of STS elements, and are focused on ones that are relatively low cost, complement existing and supported programs, and are likely to produce fairly rapid greenhouse gas (GHG) reductions and other benefits. Subsequent implementation plans will continue to explore and identify the best actions for working towards the STS vision in the mid- and long-term. More specifically, in addition to this Short-Term Implementation Plan, ODOT anticipates the development of a mid-term implementation plan (5-20 years) and a long-term implementation plan (20-40 years).

Supporting documents to this Short-Term Implementation Plan include: 1) an economic discussion paper that considers how the programs in this implementation plan may impact the state's economy; and 2) summary sheets that outline the intent of all 18 strategies included in the STS, identify potential opportunities and challenges to implementation, and list other initiatives that help move the STS vision forward.

For more information, or to download these supporting documents, please visit: http://www.oregon.gov/ODOT/TD/OSTI/Pages/sts_implementation.aspx.

Background on the STS

In 2010, the Oregon Legislature passed Senate Bill 1059 (Chapter 85, Oregon Laws 2010, Special Session) which requires:

"…the Oregon Transportation Commission, after consultation with and in cooperation with metropolitan planning organizations, other state agencies, local governments and stakeholders…shall 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 75 percent reduction below 1990 levels by 2050]…"

Over the course of a two year period, the ODOT staff conducted extensive research and analysis, and obtained policy and technical input from local governments, industry representatives, metropolitan planning organizations, state agencies, and other stakeholders to inform the development of the STS.

The resulting document, *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction*, examines all aspects of the transportation system, outlines a broad vision, and identifies various strategies effective in reducing GHG emissions from the transportation sector. Beyond reducing GHG emissions, the strategies in the STS also appear to lead to other benefits, including improved health, cleaner air, and a more efficient transportation system. These strategies will serve as the

[1] The *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction (STS)* includes 18 strategies effective in reducing GHG emissions and achieving other desirable outcomes and 133 more specific elements that represent potential actions that would help achieve the strategy.

best tools available to help meet the state's GHG reduction goals while supporting other societal goals such as livable communities, economic vitality, and public health.

On March 20, 2013, the Oregon Transportation Commission (OTC) accepted the STS. Through its acceptance, the OTC agreed that the strategies in the STS have demonstrated value and requested that ODOT further consider these strategies through the development of this STS Short-Term Implementation Plan.

For more information or to download the accepted STS, please visit: http://www.oregon.gov/ODOT/TD/OSTI/pages/sts.aspx

PLAN OF ACTION

Purpose

The STS Short-Term Implementation Plan identifies actions for ODOT to pursue in the next 2 to 5 years to help move the STS forward. This plan will in turn help Oregon to achieve its goal of a 75 percent reduction in GHG emissions from 1990 levels by 2050.

ODOT's Responsibility

This plan identifies new, enhanced, or reprioritized efforts that ODOT sees as important to its mission and to moving in the direction of the STS vision. While the impetus for these action items varies (e.g. improving safety, encouraging transit, increasing fuel efficiency), all of these programs align with the STS. By highlighting priorities, this plan will help to inform work programs throughout ODOT. In addition, it functions as a mechanism by which ODOT can increase internal and external coordination on initiatives that help to reduce GHG emissions from the transportation sector.

Since some of the strategies outlined in the STS fall outside of ODOT's purview, full implementation of the STS vision requires action by other state agencies, local jurisdictions, the private sector, and others. The actions included in this Short-Term Implementation Plan represent only a selection of STS strategies, and separate implementation plans will be needed that identify any actions to be pursued in the mid- and long-term.

ODOT Implementation Programs

This plan recommends the following seven programs for implementation:

1. *Electric Vehicles and Low Emission Fuels*
2. *Eco-Driving*
3. *Road User Charge Economic Analysis*
4. *Scenario Planning and Strategic Assessments*
5. *Intelligent Transportation Systems (ITS)*
6. *Transportation Planning and Project Selection*
7. *Stakeholder Coordination*

To better understand some of the economic costs and benefits of these programs, ODOT evaluated the potential impacts of these programs on the state's economy in the supporting document entitled *Economic Considerations: Statewide Transportation Strategy Short-Term Implementation Plan*. The level of detail included in this plan allowed for a qualitative assessment of some potential economic considerations. Since many of these programs represent extensions of ongoing ODOT work, the economic evaluation demonstrates that the programs included in this plan are not likely to cause significant economic costs. One potential economic cost to mention, however, is the potential impact on transportation funding. As some of these programs, most notably Programs #1 and #2, reduce fuel consumption, transportation funding may also be reduced unless the state pursues an alternative funding strategy, such as the road user charge.

The tables that follow provide more detail on the seven programs. Specifically, these tables outline the actions necessary to implement the program, the ODOT division lead and partners, as well as the motivation and policy support for the program.

Program #1: Electric Vehicles and Low Emission Fuels

Actions:	Electric Vehicles: • Develop communication materials that highlight the benefits of alternative fuel vehicles, including electric vehicles (EVs), and create maps and other resources that identify the state's existing EV charging network. • Expand communication efforts that promote EV tourism activities in Oregon. • Through the Transportation and Growth Management Program, collaborate with the Oregon Department of Land Conservation and Development (DLCD) and explore ways to incorporate EV charging stations, natural gas, biogas, and other alternative fueling facilities, as primary and/or accessory land uses, in model code modules. • Explore funding opportunities for implementing a pilot program focused on wireless EV charging stations. • Partner with the members of the Energize Oregon Coalition and pursue funding for innovative projects, such as studying the feasibility of implementing smart grid initiatives, which allow for the two-way communication between providers and consumers of electricity. • Continue to participate in the West Coast Green Highway Initiative. Low Emission Fuels: • Administer $4,000,000 in federal Congestion Mitigation Air Quality funds, approved by the Oregon Transportation Commission in September 2013, to encourage the use of natural gas as a transportation fuel by supporting the installation of natural gas fueling stations. • Provide data, technical information, and assistance, as appropriate to the Oregon Department of Energy (ODOE) to study the feasibility of incentivizing the purchase of cleaner, more fuel-efficient vehicles, such as electric, CNG, propane, and hybrid vehicles. • Participate and provide expertise to the Oregon Department of Environmental Quality's (DEQ) efforts to promote Clean Fuels as a member of the Interagency Low Carbon Fuel Committee. • Provide technical assistance, as appropriate to the Legislative Revenue Office in the preparation of reports on the feasibility of a statewide fee or tax on GHG emissions, required per SB 306 (2013).
Relationship to Ongoing ODOT Efforts:	This action item will build upon Oregon's ongoing work around EVs and other low-emission fuels. Of particular importance are the recommendations highlighted in the *Energizing Oregon* document: http://evroadmap.us/sites/default/files/Final_Energizing_Report.pdf
ODOT Lead:	Office of Innovative Partnerships Transportation Development Division
ODOT Partners:	Oregon Department of Environmental Quality, Oregon Department of Energy, Oregon Department of Land Conservation and Development, Oregon Public Utilities Commission, Travel Oregon, Business Oregon, Governor's Office, Drive Oregon, Oregon Department of Consumer and Business Services, Legislative Revenue Office
Motivation for	In 2010, Governor Kulongoski's Alternative Fuel Working Group made recommendations

Program:	to the state for developing the infrastructure necessary to support alternative fuels. Subsequently, several statutory changes were made to support electric vehicles. Oregon joined other states in adopting a Low Emission Vehicle Program. In addition, through other legislative efforts and the availability of federal funding, ODOT's involvement has established EVs as a more viable transportation mode and allowed other alternative fuels, such as biodiesel, to become a more viable transportation fuel. This program is aimed at: • Addressing increased market demand for alternative fuel vehicles and low emission fuels, • Reducing consumption of gasoline and enhancing energy diversity, • Reducing criteria air pollutants, and • Creating job and economic growth.
Policy Support:	Governor's 10-Year Energy Action Plan Energizing Oregon, Business Oregon State Zero-Emission Vehicle Programs Memorandum of Understanding Memorandum of Understanding between the State of Oregon Office of the Governor, State of Oregon Department of Transportation, and Drive Oregon Oregon Clean Fuels Program, DEQ Oregon Transportation Plan, ODOT • Goal 4 – Sustainability • Goal 7 – Coordination, Communication and Cooperation Statewide Transportation Strategy, ODOT • Strategy 1 – More Efficient, Lower-Emission Vehicles and Engines • Strategy 2 – Cleaner Fuels
Level of Effort:	Low to Moderate. Communication activities and technical support (i.e. modeling, data collection, and gas tax expertise) supplement existing programs at a relatively low cost. Limited coordination hours are expected with DEQ, DLCD and ODOE on the actions listed above.

Program #2: Eco-Driving

Actions:	• Launch deployment of ODOT eco-driving educational efforts, leveraging partnerships and funding where possible. • Explore the development of an eco-driving certification program for transit operators, commercial fleets, and freight carriers. • Identify opportunities for strategic partnerships and for working with the private sector to promote technologies that support eco-driving, such as in-car displays regarding fuel efficiency.
Relationship to Ongoing ODOT Efforts:	As part of the Oregon Sustainable Transportation Initiative (OSTI) legislative requirements to outreach to the public about the costs and benefits of reducing GHG emissions, ODOT developed and tested educational materials, including tip cards, posters, and how-to videos that highlight the benefits of eco-driving. A research study with Portland State University measured the effectiveness of these educational efforts, and provided recommendations for maximized deployment, which will be used to shape the proposed actions above.
ODOT Lead:	Transportation Development Division Rail and Public Transit Division
ODOT Partners:	Oregon Department of Environmental Quality, Oregon Department of Energy, Clean Cities Program, Portland State University, Oregon Transportation Research and Education Consortium, and various private sector partners
Motivation for Program:	In 2010, the legislature directed ODOT through the passage of SB 1059 to educate the public about the need to reduce GHG emissions. Through educational efforts related to eco-driving, this program is aimed at: • Advancing a low cost approach to reducing GHG emissions, • Providing cost savings to drivers, and • Increasing roadway safety.
Policy Support:	Oregon Transportation Plan, ODOT • Goal 4 – Sustainability • Goal 7 – Coordination, Communication and Cooperation Statewide Transportation Strategy, ODOT • Strategy 3 – Operations and Technology
Level of Effort:	Low. Outreach materials have been developed and partnerships formed where printing costs can be shared or be fully funded by the partners. Limited staff time is anticipated to coordinate with partners, seek out and arrange certification training courses, and coordinate other activities related to eco-driving as described above.

Program #3: Road User Charge Economic Analysis

Action:	• Analyze the benefits and costs of a road user charge (or vehicle miles traveled fee). This analysis may consider implementation costs, as well as social costs, such as air pollution and greenhouse gas emissions. The analysis may include recommendations on rate structures and associated benefits and costs.
Relationship to Ongoing ODOT Efforts:	With the passage of SB 810 (2013), ODOT is currently implementing a voluntary road user charge program that allows drivers to voluntarily pay a 1.5-cent per mile fee. This economic analysis will inform any future changes or modifications to ODOT's ongoing work around the road user charge.
ODOT Lead:	Office of Innovative Partnerships
ODOT Partners:	Oregon Department of Energy
Motivation for Program:	In 2001, the legislature created the Road User Fee Task Force to explore alternative approaches to financing the transportation system beyond the gas tax. These efforts came out of an early recognition of declining revenues, due in part to increases in fuel efficiency and decreases in vehicles miles traveled. In 2013, the legislature passed SB 810, which authorizes ODOT to initiate a program to charge a fee of 1.5-cents per mile and issue a gas tax refund to up to 5,000 volunteer motorists. This project will begin July 1, 2015. By analyzing the economic impacts of a road user charge, this program helps to support ODOT's ongoing commitment to developing a sustainable approach to financing the transportation system.
Policy Support:	Governor's 10-Year Energy Action Plan Energizing Oregon, Business Oregon Oregon Transportation Plan, ODOT • Goal 6 – Funding the Transportation System Statewide Transportation Strategy, ODOT • Strategy 16 – Funding Sources
Level of Effort:	Moderate. ODOT will need to hire an economist from a consulting firm or university to conduct the economic analysis. A mostly dedicated staff person will manage the consultant/researcher over several months and coordinate stakeholder engagement and review of associated materials.

Program #4: Strategic Assessments and Scenario Planning

Actions:	• Work with metropolitan planning organizations (MPOs) and associated jurisdictions on Strategic Assessments and scenario planning efforts, providing technical assistance and negotiating financial support. o Strategic Assessments are designed to assess the potential outcomes of a metropolitan area assuming current trends continue and adopted plans are implemented. Strategic Assessments also allow metropolitan areas to identify potential actions and policies to incorporate into planning documents to help the metropolitan area reach identified community goals. • Through the Oregon Modeling Steering Committee, collaborate on appropriate tools to support GHG reduction planning and other planning efforts.
Relationship to Ongoing ODOT Efforts:	Strategic Assessments are an outgrowth of scenario planning efforts for GHG reduction identified in the Jobs and Transportation Act of 2009 and SB 1059 (2010). The legislative intent is for MPO areas to engage in scenario planning. ODOT and the Department of Land Conservation and Development (DLCD) recognized scenario planning as a promising strategic planning process and worked to consider a broader range of planning goals in addition to GHG emission reduction, so as to make the effort more useful and attractive to MPOs and associated jurisdictions. Strategic Assessments are voluntary and allow MPOs to examine current plans and trends and understand what may occur in an area if changes are not made. It is the first step in a scenario planning process. The Governor's Office has worked with ODOT, DLCD, and the MPOs on the importance of scenario planning in reducing GHG emissions, and it is an action in the Governor's 10-Year Energy Action Plan. In addition, ODOT and DLCD developed Scenario Planning Guidelines as directed by SB 1059 (2010), to support such efforts.
ODOT Lead:	Transportation Development Division
ODOT Partners:	Department of Land Conservation and Development, Governor's Office, metropolitan planning organizations, local jurisdictions, and other stakeholders
Motivation for Program:	This program helps to implement the requirements of HB 2001, passed by the legislature in 2009. HB 2001 directs ODOT and DLCD to provide technical and financial support to select metropolitan areas engaged in scenario planning. In addition to helping the state achieve its GHG emission target, this program is aimed at: • Ensuring an integrated land use and transportation planning process, • Supporting other voluntary efforts that help to advance the STS vision, and • Helping MPOs identify the investments and programs to best meet community goals.
Policy Support:	U.S. Department of Transportation's Moving Ahead for Progress in the 21st Century (MAP-21) Governor's 10-Year Energy Action Plan Oregon Transportation Plan, ODOT • Goal 4 – Sustainability • Goal 7 – Coordination, Communication and Cooperation Statewide Transportation Strategy, ODOT • Strategy 6 – Road System Growth • Strategy 8 – Intercity Passenger Growth and Improvements • Strategy 9 – Intracity Transit Growth and Improvements

	• Strategy 10 – Bicycle and Pedestrian Network Growth • Strategy 12 – More Efficient Freight Modes • Strategy 13 – Compact, Mixed-Use Development • Strategy 15 – More Efficient Industrial Land Uses
Level of Effort:	Moderate to High. Although the level of technical expertise of each MPO varies, the amount of support needed from ODOT for individual assessments is generally low. If all four MPOs (Corvallis, Bend, Salem-Keizer, and Rogue Valley) simultaneously request to engage in this process, the level of effort increases. ODOT evaluates requests for funding on a case-by-case basis and must consider available resources at the time of the request and will negotiate funding levels with each MPO. Funds support MPO data gathering and reporting. ODOT commits technical staff resources (as available) to run the analysis and produce results (approximately one-quarter of one position for a six month period for each Strategic Assessment). DLCD helps with data collection and reporting from their budget. If an area is interested in full-scale scenario planning ODOT will evaluate the amount of support available and negotiate accordingly. The level of effort for ODOT would be high with any full-scale scenario planning project, including significant staff and financial resources.

Program #5: Intelligent Transportation Systems (ITS)

Actions:	Variable Speed Limits: • Plan for the expansion of variable speed projects across the state by identifying opportunities, assessing feasibility, and determining priorities. • Develop communication materials that educate drivers on the benefits of variable speed limits. Adaptive Signal Control: • Plan for the expansion of adaptive signal control technologies by identifying opportunities, assessing feasibility, and determining priorities across the state. Traveler Information: • Develop a TripCheck smart phone application to provide improved access to traveler information when traveling. Strategic Highway Research Program 2 (SHRP2) Project: • Work with the Governor's Office, Oregon Solutions, and Traffic Incident Management stakeholder groups to strengthen interagency coordination related to highway incident management. Traffic Incident Management: • Work with the Oregon State Police to expand the Oregon Interoperability Server, which allows for the electronic exchange of data among the ODOT, Oregon State Police, and 911 dispatch systems. • Improve awareness of Oregon's "move it" law which requires drivers of vehicles involved in a crash to remove their vehicle from the travel lane if it is operable.
Relationship to Ongoing ODOT Efforts:	This program supports ODOT's numerous, ongoing ITS initiatives, which utilize technology and software to improve system operations and management. Developed to improve mobility and safety, these efforts also help to reduce GHG emissions.
ODOT Lead:	Highway Division, Office of Maintenance and Operations
ODOT Partners:	Governor's Office, Department of Energy, Oregon Solutions, local jurisdictions, metropolitan planning organizations, law enforcement agencies
Motivation for Program:	Although not the original impetus for investing in ITS, these actions have the added benefit of reducing GHG emissions and protecting the environment. ODOT initiated it's ITS program to help improve system operations and management. More specifically, ITS projects are aimed at: • Improving safety, • Increasing the efficiency of the transportation system, and • Providing real-time information to travelers to allow traveler choice and increase mobility (Federal Real-Time System Management Information Program, 23 CFR Part 511).
Policy Support:	U.S. Department of Transportation's Moving Ahead for Progress in the 21st Century (MAP-21) Federal Highway Administration's (Every Day Counts Initiative) Governor's 10-Year Energy Action Plan Oregon Transportation Plan, ODOT • Goal 2 – Management of the System

	• Goal 5 – Safety and Security Oregon Highway Plan, ODOT • Goal 2 – System Management, Policy 2E: Intelligent Transportation Systems Traffic Incident Management Strategic Plan, ODOT Oregon Statewide ITS Architecture and Operational Concept Plan, ODOT Statewide Transportation Strategy, ODOT • Strategy 3 – Operations and Technology
Level of Effort:	Low to Moderate. Actions focus on investigating the potential for and planning for deployment of ITS technologies, not the infrastructure investments themselves. Additionally, communication activities supplement existing programs and are relatively low cost. Minimal staff time is expected for coordination work.

Program #6: Transportation Planning and Project Selection

Actions:	• Evaluate the STS strategies and elements for inclusion, as appropriate, into all relevant planning documents to help achieve the STS trajectories. Applicable planning documents may include statewide plans, plan updates, guidance documents, and policy documents such as, but not limited to: o Statewide Bicycle and Pedestrian Plan Update o Statewide Transportation Options Plan, including the subsequent development of a Transportation Options Program o Statewide Rail Plan Update o Statewide Public Transportation Plan Update o Transportation System Plan Guidelines • Amend the Oregon Transportation Plan (OTP) to consider the STS. The amendment is likely to be minor, focused to the introductory language of Goal 4: Sustainability. • Consider the STS in the development of the 2017-2020 Statewide Transportation Improvement Program (STIP) through collaboration with the STIP Stakeholder Committee.
Relationship to Ongoing ODOT Efforts:	ODOT is continually updating plans and guidance documents, as needed. Recent legislation has resulted in policy changes for access management and mobility, forcing many planning documents to be programmed for update. Additionally, with the Intermodal Oregon effort, ODOT Planning has committed to a massive update of modal and topic plans. These plans, as well as Mosaic, will help to support better transportation funding decisions in the state and help to articulate the future transportation system that ODOT envisions.
ODOT Lead:	Transportation Development Division Rail and Public Transit Division
ODOT Partners:	Other state agencies, local jurisdictions, metropolitan planning organizations, transit agencies, and other public and private sector stakeholders
Motivation for Program:	Incorporating the STS vision into everyday planning practices helps to ensure STS implementation. Although the STS is not a regulatory document, the STS serves to influence the direction of statewide policy documents, such as mode and topic plans, as well as guidance documents.
Policy Support:	Oregon Transportation Plan, ODOT • Goal 1 – Mobility and Accessibility • Goal 2 – Management of the System • Goal 3 – Economic Vitality • Goal 4 – Sustainability • Goal 7 – Coordination, Communication and Cooperation Oregon Highway Plan, ODOT • Goal 4 – Travel Alternatives, Policy 4B: Alternate Passenger Modes and Policy 4D: Transportation Demand Management Statewide Transportation Strategy, ODOT • Strategy 6 – Road System Growth

	• Strategy 7 – Transportation Demand Management • Strategy 8 – Intercity Passenger Growth and Improvements • Strategy 9 – Intracity Transit Growth and Improvements • Strategy 10 – Bicycle and Pedestrian Network Growth • Strategy 12 – More Efficient Freight Modes • Strategy 13 – Compact, Mixed-Use Development
Level of Effort:	Low. Planning staff are initiating and updating these documents for reasons beyond the STS and thus the costs for such efforts are already programmed. Minimal staff time is expected for considering the STS lens within each document.

Program #7: Stakeholder Coordination

Actions:	• Monitor and provide information on initiatives that align with the STS and ensure external and internal coordination to ensure efficiencies, remove redundancies, and identify leveraging opportunities, as appropriate. The following initiatives represent a sample of ongoing efforts that require ongoing coordination: o Road User Charge Voluntary Program o Oregon Clean Fuels Program o Zero Emission Vehicles Program o Governor's 10-Year Energy Action Plan o Oregon Passenger Rail Project o Sustainable Aviation Fuels Northwest (SAFN) o Metropolitan Planning Organization Scenario Planning o Legislative efforts related to funding for transportation o Renewable Energy Action Plan (REAP)
Relationship to Ongoing ODOT Efforts:	There are many ongoing ODOT initiatives, such as electric vehicles and a road user charge that help to advance the STS. Furthermore, some of the strategies outlined in the STS fall outside of ODOT's purview. Therefore, it is important to not only keep apprised of internal efforts that align with the STS, but also efforts being pursued and implemented by the federal government, other state agencies, local jurisdictions, and the private sector.
ODOT Lead:	Transportation Development Division
ODOT Partners:	Oregon Department of Energy, Oregon Department of Environmental Quality, Oregon Department of Aviation, Oregon Department of Land Conservation and Development, Governor's Office, metropolitan planning organizations
Motivation for Program:	Ongoing coordination with internal and external stakeholders is key to the success of the STS. Specifically, coordination helps to support other voluntary efforts that help to advance the STS vision. It also creates efficiencies and helps to reduce duplication of efforts.
Policy Support:	Oregon Transportation Plan, ODOT • Goal 7 – Coordination, Communication and Cooperation Statewide Transportation Strategy, ODOT
Level of Effort:	Low. Minimal staff time is expected for ongoing communication and collaboration.

TRACKING PROGRESS

Purpose

Since the STS vision goes out to the year 2050, it is important to ensure an iterative and fluid implementation process that allows for flexibility and modifications. By tracking progress, ODOT will identify when to begin exploring other STS strategies and when to move forward with the development of mid-term and long-term implementation plans. More specifically, any of the strategies or elements identified in the STS may be incorporated into future implementation plans.

ODOT's Responsibility

Monitor

ODOT will monitor the statewide change in GHG emissions from the transportation sector, as well as the effectiveness of the seven programs included in this implementation plan.

Cumulative Change in State GHG Emissions: Utilizing the GreenSTEP[2] modeling tool and other data and analysis, ODOT will evaluate the state's progress toward reaching the STS identified target of a 60 percent reduction in GHG emissions from the transportation sector from 1990 levels by 2050. In addition to measuring the change in GHG emissions, ODOT will track potential co-benefits (e.g. air quality, health) of any emissions reductions.

Individual Effectiveness of Program: ODOT will track the effectiveness of the programs included in this implementation plan.

Report

To formalize the ongoing implementation and monitoring process, ODOT will outline its progress through the preparation of a biennial progress report. This report will provide an update on the status of implementation programs and any actions taken, as well as emissions tracking. In addition, as ODOT moves forward with implementation, additional programs may be identified for implementation. Any proposed new programs will also be included in the progress report.

ODOT will complete the first biennial progress report within four years from the date of this Short-Term Implementation Plan.

2 GreenSTEP is an acronym for Greenhouse gas Strategic Transportation Energy Planning.

Oregon Department of Transportation

Statewide Transportation Strategy: Summary Sheets

FEBRUARY 2014

Oregon Department of Transportation

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Overview

The *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction* includes the following 18 strategies to help reduce greenhouse gas (GHG) emissions from the transportation sector:

1 – More Efficient, Lower-Emission Vehicles & Engines

2 – Cleaner Fuels

3 – Operations and Technology

4 – Airport Terminal Access

5 – Parking Management

6 – Road System Growth

7 – Transportation Demand Management

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The Oregon Department of Transportation's (ODOT) Statewide Transportation Strategy (STS) Short-Term Implementation Plan identifies programs that align with some of these strategies. Not all of these strategies are being pursued in this shorter timeframe; however, ODOT will continually consider and incorporate these strategies, as appropriate, into related efforts, such as statewide plans and other major studies. Furthermore, ODOT will identify strategies and specific actions to pursue through the development of the mid-term and long-term implementation plans. When these are drafted they will go before the Oregon Transportation Commission for review.

The following strategy summary sheets cover all 18 strategies and provide information on the intent of the strategy, implementation challenges and opportunities, as well as a small sampling of associated initiatives going on across the state.

Strategy 1
More Efficient, Lower-Emission Vehicles and Engines

Description

Transition to lower emission and fuel-efficient vehicles, enhanced engine technologies, and efficient vehicle design.

This strategy outlines 23 specific elements that focus on technologies that improve engine efficiency, as well as alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), biofuels, and electricity.

Intent

This strategy recognizes that driving vehicles and trucks will remain important modes and seeks to reduce GHG emissions through advancements in engine technologies and low-emission vehicles. For aviation, more efficient aircraft is a way to reduce emissions for large volumes of travel.

Implementation Challenges

- In order to encourage the purchase of more efficient vehicles, legislative actions may be required to offer the incentives needed. This would require coordination with other state agencies, lawmakers, and possibly automakers to establish an incentive program.
- The promotion of alternative fuel vehicles results in reduced fuel consumption, which also reduces revenues. With this in mind, ODOT would need to seek alternative ways to finance the transportation system.
- The shift to more electric vehicles (EV) creates a greater demand on the electric power generation and distribution systems, which requires coordination with the energy sector to ensure a sufficient and clean energy supply.
- Another challenge relates to current zoning and building codes, which might not permit alternative fueling stations or allow for the incorporation of charging stations into new residential buildings.

- Transitions to more fuel efficient engine technologies may result in higher vehicle capital costs, which may in turn lead to additional shipping market consolidation and higher consumer costs. There may be operating cost savings, however, from fuel savings.

- New aircraft model characteristics and airline fleet replacement schedules are driven by economic and cost effectiveness considerations of the private sector.

Implementation Opportunities

- Oregon has made great strides in increasing the electronic charging network that is available across the state. In addition, with the passage of SB 810, Oregon is the first state in the nation to implement a vehicle miles traveled (VMT) fee. Available for up to 5,000 motorists, this program is scheduled to kick-off in July 2015.
- With the recent passage of HB 3301, the Oregon State Building Code incorporates provisions that allow local jurisdictions to require certain development projects to incorporate EV charging stations. In addition, this legislation restricts homeowner associations from preventing a homeowner from installing an EV charging station.

- The SmartWay Transport Partnership program of the U.S. Environmental Protection Agency encourages representatives of the freight industry to voluntarily improve fuel efficiency. This program also offers a competitive grant program for freight carriers interested in investing in fuel-saving equipment.

- Despite concerns related to cost, aircraft manufactures lead the way in developing more fuel-efficient engines and aircraft.

Analysis Prior to Implementation

ODOT will determine if any analysis is needed prior to moving forward with any new initiatives related to more efficient vehicles and engines.

STS Short-Term Implementation Plan

Program #1: Electric Vehicles and Low Emission Fuels helps to advance the ongoing work within Oregon around EVs and alternative fuels, such as natural gas and biogas. As is outlined in this program, ODOT proposes to expand some of its public education initiatives around the benefits and opportunities provided by EVs. In addition, this program recognizes the partnership that exists between ODOT and the Department of Energy (DOE) related to clean fuels. Other elements of this strategy are not being pursued at this time.

Other Current Initiatives

Oregon's efforts around alternative fuels started in 2010 with Governor Kulongoski's Alternative Fuel Working Group. This group made recommendations to the state for developing the infrastructure necessary to support alternative fuels and work towards statutory changes to support EVs. Oregon also joined other states in adopting a Low Emission Vehicle Program, which is spearheaded by the Oregon Department of Environmental Quality.

In September 2013, the Oregon Transportation Commission approved $4 million dollars in Congestion Mitigation Air Quality (CMAQ) funds to encourage the use of natural gas as a transportation fuel. With this approval, ODOT is working on moving this effort forward and will be administering the distribution of these funds.

Strategy 2
Cleaner Fuels

Description

Support the development and use of cleaner fuels, including reduction of the carbon intensity of fuels.

Intent

Through advancements in fuel technology and the promotion of alternative fuels, this strategy has the potential to greatly reduce GHG emissions.

Implementation Challenges

- Infrastructure poses a challenge for the implementation of alternative fuels. As electric vehicles and other alternative fuel vehicles rise in popularity, the infrastructure needed to re-charge and re-fuel these vehicles is necessary.

- Although rapid changes in fuel prices are not anticipated with clean fuels requirements, increases remain a concern. Another concern includes the potential costs associated with retrofitting old equipment or purchasing new equipment and vehicles. Other cost concerns relate to the high capital cost for new fuel networks, such as liquefied natural gas, and the high costs of research and development.

- Similar to freight, the transition to alternative fuels raises cost concerns. More specifically, airports often need to convert fueling infrastructure to accommodate alternative fuels. The costs associated with these infrastructure improvements are sometimes prohibitive.

- Further research is required of feedstocks that could be used to create fuels with minimal need for arable land and water, and with large yields per acre.

- Lastly, there are challenges in developing and commercializing the large-scale production of the next generation of biomass feedstocks.

Implementation Opportunities

- Oregon established its Clean Fuels Program in 2009 with the passage of HB 2186. Currently, this bill is set to expire in December 2015. In 2013, SB 488 was introduced to remove this deadline. Although this bill did not pass, there may be legislative opportunities in the future to extend or remove this deadline.

- Fuel is a large cost for the freight industry. Despite concerns over the short-term costs associated with the transition to alternative fuels, alternative fuels may provide long-term cost savings to the freight industry.

- The aviation industry continues to explore the use of alternative fuels, in particular biofuels, to help reduce their carbon footprint.

Analysis Prior to Implementation

ODOT will determine if any analysis is needed prior to moving forward with any new initiatives related to more efficient vehicles. Of particular importance will be analyzing potential impacts to the freight and air industries.

STS Short-Term Implementation Plan

Program #1: Electric Vehicles and Low Emission Fuels helps to advance the ongoing work within Oregon around electric vehicles (EVs) and alternative fuels, such as natural gas and biogas. As is outlined in this program, ODOT proposes to expand some of its public education initiatives around the benefits and opportunities provided by EVs. In addition, this program recognizes the partnership that exists between ODOT and the Department of Energy (DOE) related to clean fuels.

Other Current Initiatives

Oregon's efforts around alternative fuels started in 2010 with Governor Kulongoski's Alternative Fuel Working Group. This group made recommendations to the state for developing the infrastructure necessary to support alternative fuels and work towards statutory changes to support electric vehicles. Oregon also joined other states in adopting a Low Emission Vehicle Program, which is spearheaded by the Oregon Department of Environmental Quality.

In September 2013, the Oregon Transportation Commission approved $4 million dollars in Congestion Mitigation Air Quality (CMAQ) funds to encourage the use of natural gas as a transportation fuel. With this approval, ODOT is working on moving this effort forward and will be administering the distribution of these funds.

The Port of Portland invested in a fleet that uses alternative fuels and also participated in Sustainable Aviation Fuels Northwest (SAFN), a bio-renewable aviation fuel pilot program.

Strategy 3
Operations and Technology

Description

Enhance fuel efficiency and system investments, and reduce emissions by fully optimizing the transportation system through operations and technology.

This strategy includes 23 more specific elements, which include a variety of different intelligent transportation system (ITS) technologies, such as variable speed limits, advanced signal timing, incident management techniques, and vehicle-to-vehicle and vehicle-to-infrastructure technologies. Other elements cover eco-driving and anti-idling policies. Elements 3.13 through 3.17 are specific to the freight travel market. One example includes the installation of auxiliary power supplies at truck stops, shipping terminals, and ports. Elements 3.18 through 3.23 focus on the air passenger travel market.

Intent

Through the use of technology and public education, this strategy improves operations and systems performance, increases efficiencies in the movement of goods and people, and in turn reduces GHG emissions.

Implementation Challenges

- Certain ITS strategies require significant investment to install and maintain. Adaptive signal controls, which are effective in locations with unpredictable peaks in congestion, can be an expensive investment.

- Variable speed limit programs are most effective in Europe, which automatically enforces speed limits. Although variable speed limit programs have helped to reduce crashes in the U.S., automatic enforcement encounters resistance in the U.S. where variable speeds are often advisory. Furthermore, recent proposals in the Oregon Legislature indicate some degree of public preference towards raised speed limits, not lowered.

- Strategies related to the freight market, in particular the installation of auxiliary power supplies at ports, cause concern for ports that continually work to increase their competitive edge. In addition, shippers often fear potential costs associated with fleet retrofits and upgrades needed to plug-in at port facilities. Therefore, any regulations regarding plugging in at port facilities need to address concerns regarding costs and economic competitiveness.

- Due to sequestration, the Federal Aviation Administration no longer has the funds to implement NextGen, a program that focuses on implementing fuel-efficient climb, routing, and descent for passenger aircraft, by 2015.

Implementation Opportunities

- ODOT has implemented a number of ITS pilot projects that demonstrate benefits beyond reducing GHG emissions, such as improved safety, increased system performance, and decreased operation and maintenance costs (referred to in the STS as "co-benefits"). The lessons learned from these pilot projects will help to develop and refine the details for broader application of these technologies where they will deliver the desired results.

- Oregon is not alone and other states are also attempting to reach their GHG reduction goals using similar strategies. For instance, in 2014, California will require vessels with diesel engines to plug-in while docked at port facilities.

- While there is still federal support for NextGen, with limited federal resources it will be a much longer-term implementation effort. Nonetheless, it is likely that some airports will invest in changes envisioned by NextGen to increase operational efficiencies and cost savings. There may be opportunities to support these types of efforts through *Connect*Oregon.

Analysis Prior to Implementation

Prior to the implementation of certain elements of the STS, ODOT may conduct case studies and feasibility assessments prior to the application of ITS technologies in new locations. Some elements may also require an investigation of social and economic costs and benefits.

STS Short-Term Implementation Plan

In the short term, ODOT plans to enhance its ITS-related efforts by implementing *Program #5: Intelligent Transportation Systems* of the STS Short-Term Implementation Plan. In addition, *Program #2: Eco-Driving* expands ODOT's educational efforts that provide information about the importance of reducing GHG emissions to the public. This initiative will help ODOT meet the legislative directive to educate the public about the need to reduce GHG emissions per SB 1059 (2009).

Other Current Initiatives

With new technologies on the horizon, such as autonomous vehicles and vehicle-to-vehicle communication, ODOT continues to look to the future for ways to utilize these advancements to improve the transportation system.

Opinions raised by stakeholders during the public review of the STS identified a preference for incentives rather than disincentives or penalties as a way to encourage desired change. ODOT should cooperate with private industry and federal efforts to accelerate the adoption of technologies that reduce emissions and deliver other co-benefits such as improved efficiency and safety.

ODOT's ongoing ITS initiatives include active traffic management, adaptive signal control, traffic incident management, and other projects. More specifically, ODOT has completed adaptive signal control pilot projects in Redmond and Portland and is planning additional adaptive or traffic responsive signal control projects in Lincoln City and Newberg.

In regards to traveler information initiatives, ODOT deployed TripCheckTV an animated traveler information website for display in public buildings, provided access to public transit service information including links to service providers and itinerary planners through the TripCheck transportation options tab, and variable message signs to alert motorists of impending hazards. Further updates to TripCheck include the addition of improved real time transit information for the entire state system, and a mapping application of use to both travelers and planners that contains General Transit Feed Specific (GTFS) transit route and stop data.

Other Current Initiatives (con't)

ODOT's Roadmap for Connected Vehicles Research Project will result in a recommended vision for the deployment of Oregon's priority connected vehicle system applications. In order to get to this vision, the research team will develop an inventory of connected vehicle applications and capacity, conduct stakeholder outreach, and recommend scenarios for implementation through future federally funded initiatives.

External to the agency, the Port of Portland is investing in NextGen technology to help reach the Port's internal GHG targets, which they continually track. The Oregon Department of Aviation (ODA) is exploring ways to address the lack of funding to support NextGen and similar efforts. In addition, the aviation industry's use of unmanned aerial vehicles, which use less fuel and alternative fuel, instead of planes and helicopters for some jobs (e.g. pinpointing the location of a wildfire, telecommunications line inspectors) helps to reduce GHG emissions.

Strategy 4
Airport Terminal Access

Description

Increase efficiency in all airport terminal access activities, including shifting to low and zero emission vehicles and modes for passengers, employees, and venders.

This strategy outlines three elements that focus on the air travel market and the ground passenger and commercial services travel market.

Intent

The intent of this strategy is to provide greater transportation options to airport passengers who may choose to take more efficient modes of transportation, and also create efficiencies in airport systems and operations.

Implementation Challenges

- The Oregon Department of Aviation (ODA) identified federal cuts from sequestration as one of the main challenges that Oregon airports face. This is particularly true for approaches that require infrastructure investments and the implementation of NextGen technologies.
- Extending carbon-efficient access modes and vehicles to airports outside of the Portland International Airport will be a long-term effort. Furthermore, the suitability and effectiveness of public transit access and changes to parking policies will vary.

Implementation Opportunities

- Recognizing the funding gap, ODA presented a bill to the 2013 legislature to increase the jet fuel tax by $0.02. Although this tax increase faces opposition, ODA will continue to explore options to increase funding.

Analysis Prior to Implementation

The elements outlined in this strategy are outside of ODOT's authority.

STS Short-Term Implementation Plan

The STS Short-Term Implementation Plan does not include any programs that align with this strategy.

Other Current Initiatives

In terms of more efficient operations, the Port of Portland invested in a fleet that uses alternative fuels. Employees and passengers also have the option to access the Portland International Airport by bicycle or train. In addition, regional airports across the state provide various options. For example, passengers to the Eugene Airport may utilize a shuttle service and the Rogue Valley Transit Districts provides service to the Rogue Valley International-Medford Airport.

Strategy 5
Parking Management

Description

Promote better management and use of parking in urban areas to support compact, mixed-use development and use of other modes, including transit, walking, and bicycling.

This strategy has seven elements that encourage the use of parking strategies to reinforce efficient development and support multiple modes for accessing an area. This strategy seeks to encourage the use of alternative modes by promoting the use of parking management strategies. Examples include employer supported incentives, local zoning codes that reduce requirements for off-street parking, and parking restrictions such as penalties and time limits. This element also calls for providing secure and convenient bicycle parking in key areas and supports the use of timely information about costs to influence travel behavior.

Intent

This strategy seeks to support compact, mixed-use development and alternative transportation options in urban areas thereby reducing transportation related GHG emissions. The strategy includes both incentives and disincentives which may influence individual choice and actions in support of transportation efficient development.

Implementation Challenges

- Parking is frequently a controversial issue in communities. Many business owners and operators feel that their success relies on an ample and easily accessible supply of parking, as do the customers that want convenient access to the business. The same can be true for access to work and home for employees and residents.
- Changes that are implemented to restrict parking or increase the cost of parking are often strongly resisted.
- ODOT facilities can be affected if the state highway passing through a community is also the local jurisdiction's main street. In these cases, ODOT's main interest would be that parking and parking management not unnecessarily impede through movement, particularly for freight.

Implementation Opportunities

- The parking management strategy is closely linked with transportation options strategies. More specifically, providing alternative forms of access to an area supports better managed parking infrastructure and requires less space for parking.
- ODOT encourages parking management through the Transportation System Planning Guidelines, which can be supported by the Transportation and Growth Management (TGM) program.

Analysis Prior to Implementation

Local jurisdictions pursuing changes to parking fees may consider economic costs and benefits.

STS Short-Term Implementation Plan

Although no specific programs are identified that align with this strategy, the agency should continue to support local planning efforts, with consideration of STS strategies, within the limits of the planning budget.

Other Current Initiatives

The TGM program supports community efforts to expand transportation choices by linking transportation and land use planning. Local jurisdictions can apply for planning assistance, education and code assistance help. These resources can be used to develop parking management plans, implement employee cash out programs, and revise zoning codes.

The TGM program just developed and published a document called: *Parking Made Easy: A Guide to Managing Parking in Your Community*, which is available online. Additionally, the new *Model Code for Small Communities* has a section on parking and is also available online. Technical assistance is offered through the TGM program.

The Oregon GHG Reduction Toolkit offers strategy reports on parking pricing and parking management to help local jurisdictions explore and consider options.

Strategy 6
Road System Growth

Description

Design road expansions to be consistent with the objectives for reducing future GHG emissions by light duty vehicles.

This strategy includes five elements that are designed to make GHG emissions reduction a conscious goal as future road capacity improvements are considered. The approaches outlined include: changing modes or diverting travelers, using GHG emissions budgets in the planning process, considering induced demand from a project, supporting development that avoids expansion, and integrating multimodal solutions to manage transportation demand.

Intent

This strategy is aimed at expanding road capacity where needed, but more consciously considering when other solutions would suffice. More specifically, the exploration of alternatives to road expansion, such as multimodal solutions, and the avoidance of induced demand are key to this strategy.

Implementation Challenges

- Oregon's economy relies on efficient, safe and secure transportation services. Increasing population and roadway congestion are often seen as, and can be, an impediment to economic development.
- Programs that reduce demand and increase operational efficiency may not keep pace with growing population and income, which could lead to increases in congestion depending on the availability of alternative modes to help support increased demand. Congestion is particularly an impediment to roadway freight movement and can increase GHG emissions due to idling.

Implementation Opportunities

- ODOT statewide plans and design guidance support the concept of being strategic in maintaining the performance of the transportation system and considering other options before capacity improvements. Due to limited funding for capacity improvements on the roadway, this has been the practice for many years.
- The Oregon Highway Plan (OHP), Action 1G.1 prescribes the use of four measures prioritized as follows: 1) protect the existing system, 2) improve efficiency and capacity of existing highway facilities, 3) add capacity to the existing systems, and 4) add new facilities to the system. In addition, the Oregon Transportation Plan (OTP) Strategy 1.1.4 prescribes using the most cost effective modes and solutions over the long term.
- ODOT's existing practices, outlined in the Practical Design Strategy, support designing the roadway system under fiscal constraint and actively seeking opportunities to achieve lower cost improvements while improving the overall transportation system.

Analysis Prior to Implementation

This strategy falls within current practices; and therefore, no analysis is necessary.

STS Short-Term Implementation Plan

Program #4: Strategic Assessments and Scenario Planning outlines ODOT's commitment to continue to work with metropolitan areas and associated jurisdictions on strategic assessments and scenario planning efforts. Strategic assessments provide metropolitan areas an opportunity to evaluate how their region's transportation system will perform in the future assuming that adopted plans are implemented and current trends continue.

Other Current Initiatives

ODOT continues using the major improvements approach outlined in the OTP and the OHP, as well as practical design strategies. ODOT also continues to work with local governments and other agencies to target the type of improvements needed to support economic development in Oregon.

ODOT continues to look at transportation solutions holistically and considers multimodal solutions.

When updating long-range plans, ODOT should consider similar policies and strategies around major improvements.

Strategy 7
Transportation Demand Management

Description

Support and implement technologies and programs that manage demand and make it easier for people to choose transportation options.

This strategy outlines 10 elements that focus on the ground passenger and commercial services travel market.

Intent

The intent of this strategy is to ensure that individuals have a variety of options to choose from when traveling, and let the market and individual choice drive use or modal decisions.

Implementation Challenges

- The Transportation Growth Management program recently published a document entitled *Transportation Demand Management (TDM) Plans for Development*. This publication outlines some of the difficulties of incorporating programmatic TDM strategies, such as subsidized transit passes for employees, into the land use review process. Although challenging, in part due to the need for ongoing monitoring, this report outlines some recommendations for local jurisdictions interested in pursuing these options as part of the land use development process.

- The elements associated with this strategy may require public incentives to implement remote conferencing or work-center strategies to improve private sector cost effectiveness and participation.

Implementation Opportunities

- Initiatives that focus on communicating the variety of transportation options to travelers are often low cost to implement and have the potential to greatly reduce emissions. Furthermore, these initiatives empower travelers to make informed travel choices.

Analysis Prior to Implementation

During the development of the STS, some stakeholders expressed concerns over the potential for mode shift from TDM strategies. For example, the promotion of telecommuting may reduce business trips by air. ODOT does not plan to implement a program forcing modal diversion. Instead, ODOT is interested in facilitating transportation options. ODOT will be mindful of potential impacts to travel and other factors when implementing telecommuting and other TDM strategies.

STS Short-Term Implementation Plan

Program #6: Transportation Planning ensures that statewide plans consider the STS and work to move in the direction of the STS vision. This program includes the Oregon Transportation Options (TO) Plan, expected to be complete in late 2014.

Other Current Initiatives

Oregon's first TO Plan will establish a vision and policy framework that integrates transportation options in local, regional, and state transportation planning, programming, and investment.

Travelers in ODOT Region 5 often have to travel long distances due to the rural character of eastern Oregon. As such, travelers with like destinations started coordinating and creating informal park-and-rides near freeway on-ramps. Upon noticing the creation of these park-and-rides, Region 5 is looking at ways to make these informal locations official park-and-rides accessible to more travelers.

In November 2013, the Oregon Drive Less Challenge ran for 12 days and exceeded expectations by eliminating 913,664 vehicle miles and 658,696 pounds of carbon dioxide emissions. It also saved over 33,899 gallons of gasoline and $225,460 by reducing the number of single-occupant car trips. The challenge was spearheaded by ODOT and its partners as part of the state's ongoing efforts to reduce GHG emissions and to alleviate traffic congestion.

The Rogue Valley Metropolitan Planning Organization recently initiated a Clean Air Campaign. Although this program focuses on reducing air pollution, it has the added benefit of reducing GHG emissions. A major component of this program is providing educational materials to its residents about ways it can reduce pollution from the transportation sector. Some options may include TDM strategies.

Strategy 8
Intercity Passenger Growth and Improvements

Description

Promote investment in intercity passenger public transportation infrastructure and operations to provide more transportation options that are performance and cost competitive.

The five elements in this strategy address transportation options for intercity travel including high-speed rail and bus services that connect service between metropolitan areas and population and job centers. The focus is on investment in high-volume corridors where there is the potential for modal diversion through the provision of transportation options.

Intent

The intent of this strategy is to ensure that individuals have a variety of options to choose from when traveling, and let the market and individual choice drive use or modal decisions.

Implementation Challenges

- The lack of adequate, sustainable long-term funding for rail and public transportation makes investment in intercity passenger movement challenging. Furthermore, implementation barriers, such as track geometry and right-of-way issues could make service above 110 miles per hour difficult to achieve.
- The limited miles of tracks in high use corridors means that freight and passenger rail compete for track usage.
- Stakeholders expressed concerns over competition between rail, bus, and air during the development of the STS.

Implementation Opportunities

- The Oregon Transportation Plan Policy 1.1: Development of an Integrated Multimodal System supports this strategy.
- ODOT is conducting the Oregon Passenger Rail Environmental Impact Statement Project as the next step to improving passenger rail services in Oregon for the federally designated Pacific Northwest Rail Corridor between Eugene and Portland. Work is expected to conclude in late 2014.
- A Task Force provided the Oregon Transportation Commission a report on Oregon Rail Funding, which outlined types of fees that could be utilized to develop funding for rail passenger and freight.
- *Connect*Oregon is a potential multimodal funding source provided by the Oregon Legislature, which can help to implement this strategy.

Analysis Prior to Implementation

Two important objectives of the Oregon Passenger Rail project include promoting economic development and protecting freight rail carrying capability. Therefore, as part of this project, ODOT is coordinating with representatives of the freight rail system to work out solutions that will be compatible with freight rail operations.

STS Short-Term Implementation Plan

Program #4: Strategic Assessments and Scenario Planning outlines ODOT's commitment to continue to work with metropolitan areas and associated jurisdictions on strategic assessments and scenario planning efforts. Strategic assessments provide metropolitan areas an opportunity to evaluate how their region's transportation system will perform in the future assuming that adopted plans are implemented and current trends continue.

Program #6: Transportation Planning and Project Selection ensures that ODOT will incorporate the STS into statewide plan updates. Through the Oregon Public Transportation Plan Update, ODOT will provide a policy foundation to support an integrated, well connected transportation system. The Oregon Rail Plan Update, expected to be completed in mid-2014, will outline policies and strategies related to decreasing travel time, improving service reliability, and improving passenger connections to transit, bus, auto, bicycle and pedestrian modes.

Other Current Initiatives

In the review of transportation system plans, ODOT helps to identify opportunities for intercity public transportation systems. In addition, through the review of regional transportation plans, ODOT encourages work with nearby cities to include public transportation opportunities to reduce vehicle miles traveled.

Through TripCheck and Drive Less Save More, ODOT supports electronic trip and itinerary planning so that travelers have readily available information about alternative transportation services.

ODOT continues to study options for improved passenger rail service between the Columbia River in the Portland metro area and the Eugene-Springfield area through the Oregon Passenger Rail project. ODOT also continues to support incremental rail improvements in the Cascade Corridor, as well as intercity bus and express intercity bus.

The Confederated Tribes of the Umatilla Indian Reservation offer free intercity bus service to multiple jurisdictions in northeastern Oregon and southeastern Washington and are currently exploring opportunities for expansion.

Strategy 9
Intracity Transit Growth and Improvements

Description

Investing in public transportation infrastructure and operations to provide more transportation options and help reduce single-occupant vehicle travel.

The eight elements of this strategy address various approaches to improve and expand public transportation infrastructure to provide a more complete public transportation system. The elements include incentives for mode shift, increased service and schedules, provision of transportation payment options and utilizing existing infrastructure where possible.

Intent

The intent of this strategy is to ensure that individuals have a variety of options to choose from when traveling, and let the market and individual choice drive use or modal decisions.

Implementation Challenges

- The lack of adequate, sustainable long-term funding for public transportation makes expansion of the system by local governments difficult. Beyond expansion of the system, there appears to be inadequate funding assistance for operation of the system.
- Some existing transit routes are not at capacity, in terms of ridership, and increasing ridership rates can be challenging.
- Public perception may be that public transportation services are only of interest to people who cannot or choose not to drive. It is difficult to convey that public transportation services have broader uses and benefits.
- Different funding sources from various federal and state agencies come with different requirements and support different types of users, making it difficult to achieve efficiencies. For instance, the funding to get students to and from schools may not align with the transportation needs of the elderly and disabled.
- In general, there are currently limited transit service options for rural communities.

Implementation Opportunities

- With input from local jurisdictions, ODOT produced the Scenario Planning Guidelines and a Toolkit. These guidance documents outline an array of planning options that local jurisdictions may consider as part of GHG emissions reduction planning efforts.
- Traveler information that outlines various transportation options and travel time is currently offered on TripCheck.
- As ODOT works to incorporate the STS into statewide plans, metropolitan planning organizations (MPOs) and local jurisdictions may also consider the STS in transit planning efforts.

Analysis Prior to Implementation

Some future funding programs may require an economic analysis for the development of project priorities.

STS Short-Term Implementation Plan

Program #4: Strategic Assessments and Scenario Planning outlines ODOT's commitment to continue to work with metropolitan areas and associated jurisdictions on strategic assessments and scenario planning efforts. Strategic assessments provide metropolitan areas an opportunity to evaluate how their region's transportation system will perform in the future assuming that adopted plans are implemented and current trends continue.

Program #6: Transportation Planning and Project Selection ensures that ODOT will incorporate the STS into statewide plan updates. Through the Oregon Public Transportation Plan Update, ODOT will provide a policy foundation for public transportation. It will discuss the public transportation service needs for communities of various sizes, and consider different funding mechanism. Through statewide plan updates ODOT may also consider ways to couple transit services with parking pricing.

Other Current Initiatives

Through the review of transportation system plans, ODOT identifies opportunities for intracity public transportation systems and policies that support an appropriate level of public transportation for the community's size and needs. The success of intracity transit is dependent on land use configurations and needs to be closely coordinated with land use plans.

Through TripCheck and Drive Less Save More, ODOT supports electronic trip and itinerary planning so that travelers have readily available information about alternative transportation services.

External to ODOT, the Portland-Milwaukie Light Rail Transit Project will expand TriMet's light rail system by 7.3 miles. This expansion will connect Milwaukie and north Clackamas County with downtown Portland.

Strategy 10
Bicycle and Pedestrian Network Growth

Description

Encourage local trips, totaling twenty miles or less round-trip, to shift from single-occupant vehicle (SOV) to bicycle, walking, or other zero emission modes.

The strategy contains five more specific elements that address infrastructure design elements that facilitate safe bicycling and walking, and the promotion of bicycle sharing, bicycle parking and support of other zero-emissions options. It also supports development of funding sources for bicycle and pedestrian infrastructure.

Intent

The intent of this strategy is to ensure that individuals have a variety of options to choose from when traveling, and let the market and individual choice drive use or modal decisions.

Implementation Challenges

- The apparent lack of adequate and sustainable funding for multimodal improvements makes development of infrastructure difficult.
- Some individuals and businesses see a conflict with other mode movements, particularly the movement of freight.
- Creating a transportation network that is safe for all modes is a challenge. In some circumstances, a measure that is intended to make one mode safe, may not be perceived or actually safe for another mode, and vice-versa.
- During the outreach for the STS, some stakeholders shared the concern that not all users of the system provide funds for the development of infrastructure.

Implementation Opportunities

- ODOT is working on internal processes to better identify and fund strategic multimodal transportation project solutions to address particular problems. Following this direction, the Statewide Transportation Improvement Program (STIP) is no longer developed as a collection of programs tied to specific pools of funding dedicated to specific transportation modes or specialty programs. The purpose of this change is to take care of the existing transportation assets while still providing a measure of funding to enhance the state and local transportation system in a multimodal way. Although bike and pedestrian modes no longer have dedicated flexible funding for projects under this new paradigm, they are eligible to compete for a larger pool of funding than what was previously available.
- Chapter 366, Section 514 of the Oregon Revised Statues outlines the provisions for the inclusion of bicycle and pedestrian facilities in highway and road projects.
- A special fee for motor vehicle licenses, Share the Road, collects money for use by two non-profit bicycle advocacy groups: the Bicycle Transportation Alliance and Cycle Oregon.
- *Connect*Oregon is a multimodal funding program provided by the Oregon Legislature. Off-road bicycle and pedestrian improvements are now eligible to compete for funding through this program. Such projects include multi-use trails and the promotion of bike tourism.
- As ODOT works to incorporate the STS into statewide plans, metropolitan planning organizations (MPOs) and local jurisdictions may also consider the STS in bicycle and pedestrian planning efforts.

Analysis Prior to Implementation

This is an ongoing effort, so no analysis is required by ODOT.

Some funding programs may require an economic analysis for comparison of project priorities.

STS Short-Term Implementation Plan

Program #6: Transportation Planning and Project Selection ensures that statewide plans consider the STS and work to move in the direction of the STS vision. This program includes the Statewide Bicycle and Pedestrian Plan Update, which is anticipated to be complete in mid-2015. The Plan will outline the statewide policy direction for these modes and how bicycles and pedestrians interact with other modes.

Other Current Initiatives

Consideration of bicycle and pedestrian needs is included in the Department of Land Conservation and Development's Transportation Planning Rule. When ODOT reviews transportation system plans, it identifies opportunities for bicycles and pedestrians, as well as other zero emission modes, and encourages a safe, interconnected multimodal system.

ODOT provides bicycle and pedestrian information electronically through Drive Less Connect, which matches people with places. Travel Oregon's RideOregonRide.com also provides bicycle traveler information. In addition, funding opportunities exist through the STIP and *Connect*Oregon.

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Strategy 11
Carsharing

Description

Enhance the availability of carsharing (short-term self-service vehicle rental and/or peer-to-peer) programs to reduce the need for households to own multiple vehicles and to reduce household vehicle miles traveled.

Carsharing is one of a suite of transportation options that provide choice for transportation system users. The two elements address incentives and formal and informal mechanisms to share vehicles.

Intent

The intent of this strategy is to ensure that individuals have a variety of options to choose from when traveling, and let the market and individual choice drive use or modal decisions.

Implementation Challenges

- Carsharing opportunities will likely be driven by private enterprise or public/private partnerships and locate in more urban areas.
- There may be a need for local governments to integrate carsharing programs and regulations with high need areas, such as transit stops.
- For personal vehicle carsharing (peer-to-peer) programs to operate, liability insurance issues must be addressed to avoid prohibitively high insurance costs for car owners whose vehicles are used in the program.

Implementation Opportunities

- The Oregon Transportation Plan Policy 1.1: Development of an Integrated Multimodal System supports this strategy.

Analysis Prior to Implementation

If an incentive funding program is developed, it may require an economic analysis for comparison of project priorities.

STS Short-Term Implementation Plan

Program #6: Transportation Planning and Project Selection ensures that ODOT will incorporate the STS into statewide plan updates. The Oregon Transportation Options Plan and the Oregon Public Transportation Plan Update may include policies related to carsharing.

Through the review of transportation system plans, ODOT may identify opportunities for transportation options such as carsharing.

Other Current Initiatives

Carsharing is a business idea that works because people can save money on car payments and insurance premiums; yet have access to a vehicle or a different type of vehicle without the hassle of vehicle ownership. It may work as a green business without publicly funded incentives.

ODOT's Drive Less Save More website includes carshaing as an option.

Carsharing programs are already available in many cities, including Portland, Eugene, Corvallis and Medford/Ashland.

Strategy 12
More Efficient Freight Modes

Description

For the commodities and goods where low carbon modes are a viable option, encourage a greater proportion of goods to be shipped by rail, water, and pipeline modes.

The six elements of this strategy include relieving freight bottlenecks and modernizing multimodal infrastructure to provide lower carbon options for freight shipments. It also includes minimizing extraneous shipping materials and providing informational materials about carbon efficiency of modes for shippers and consumers, as well as rail issues around grade separation and preservation of rail lines.

Intent

The intent of this strategy is to ensure that shippers and carriers have a variety of options to choose from when moving goods, and let the market and business choice drive use or modal decisions.

Implementation Challenges

- Considerable capital costs are associated with major capacity expansions of rail, marine, and pipeline networks. The lack of adequate and sustainable funding for multimodal improvements and the high cost of modal infrastructure improvements makes the provision of options difficult. Furthermore, many commodity types are not amenable to being shipped by other modes.
- Since rail lines are in private ownership, it is difficult to influence rail line funding priority decisions.
- Shipping decisions are mainly driven by location, cost and delivery timelines; spheres where the state has little influence.

Implementation Opportunities

- The Oregon Freight Plan, Freight Issue 2, identifies the need to define and establish criteria regarding freight constraints, congestion, unreliability, and geometric deficiencies in key highway, rail, and marine freight corridors.
- *Connect*Oregon is a multimodal funding program provided by the Oregon Legislature, which can be used to support this strategy.

Analysis Prior to Implementation

If used as criteria in an improvement program, it may require an economic analysis for comparison of priority projects.

STS Short-Term Implementation Plan

Program #4: Strategic Assessments and Scenario Planning outlines ODOT's commitment to continue to work with metropolitan areas and associated jurisdictions on strategic assessments and scenario planning efforts. Strategic assessments provide metropolitan areas an opportunity to evaluate how their region's transportation system will perform in the future assuming that adopted plans are implemented and current trends continue.

Program #6: Transportation Planning and Project Selection ensures that ODOT will incorporate the STS into statewide plan updates. The Oregon Rail Plan Update, expected to be completed in mid-2014, will address grade separation projects and the preservation of rail lines for future potential capacity needs.

Other Current Initiatives

The Oregon Freight Plan includes strategies for considering freight improvements in system plans with the intent to improve supply chain performance and the need to increase modal alternatives on key freight corridors. Increase in modal alternatives encourages the development of carload, transload consolidation facilities where there is market support for such facilities.

ODOT should examine *Connect*Oregon project criteria to support efficient multimodal projects.

Strategy 13
Compact, Mixed-Use Development

Description

Promote compact, mixed-use development to reduce travel distances, facilitate use of zero or low energy modes (e.g. bicycling and walking) and transit and enhance transportation options.

The strategy outlines four specific elements, which promote the creation of complete, self-sufficient communities and encourage higher intensity development that promotes sustainable transportation options, such as transit, walking, and biking. This strategy also supports adjusting development codes to remove barriers to mixed-use development.

Intent

The strategy promotes creating communities that support the integration of land use and transportation, including efficient street networks, modal connections, and compact land use, which together reduce travel demand and transportation related GHG emissions.

Implementation Challenges

- The primary challenge will be accommodating increased population and supporting economic growth while also maintaining the sustainable use of valuable land resources and minimizing adverse impacts on the transportation system.
- A significant challenge is providing sufficient transportation infrastructure funding to support increased availability of transportation options.
- Although land use considerations are under the authority of local governments, ODOT provides system information and policy direction for transportation planning and encourages efficient transportation plans that support compact, mixed-use development.

Implementation Opportunities

- Oregon has encouraged transportation planning that includes land use considerations for over two decades. The Land Conservation and Development Commission's Goal 12: Transportation came into effect in 1991. ODOT has a strong policy foundation, in both the Oregon Transportation Plan and the Oregon Highway Plan, that guides and informs the local planning process where land use decisions affect state transportation facilities and services.
- The Transportation Growth Management (TGM) Program makes funding available to local jurisdictions to develop and update transportation system plans and plan for transportation and land use in a coordinated manner. As part of these efforts, the ODOT Region staff work with local governments.
- The passage of SB 1059 (2010) required ODOT and the Department of Land Conservation and Development (DLCD) to develop guidance documents for local jurisdictions considering GHG reduction planning. ODOT and DLCD developed the Scenario Planning Guidelines and a Toolkit, with input from local governments, to outline an array of planning options that can be considered in local planning processes.

Analysis Prior to Implementation

This is an ongoing program, and therefore, no analysis is required.

STS Short-Term Implementation Plan

Program #4: Strategic Assessments and Scenario Planning outlines ODOT's commitment to continue to work with metropolitan areas and associated jurisdictions on strategic assessments and scenario planning efforts. Strategic assessments are designed to assess the potential outcomes of a metropolitan area assuming adopted land use and transportation plans are implemented and current trends continue. Strategic assessments also provide metropolitan areas the opportunity to look at what potential actions may help the metropolitan area reach identified community goals.

Other Current Initiatives

ODOT supports local planning efforts, with consideration of STS strategies, within the limits of the planning budget.

The TGM program is an ongoing program dedicated to supporting local transportation and land use planning efforts. The grant selection criteria for the TGM program currently contains criteria that support transportation and land use planning that encourages compact, mixed-use development. In the current biennium, the TGM program will use code assistance funding to develop GHG reduction related model code language that local jurisdictions can adapt to local conditions. The TGM program will also continue to help individual cities update their existing codes.

Strategy 14
Urban Growth Boundaries

Description

Create full-service healthy urban areas to accommodate most expected population within existing Urban Growth Boundaries (UGB) through infill and redevelopment.

The urban growth boundary strategy, like the compact, mixed-use development strategy, considers using land resources efficiently while accommodating population increases and supporting economic development opportunities. The current rate of UGB expansion is at about 15% of population growth in Oregon metropolitan areas. This strategy proposes that Oregon continue to maintain that level.

Intent

The intent of this strategy is to maintain the expansion of urban growth boundaries at about the current rate of growth experienced in metropolitan areas to decrease sprawl and support GHG emissions reduction.

Implementation Challenges

- Accommodating increased population and supporting economic growth have to be coupled with the sustainable use of land resources in the state. Greenfield development is often less expensive than infill development, which makes areas outside of the current UGB more attractive to developers. Therefore, it is important to incentivize infill development and create suitable sites within the UGB for redevelopment through the provision of adequate infrastructure, which may be difficult due to limited infrastructure funding. ODOT does not have decision authority with regard to UGB amendments. This authority lies with local jurisdictions, subject to the Department of Land Conservation and Development (DLCD) acknowledgment.

Implementation Opportunities

- Continue working with local governments and DLCD to ensure that state transportation facilities are adequate to serve new urban uses at the time of urban growth boundary changes, or that plans and funding are in place to make necessary improvements.
- Continue to work with DLCD on land use initiatives and rulemaking to ensure adequate transportation facilities and services are considered in a timely manner during the review of UGB amendments.
- The Transportation Growth Management (TGM) program is supportive of local efforts to accommodate growth within existing UGBs through compact, infill development.

Analysis Prior to Implementation

No analysis is required in the immediate term.

STS Short-Term Implementation Plan

The STS Short-Term Implementation Plan does not include any programs that directly align with this strategy. However, as opportunities arise, ODOT will work with local governments early in the decision process to determine the impact of a proposed UGB expansion on transportation facilities and whether necessary improvements can be made within the planning horizon. If reasonable solutions cannot be reached to make state transportation facilities adequate for urban development, ODOT may consider an appeal of the local decision.

Other Current Initiatives

HB 2254, from the 2013 Legislative Session, deals with the creation of options for cities outside of Metro to project need, based on population growth, for additional land for housing and jobs to be included within the UGB. The law is intended to simplify the methods that establish priorities in the selection of land that can be included.

DLCD has appointed a UGB Rulemaking Advisory Committee and ODOT will participate on that committee. Rulemaking is expected to be completed sometime in 2014.

Strategy 15
More Efficient Industrial Land Uses

Description

Encourage and incentivize more efficient use of industrial land through closer proximity of shippers and receivers, consolidate distribution centers and better access to low carbon freight modes.

This strategy includes three more specific elements promoting industrial development in multimodal, transportation efficient locations. This includes industrial park locations, planning for urban consolidation centers and planning for freight movement in key transportation corridors that serve major industrial uses.

Intent

The intent of this strategy is to encourage lower carbon, multimodal transportation options and consolidation centers that are strategically located to support business and industry in Oregon and assist in the reduction of transportation related GHG emissions.

Implementation Challenges

- Industrial land sites with access to multiple, abundant transportation modes are in limited supply. Therefore, it is important to preserve industrial uses and to make new industrial sites more efficient by co-locating resources. Due to conversion pressures, it is also important to protect vacant industrial lands.
- Development of sites designed to implement the types of integrated systems identified here, such as eco-industrial parks or urban consolidation centers, would rely primarily on private funding, and potentially public-private partnerships.

Implementation Opportunities

- The Oregon Freight Plan recognizes the need to better integrate freight facility needs into land use planning. The plan includes actions to support inclusion of freight in regional and local land use planning processes and encourage local governments to integrate industrial land planning into comprehensive plans and actions.

Analysis Prior to Implementation

If an incentive funding program is developed, it may require an economic analysis for comparison of priority projects.

STS Short-Term Implementation Plan

Program #4: Strategic Assessments and Scenario Planning outlines ODOT's commitment to continue to work with metropolitan areas and associated jurisdictions on strategic assessments and scenario planning efforts. Strategic assessments are designed to assess the potential outcomes of a metropolitan area assuming adopted land use and transportation plans are implemented and current trends continue. Strategic assessments also provide metropolitan areas the opportunity to look at what potential actions may help the metropolitan area reach identified community goals.

Other Current Initiatives

ODOT continues to work with local governments and the Department of Land Conservation and Development (DLCD) to support more efficient industrial land uses and increase the focus on freight infrastructure and services in industrial land planning.

As opportunities arise to work with local governments in development review related to industrial sites, ODOT takes into account anticipated impacts on transportation facilities, particularly freight routes, and opportunities to improve conditions for freight.

ODOT leadership regularly meets with DLCD, Business Oregon and the Governor's office to discuss high-level issues that cut across agencies.

The ODOT Director is part of the Economic Recovery Review Council which also includes the Department Directors of Business Oregon, Environmental Quality, Land Conservation and Development and State Lands. This Council was put in place to help expedite the review and approval of industrial development projects of state and regional significance.

Strategy 16
Funding Sources

Description

Move to a more sustainable funding source that covers the revenue needed to maintain and operate the transportation system and accounts for the true cost of travel.

This strategy outlines 11 specific elements, including the restructuring of user fees to account for the true cost of travel. True cost pricing considers not only the costs of using the transportation system (e.g. construction, maintenance, and operations), but also the social costs imposed on others (e.g. costs of air pollution, GHG emissions, congestion costs). Implementing a road user fee is one strategy already being explored by the state. Other elements proposed include congestion pricing and carbon fees.

Intent

The intent of this strategy is to explore alternative financing mechanisms that offset decreasing gas tax revenues and to generate added revenue required to adequately fund increasing transportation infrastructure and maintenance needs. Funds could be used to cover future STS implementation programs. In addition, this strategy includes the investigation of additional fees to capture impacts to climate change and inform transportation users about the costs of carbon.

Implementation Challenges

- The complex nature and confusion around changes to taxes and/or fees often makes public support a challenge. It may be difficult to build support for the concept that users should pay the true cost of transportation.

- Oregon has used a form of a weight-mile tax on commercial vehicles over 26,000 pounds since 1925. Oregon faced opposition from the trucking industry in 2000 when the industry challenged this tax, saying that it discriminated against non-Oregon based interstate firms. In 2005, the Oregon Supreme Court ruled in favor of the State. As this illustrates, changes in user fees are often contentious. Therefore, pursuing changes to the current system may likely face challenges. Most notably, potential increased fees and vehicle upgrade costs associated with any variable tax that considers vehicle efficiency raises concerns for trucking companies and haulers.

- Although common in some foreign countries, the validity and benefits of carbon fees remain highly debated in the U.S. Any effort to establish a transportation-related carbon fee or tax in Oregon will be a long-term effort that may require support from the federal government and other states, and the participation of a broad range of stakeholders.

Implementation Opportunities

- Decreasing gas tax revenues combined with increasing infrastructure needs has led many states across the country to explore alternative strategies to financing the transportation system. In fact, since 2001 ODOT has studied the feasibility of road user fees. An opportunity lies with the recent passage of SB 810 (2013), which allows Oregon drivers to voluntarily participate in a program and pay a 1.5-cent per mile fee and receive a gas tax reimbursement. This voluntary program is the first step in ensuring an equitable system for all users of the roadway. Furthermore, it provides opportunities for ODOT to reach out to the public and provide information on declining revenues for transportation maintenance and improvements.

- Decreasing revenues and increasing needs affects all states across the nation. Therefore, in exploring true cost pricing through the existing weight-mile tax, opportunities may exist to establish multi-state efforts. Furthermore, any effort that helps improve efficiencies may result in a win for the state and a win for industry.

- The Oregon Department of Aviation (ODA) presented a bill to the 2013 legislature to increase the jet fuel tax by $0.02. Although this tax increase faces opposition, ODA will continue to explore options to increase funding.

Analysis Prior to Implementation

Before implementing any funding strategy, ODOT will consider the potential social and economic costs and benefits of the policy. Any future analyses will be tailored to the specific program, but may include the following:

- A qualitative and/or quantitative examination of options, including their implementation costs, benefits and disbenefits;
- An assessment of economic impacts, and ways to mitigate those impacts;
- An examination of equity and whether certain groups (such as, but not limited to small businesses, low-income households, and federally-protected classes) and/or geographic areas are disproportionately affected; and
- A research review on similar statewide efforts, with a particular focus on the western U.S.

STS Short-Term Implementation Plan

Program #3: Road User Charge Economic Analysis, outlined in the STS Short-Term Implementation Plan, relates to this strategy. The implementation of this program supports ODOT's ongoing efforts related to the exploration of switching from a gas tax to vehicle miles traveled fee.

Other Current Initiatives

In 2001, the Oregon Legislature created the Road User Fee Task Force to explore alternative approaches to financing the transportation system beyond the gas tax. These efforts came out of an early recognition of declining revenues and the recognition that the gas tax no longer accurately reflects the use of the road system because of the disparity in fuel efficiency. In 2013, the legislature passed SB 810, which authorizes ODOT to charge a fee of 1.5 cents per mile and issue a gas tax refund to up to 5,000 volunteer motorists. This project will begin July 1, 2015.

For trucks over 26,000 pounds conducting commercial operations on public roadways, Oregon requires the payment of a weight-mile tax. Under this taxing structure, the per mile tax rate increases with the weight of the vehicle.

In 2013, the Oregon Legislature passed SB 306 which directs the Legislative Revenue Office to prepare preliminary and final reports on the feasibility of a statewide fee or tax on GHG emissions.

Strategy 17
Pay-As-You-Drive Insurance

Description

Promote Pay-As-You-Drive Insurance (PAYD) programs that allow drivers to pay per-mile premiums, encouraging less driving through insurance savings.

The strategy looks at working with insurance companies to offer and encourage the use of PAYD insurance. The strategy starts with encouragement and in the long-term would look at the potential for mandating that insurance companies provide this option.

Intent

PAYD insurance offers incentives for driving less by saving drivers money on car insurance; driving less reduces fuel consumption and GHG emissions.

Implementation Challenges

- It would likely take a legislative mandate to require insurers to offer PAYD insurance. Such a mandate would need to be driven by the Department of Consumer and Business Services who authorize vehicle insurance companies in Oregon.
- The PAYD plans currently available require a data logging device (DLD). Vehicles built before 1996 do not have the required port available.
- Most plans also consider driving behavior, collected through the DLD, which can record data that individuals may not want available to their insurance company. Behaviors include actions such as hard braking, acceleration, speed, and sharp turning. Insurance companies that offer this type of insurance often accompany it with an incentive for good driver behavior.

Implementation Opportunities

- Pay-as-you-go (same as PAYD) auto insurance for personal vehicles is currently available through a number of insurance providers in Oregon.
- Options are available for business vehicles. The business programs are geared to small-to-medium fleets ranging from heavy trucks to business use passenger vehicles.

Analysis Prior to Implementation

No analysis is required for implementation. Individual drivers would have to decide whether to participate in this option, which would likely be determined by their anticipated mileage.

STS Short-Term Implementation Plan

The STS Short-Term Implementation Plan does not include any programs that align with this strategy. However, if it were determined in the future to try to mandate companies to offer PAYD insurance, ODOT will work with the Department of Consumer and Business Services, as needed.

Current Initiatives

The State of Oregon currently encourages the provision of pay-as-you-go insurance by offering a tax credit for insurance companies with mileage-based or time-based rating plans. Insurance companies that seek to qualify for the tax credits establish formal programs that count miles, time of day, or some combination of these factors to calculate the premium.

Strategy 18

Encourage a Continued Diversification of Oregon's Economy

Description

Maintain economic prosperity through an increase in the value per ton (the "value-density") of goods produced in the state, which is projected to reduce shipping costs and GHG emissions from any given level of economic output.

This strategy has five more specific elements that mainly support the diversification of Oregon's economy through growth in value-added industries, consistent with the Oregon Business Plan. Elements include investing in higher education and training programs, encouraging the co-location of value-added industries, providing incentives to develop this type of industry, as well as dealing with waste prevention and minimization programs.

Intent

This strategy seeks to develop a greater proportion of goods finished and consumed locally and reduce GHG emissions by decreasing the distance goods are shipped. While this strategy is not directly related to transportation, it is an acknowledgement that consumption of goods and goods movement greatly impacts GHG emissions. This strategy seeks to provide opportunities to foster a diversification of Oregon's economy, but not to force it.

Implementation Challenges

- Development and funding of industry co-location sites would fall largely to private developers and potentially public private-partnerships.
- Funding for multimodal transportation infrastructure may be needed, particularly in rural and congested areas.
- Training workers for high-value density industries requires investment in post-secondary education and job training programs.

Implementation Opportunities

- Transportation infrastructure and investment, the provision of multiple transportation options, is an initiative of ODOT.
- The Oregon Business Plan initiatives are intended to improve the conditions for economic success in Oregon. The Plan recognizes that there are particularly strong opportunities in value-added and specialty products.
- *Connect*Oregon is a multimodal funding program provided by the Oregon Legislature that helps to fund implementation aspects of this strategy.

Analysis Prior to Implementation

No analysis is required for ODOT efforts; however, other state agencies may consider conducting further analyses depending on their policies and procedures.

STS Short-Term Implementation Plan

The STS Short-Term Implementation Plan does not include any programs that align with this strategy. However, state agencies should continue exploring issues related to a diverse economy and examine the link to transportation infrastructure.

Other Current Initiatives

The Oregon Freight Plan includes strategies that address consideration of freight improvements in system plans with the intent to improve supply chain performance and the need to increase modal alternatives on key freight corridors. Increase in modal alternatives encourages the development of carload, transload consolidation facilities where there is market support for such facilities.

ODOT should examine the *Connect*Oregon project criteria to support a diverse Oregon economy.

ODOT staff is working with the freight industry to develop a prioritized list of bottlenecks on highways and connections to other modal facilities; this includes looking at the last mile connection for freight.



Implementation Considerations Matrix

Overview

The matrix on the following pages summarizes ODOT's role, as well as its presumed level of effort in implementing each of the 18 strategies in the STS. It also identifies other leaders (i.e. federal, state, and local government, and the private sector) important in STS implementation, as well as some potential challenges. While the individual strategy summary sheets provide additional detail, this matrix offers a quick reference to some important considerations ODOT may examine further as it moves forward with implementing the STS.

KEY

Level of Effort:

○	Low
◒	Medium
●	High

Note: The level of effort indicated for each strategy in the matrix below represents the estimated level of effort, which may change depending on the specific action taken.

Challenges:

$	Funding
⚖	May require legislative leadership or initiative

Strategies	Plan, Invest, and/or Build	Develop Statewide Policies	Partner with Other Leaders	ODOT Presumed Level of Effort	Other Leaders	Challenges	Notes
	ODOT Role						
Strategy 1 – More Efficient, Lower-Emission Vehicles and Engines: Transition to lower emission and fuel-efficient vehicles, enhanced engine technologies, and efficient vehicle design.	✓		✓	○	Federal, State, Local, Private	$ 	Driven by private innovation; Requires new technology and infrastructure; Consider incentive funding; Long term potential tax structure changes
Strategy 2 – Cleaner Fuels: Support the development and use of cleaner fuels, including reduction of the carbon intensity of fuels.	✓		✓	○	Federal, State, Local, Private	$ 	Driven by private innovation; Requires new technology and infrastructure; Consider incentive funding
Strategy 3 – Operations and Technology: Enhance fuel efficiency and system investments, and reduce emissions by fully optimizing the transportation system through operations and technology.	✓	✓	✓	◒	Federal, State, Local, Private	$ 	Private innovation; Requires new technology and infrastructure; Federal aviation leadership and funding needed
Strategy 4 – Airport Terminal Access: Increase efficiency in all airport terminal access activities, including shifting to low and zero emission vehicles and modes for passengers, employees, and vendors.			✓	○	Federal, State, Local, Private	$	May require new technology and infrastructure; Lack of sustainable funding; Consider incentive funding
Strategy 5 – Parking Management – Promote better management and use of parking in urban areas to support compact, mixed-use development and use of other modes, including transit, walking, and bicycling.			✓	◒	Local		Continue support of local planning efforts; When state highway is impacted ensure that through traffic is not unnecessarily impeded
Strategy 6 – Road System Growth: Design road expansions to be consistent with the objectives for reducing future GHG emissions by light duty vehicles.		✓		○	Federal, Local		Policies in the OTP and OHP support road system growth only after considering other approaches; Lack of sustainable funding; Federal or state legislature sometimes direct funds

Strategies	Plan, Invest, and/or Build	Develop Statewide Policies	Partner with Other Leaders	ODOT Presumed Level of Effort	Other Leaders	Challenges	Notes
	ODOT Role						
Strategy 7 – Transportation Demand Management: Support and implement technologies and programs that manage demand and make it easier for people to choose transportation options.		✓	✓	◒	Local, Private	$	Lack of sustainable funding; Private sector may invest in incentives and the development of conferencing sites; Oregon Transportation Options plan is in development
Strategy 8 – Intercity Passenger Growth and Improvements: Promote investment in intercity public transportation infrastructure and operations to provide more transportation options that are performance and cost competitive.	✓	✓	✓	●	Federal, Local, Private	$	Lack of sustainable funding; Much of infrastructure in private ownership; Oregon Rail Plan is in development
Strategy 9 – Intracity Transit Growth and Improvements: Investing in public transportation infrastructure and operations to provide more transportation options and help reduce single-occupant vehicle travel.	✓	✓	✓	●	Federal, State, Local, Private	$	Lack of sustainable funding; An update of the Oregon Public Transportation Plan is needed
Strategy 10 – Bicycle and Pedestrian Network Growth: Encourage local trips, totaling twenty miles or less round trip, to shift from single-occupant vehicle to bicycle, walking, or other zero emissions modes.	✓	✓	✓	◒	Local	$	Oregon Bicycle and Pedestrian Plan is in development; Lack of sustainable funding
Strategy 11 – Carsharing: Enhance the availability of carsharing (short-term self-service vehicle rental and/or peer-to-peer) programs to reduce the need for households to own multiple vehicles and to reduce household vehicle miles traveled.			✓	○	Local, Private		Probably led by private enterprise

Strategies	Plan, Invest, and/or Build	Develop Statewide Policies	Partner with Other Leaders	ODOT Presumed Level of Effort	Other Leaders	Challenges	Notes
	ODOT Role						
Strategy 12 – More Efficient Freight Modes: For the commodities and goods where low carbon modes are a viable option, encourage a greater proportion of goods to be shipped by rail, water, and pipeline modes.	✓	✓	✓	○	Federal, Private	$	Lack of sustainable funding; Much of infrastructure in private ownership
Strategy 13 – Compact, Mixed-Use Development: Promote compact, mixed-use development to reduce travel distances, facilitate use of zero or low energy modes (e.g. bicycling and walking) and transit, and enhance transportation options.		✓	✓	○	State, Local		Ongoing effort, led by local governments; Requires funding to provide transportation options
Strategy 14 – Urban Growth Boundaries: Create full service healthy urban areas to accommodate most expected population within existing Urban Growth Boundaries (UGB) through infill and redevelopment.			✓	○	State, Local		Local governments control land uses; LCDC acknowledges
Strategy 15 - More Efficient Industrial Land Uses: Encourage and incentivize more efficient use of industrial land through closer proximity of shipper and receivers, consolidate distribution centers, and better access to low carbon freight modes.			✓	○	State, Local, Private	$	Lack of sustainable funding for infrastructure; Consider incentive funding; Local government controls land use; Private investment needed for consolidation centers
Strategy 16 – Funding Sources: Move to a more sustainable funding source that covers the revenue needed to maintain and operate the transportation system and accounts for the true cost of travel.	✓	✓	✓	●	Federal, State, Local	⚖	Changing user fee structure is a long term effort; Foundational work is underway

Strategies	Plan, Invest, and/or Build	Develop Statewide Policies	Partner with Other Leaders	ODOT Presumed Level of Effort	Other Leads	Challenges	Notes
	ODOT Role						
Strategy 17 - Pay-As-You-Drive Insurance: Promote Pay-As-You-Drive insurance programs that allow drivers to pay per-mile premiums, encouraging less driving through insurance savings.			✓	○	State, Private		Currently an option of some insurers; If Oregon decided to require insurance companies to provide this option, it would likely require legislative direction
Strategy 18 - Encourage a Continued Diversification of Oregon's Economy: Maintain economic prosperity through an increase in the value per ton ("value density") of goods produced in the state, which is projected to reduce shipping costs and GHG emissions from any given level of economic output.			✓	○	State, Private	$	Multimodal funding for infrastructure development may be needed

Economic Considerations:

Statewide Transportation Strategy (STS)
Short-Term Implementation Plan

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Economic Considerations of the STS

Overview

This paper evaluates how the programs identified in the *Statewide Transportation Strategy (STS) Short-Term Implementation Plan* may individually and cumulatively impact the state's economy. In addition to these individual evaluations, this paper outlines some potential economic benefits of the STS and describes some basic economic concepts that apply to understanding all of the potential economic impacts from STS implementation. Furthermore, it outlines how ODOT may conduct more rigorous economic impact analyses if or when specific STS programs with the potential for significant economic impacts are closer to implementation.

This paper does not consider the costs and benefits of reduced greenhouse gas (GHG) emissions on climate change, sea level rise, and other impacts from decreased GHG outputs as a result of implementing these STS programs. These are excluded for two reasons: first, the state of Oregon and the transportation sector cannot address a global issue like climate change without the support of other states, economic sectors, and nations. Second, the economic benefits from the slowing of climate change would accrue beyond the 20 to 30 year horizon applied to most economic impact analyses.

The exemption of climate change benefits does not diminish the potential for significant economic benefits produced for the state by the STS programs. These "co-benefits" (i.e., benefits in addition to the primary benefit of reducing GHG emissions) occur because the actions within each program may improve the efficiency of Oregon's households and productivity of its businesses. The following example of linked outcomes provides an example of how a specific STS action produces economic benefits independent of the long-term benefits of climate change abatement:

1. An action such as the expansion of ODOT's traffic incident management program will reduce congestion on the roadways where it is deployed;

2. Reduced congestion will in turn reduce commute time for workers;

3. Reduced commute time in turn increases the number of workers available to employers within a certain commute shed;

4. This larger pool of labor improves the likelihood that employers can match worker skills to jobs;

5. Better worker matching increases the productivity of businesses;

6. Higher productivity makes a business more competitive relative to its rivals outside the region and thus increases that business's market share;

7. A larger market share stimulates that business's hiring and output (i.e., direct effects);

8. Increased output leads this business to purchase more inputs, both raw materials and services, which increase employment and output for this business's suppliers (i.e., indirect effects); and,

9. This cumulative expansion increases workers wages, who spend these additional wages and stimulate additional economic activity (i.e., induced effects).

Conversely, there is also the potential for significant economic cost for the state and for individuals or businesses associated with ongoing implementation of the STS programs. Thus, the net impact of these co-benefits depends on their timing, the cost of an STS action, and how this cost is paid. The timing matters because a dollar of benefit that is realized ten years in the future is worth less than a dollar of cost incurred now. The cost matters because the cost of implementing a particular program or strategy may exceed the value of the benefit.

Finally, the source of funding matters because general taxes impose burdens across all households and businesses regardless of whether they receive any benefit from the strategy. User fees, on the other hand, may be designed and implemented to impose the cost directly on those who benefit. Using the above example of the STS action to expand ODOT's traffic incident management program (TIMP), if the TIMP is paid for with tolls on the roadway segment where the TIMP is deployed, the commuter who benefits pays directly for the TIMP. This direct link between the value of each STS action and the price charged to the beneficiaries creates a marketplace, where the STS actions that confer the most value on users can be most easily funded by "capturing" that value and charging the beneficiaries through user fees.

Determining the net economic benefits of the STS programs will ultimately require a quantitative economic impact analysis. A robust analysis of each program entails first calculating the direct impacts of each action in each program, which will require knowing much more about the specific locations where each action is deployed and its particular characteristics or technical specifications. These direct impacts, together with the costs of implementing and maintaining each action, and the sources of revenue for paying these costs, are then input into an economic model that determines how firms will change their production of goods and services and how households change their work and consumption. The aggregation of all these changes across Oregon's population provides a quantified estimate of the change in the state's economic performance compared to if the STS actions were not implemented.

The *STS Short-Term Implementation Plan* does not include the level of detail required for a quantitative economic impact analysis of the type described above. Nevertheless, the actions in each program provide sufficient information to conduct a qualitative assessment of how individual actions or a program as a whole will likely cause direct impacts to household and businesses, and how these in turn will cause economic impacts.

Discussion of Economic Concepts

Before delving into the potential economic impacts of the individual STS programs, this overview describes three simple economic concepts that may apply across all of the STS programs and explain how they may impact the state's economic performance.

Market failures and regulation: Mainstream economics embrace the concept that free markets produce more efficient outcomes and more economic growth than highly regulated markets. Nevertheless, most free markets suffer from imperfections which diminish their efficiency. The market for auto travel, for example, suffers significant lost efficiency because of congestion. Congestion occurs when individual drivers are not deterred from entering a freeway when it has reached its carrying capacity. The lack of sufficiently strong deterrents to those last few drivers that bring an almost saturated roadway to a state of gridlock would be what economists would call a "market failure." Ramp metering or peak period tolling are examples of regulations that can remedy this failure. The challenge for regulators, and the most common reason businesses contend that many regulations harm a market rather than help it, involve poorly designed regulations. These either do not remedy the real imperfections, are applied too weakly or aggressively, or both.

Market formation and barriers to entry: Another closely held belief of efficient markets is that the private sector will provide the appropriate type and amount of goods and services when there is sufficient demand. The flip side of this belief reasons that public investments intended to create a market are likely to merely use taxpayer money to create a market that is either not viable or, if viable, would have been created without public investment. Well-functioning economies, however, exhibit many examples of viable and important private sector industries that would not have been created without significant public investment. Air travel, for example, would not exist as we know it without heavy public investment in airports, air traffic control systems, safety oversight, security, etc. While private industry can now provide some of these public sector investments, the formation and dramatic growth of the air travel market depended heavily on these public sector investments in very large capital infrastructure projects.

Related but somewhat different is the effect that initial impediments or "barriers to entry" have on formation of markets that could be profitable to business and provide a valuable service or good to the consumer. One current example is the role of the public sector in creating a larger network of charging stations for electric vehicles (EV). The private sector has heretofore generally avoided making large investments in electric charging stations because they perceive too much uncertainty in the EV market and therefore too much risk to warrant the capital investment. Public sector investment (whether direct or in the form of an industry subsidy) is required to create an economic environment in which the various players will step forward and make the investment decisions that eventually lead to a functioning market that does not require ongoing subsidy. In this example, with publicly-funded expansion of the electric charging network, consumers have one fewer reason to avoid purchasing an EV (i.e., limited range because there are not enough places to recharge along the highway) so EV sales increase. Auto manufacturers see less risk in

producing a larger volume of EVs, and eventually there becomes enough EV ownership that sufficient demand for charging stations emerges to support a for-profit industry.

Short versus long term impacts: Among the concerns businesses and residents may hold about the potential adverse economic impacts of STS strategies, many may be best understood by separating these impacts into short-term versus long-term, and small versus large businesses. Many STS strategies would likely result in immediate or short-term changes in business practices or personal consumption that may be disruptive or expensive, and that may reduce the competitiveness of some in-state businesses. As businesses and households adapt to the STS programs, these short-term impacts will give way to long-term impacts that may often be smaller, larger, or work in the opposite direction. Small businesses are less able to weather short-term costs and disruptions than larger and multi-state firms. Understanding the differences and magnitudes of short versus long-term impacts provides policymakers with the opportunity to adjust the speed and scale of implementing STS actions such that these short-term adverse impacts may be mitigated for the most vulnerable households and businesses.

Evaluation of STS Short-Term Implementation Plan Programs

In the following evaluations of the STS programs[1], the general economic concepts presented above are applied to each program's likely economic impacts. These program summaries provide qualitative descriptions of the likely economic impacts, and include the following three parts:

- **Program Actions and Their Intended Economic Remedies:** This part provides a list of the program's specific actions and summarizes their attributes which have direct relevance to understanding their potential impacts to the State's economy.

- **Direct and Potential Costs:** Direct costs are defined here as the amount of funding needed to launch and sustain an action. The potential costs are monetary and non-monetary burdens that may cause economic harm to Oregon businesses or households.

- **Potential Economic Co-benefits:** Co-benefits are benefits in addition to the primary benefit of reducing GHG emissions.

Our summaries of each program's economic impact avoids speculating whether a "net present value" analysis would determine if the aggregate benefits over time will exceed the aggregate costs. Such quantitative findings require analytical rigor well beyond the scope of this overview. As already noted above, such analysis would also require more detailed specification of the STS actions and costs. Nevertheless, efforts were made to determine the timeframe for potential benefits and costs.

[1] For more information on these programs, please refer to the STS Short-Term Implementation Plan.

Program 1: Electric Vehicles and Low Emission Fuels

Program Actions and Their Intended Economic Remedies

Overall, this program's actions attempt to remedy *market formation and barriers to entry* and *short versus long term impacts*. Many state and metropolitan regions have determined that electric vehicles (EV) sales are impeded most significantly by the lack of an extensive network of electrical charging stations akin to the abundance of gas stations. Industry experts and academic analysis have identified the significant risks and large upfront investment costs of developing the recharging network as the major obstacle. Nevertheless, Oregon has roughly 500 charging stations at the present time and will add more. Other obstacles include the higher cost of EV (i.e., a barrier to entry to the consumer), uncertainty in the volatile price trends for gasoline, natural gas, and electricity (i.e., short versus long term impacts), and to a much lesser degree the lack of standards for recharging equipment and technology (an investment risk factor that impedes market formation.) The ten actions intended to address these challenges involve the following:

1. Develop communication materials that highlight the benefits of alternative fuel vehicles, including EV, and create maps and other resources that identify the state's existing EV charging network.

2. Expand communication efforts that promote EV tourism activities in Oregon.

3. Through the Transportation and Growth Management (TGM) Program, collaborate with the Oregon Department of Land Conservation and Development (DLCD) and explore ways to incorporate EV charging stations, natural gas, biogas, and other alternative fueling facilities, as primary and/or accessory land uses, in model code modules.

4. Explore funding opportunities for implementing a pilot program focused on wireless EV charging stations.

5. Partner with the members of the Energize Oregon Coalition and pursue funding for innovative projects, such as studying the feasibility of implementing smart grid initiatives, which allow for the two-way communication between providers and consumers of electricity.

6. Continue to participate in the West Coast Green Highway Initiative.

7. Administer $4,000,000 in federal Congestion Mitigation Air Quality funds, approved by the Oregon Transportation Commission in September 2013, to encourage the use of natural gas as a transportation fuel by supporting the installation of natural gas fueling stations.

8. Provide data, technical information, and assistance to the Oregon Department of Energy (ODOE) to study the feasibility of incentivizing the purchase of cleaner, more fuel-efficient vehicles, such as electric, CNG, propane, and hybrid vehicles.

9. Participate and provide expertise to the Oregon Department of Environmental Quality's (ODEQ) efforts to promote Clean Fuels as a member of the Interagency Low Carbon Fuel Committee.

10. Provide technical assistance to the Legislative Revenue Office in the preparation of reports on the feasibility of a statewide fee or tax on GHG emissions, required per SB 306 (2013).

Direct and Potential Costs

Assuming that funds will not need to be increased to cover the implementation and/or the maintenance and operation costs, the *economic* cost of launching and sustaining the three communication actions may be described as either: 1) the *opportunity* cost of not spending these funds on the next best alternatives or 2) the repeal of these funding sources and returning them to the taxpayers. A quantitative economic impact analysis would create two alternatives, a *next-best* scenario and a *no-project* scenario, and then compare the outcomes of all three to estimate the differences, with all other conditions held constant.

There are two potential economic costs expected of this program. The first involves the potential impact on transportation funding. Unless the State amends its fuel tax statutes or replaces them with a mileage-based fee, the substitution of gasoline with lower-taxed alternative fuels will accelerate the current decline in fuel tax revenue. The further loss of transportation funding will exacerbate the state-of-good-repair for Oregon's roadways and defund some economically positive investments. In addition, there is the potential that either the loss of transportation revenue or redirecting existing expenditures will reduce funding for other programs that assist low income households, thus having an adverse impact on equity. While equity impacts (i.e., the potential redistributive effects of an action) are not economic impacts *per se*, the possibility that STS actions might adversely impact some groups more than others, and particularly those groups protected by law, was a frequently-heard concern in the STS outreach efforts.

The second potential economic cost, i.e., foregone opportunity to repeal and rebate existing taxes, seems small and unlikely. The economic harm would be caused in the same way only in the reverse of the benefit described in the Overview with the example involving expansion of ODOT's traffic incident management program. In that example, the STS action reduces congestion.

While not an economic impact, another potential impact of any strategy that accelerates conversion to electric-powered vehicles is the prospect of further environmental impact (including GHG emissions) from generation of electricity from fossil fuels. This economic assessment, like the STS itself, assumes that the power generation industry will also be motivated or required to achieve significant reductions in GHG emission. Thus, the increase in future electricity demand for transportation will not result in an offsetting increase in GHG emissions from the power sector.

Potential Economic Co-Benefits

The most obvious positive economic impacts of this program will involve the benefits to Oregon's electric power generation industry. Benefits will also accrue to those industries that produce and distribute alternative fuels, but only to the degree that the alternative fuel industries are not the same ones that produce and distribute gasoline and diesel transportation fuels. The magnitude of this economic benefit depends on the amount of in-state industry activity that is linked to electric power and alternative fuels, compared to the petroleum production and distribution and the manufacturing and repair of gasoline versus electric and alternative-fueled vehicles. Given that Oregon's electric power industry produces surplus power but the state has no domestic oil or gas production, this program may stimulate significant economic benefits for the state. Finally, households that own an EV may have lower lifecycle vehicle costs depending on the costs of fossil fuel and the premium paid for electric and alternative fueled vehicles.

Program 2: Eco-Driving

Program Actions and Their Intended Economic Remedies

From an economic perspective, this program is intended to address specific inefficient driving habits that result in more fuel consumed than is necessary. This program seeks to change these habits with four actions which focus on education. ODOT is currently developing and distributing educational materials and collaborating on research with academic institutions to measure the effectiveness of current education. The STS includes the following four actions which will expand on the existing educational programs:

1. Launch deployment of ODOT eco-driving educational efforts, leveraging partnerships and funding where possible.

2. Explore developing an eco-driving certification program for transit operators, commercial fleets, and freight carriers.

3. Identify opportunities for strategic partnerships and for working with the private sector to promote technologies that support eco-driving, such as in-car displays regarding fuel efficiency.

Two of these three actions involve state government or local agencies appealing to the driver directly. Action 3 proposes to partner with private industry. The evidence supporting all of these actions indicates that the demand for additional education is insufficient to entice the private market to provide these expanded services.

Direct and Potential Costs

Only one potential economic cost of this program is expected. As would be the case for Program 1, Program 2's deliberate intent to reduce fuel consumption, unintentionally

reduces transportation funding. Unless these funds are replaced, the further loss of transportation funding will exacerbate underinvestment in maintenance and repair of the state's existing transportation infrastructure, and/or curtail cost-effective capital projects. These deficiencies retard economic growth by raising operating costs for motorists and/or allowing congestion to increase.

Unlike Program 1, which stimulates replacement of petroleum fuels with electric and alternative fuels, this program will simply reduce fuel consumption per mile, and possibly in total. In order to understand all sides of the potential economic impact from decreased petroleum fuel consumption, consideration needs to be given to the impacts on the state's petroleum businesses and workers. Each year, Oregonians spend more than $3 billion for petroleum products. Oregon has no primary oil refineries in the state, but the state's industry includes petroleum distributors in addition to businesses that are not impacted by less motor fuel consumption (e.g., lubricating oils, asphalt production, and asphalt roofing products). The state has over 140 businesses that distribute petroleum products throughout Oregon and about 1,800 fueling stations (in 2010) which employ more than 9,800 full- and part-time workers. If the STS eco-driving program is effective at reducing the amount of gasoline and diesel that households and trucking companies purchase, these jobs should be reduced proportionately, all other conditions held constant. As described below, however, new jobs should be created when household and business savings are reinvested into the state economy.

Potential Economic Co-Benefits

The potential economic benefits of this program are likely to be modest and involve both households and businesses. To the degree that significant numbers of household adopt aggressive eco-driving practices, these households will save on motor fuel expenditures and have additional disposable income. From an economic perspective, this substitution of fuel expenditures with other forms of household consumption has some likelihood of benefiting the state's economy. The amount of benefit depends on the local content (i.e., the amount of in-state value added) of the household's alternative consumption. If a family spends the money they save by eco-driving on Oregon-produced Pinot Noir, the state's economy grows. If they buy a tablet computer produced in China, then Oregon's economy does not benefit as much.

Trucking companies and transit operators that save fuel because their drivers are trained (and certified) will see their operating costs decrease. For private trucking, this cost savings will improve the competitiveness of these businesses and the truck-intensive businesses they serve, which in turn enables these businesses collectively to capture larger market share compared to their out-of-state rivals, and to increase their output, hiring, and wages. The cost savings for transit operators will reduce their operating costs, which provides opportunities to expand service, invest in new equipment, raise wages, reduce the current operating subsidy, or lower passenger fares. Any of these outcomes stimulate the state's economy.

Program 3: Road User Charge Economic Analysis

The action of this Program is to conduct a rigorous economic analysis of the benefits and costs of a road user charge or vehicle miles traveled fee. This analysis will consider implementation costs, as well as social costs such as air pollution and greenhouse gas emissions. Because the proposed action is itself an economic analysis, no further assessment is provided here.

Program 4: Strategic Assessments and Scenario Planning

Program Actions and Their Intended Economic Remedies

The Program will direct ODOT's Transportation Development Division to work with metropolitan planning organizations (MPOs) and associated jurisdictions on Strategic Assessments and scenario planning efforts, providing technical assistance and negotiating financial support. ODOT will collaborate with the Department of Land Conservation and Development (DLCD) to provide this technical and financial assistance to regional and local agencies and engage with stakeholders. This program, under the requirements of HB 2001, will improve the integration of land use and transportation planning processes to achieve statewide GHG emission targets and will support voluntary efforts that help to advance the STS vision.

Strategic Assessments are designed to assess the potential outcomes in a metropolitan area assuming current trends continue and adopted plans are implemented. These assessments, together with the technical and financial support provided by ODOT and DLCD, help the MPO identify potential actions (investments, programs, etc.) that best meet identified community goals; they represent the first step in a scenario planning process. The amount of support for individual assessments is generally low, but the uncertainty of Strategic Assessments that focus on STS outcomes, and the potential for stakeholder concerns, present potential complexities that could challenge MPOs in ways that require more than ODOT and DLCD can provide given current funding levels and staff resources.

Direct and Potential Costs and Benefits

The technical and financial support provided by Program 4 are very unlikely to cause significant economic benefits or costs. One purpose of the Strategic Assessments themselves is to determine potential regional impacts (i.e., benefits and costs) of actions that include GHG reduction efforts. The likely economic impacts from STS program implementation depends on each regional economy's unique industry mix, land use, fiscal health and other market and socioeconomic conditions. Although the integration of STS policies into Strategic Assessments and regional scenario planning efforts will likely produce economic costs and benefits, the specific net economic impacts on households and businesses for any given region cannot be identified in advance of the scenario planning activities themselves.

Program 5: Intelligent Transportation Systems (ITS)

Program Actions and Their Intended Economic Remedies

This program supports ODOT's numerous, ongoing ITS initiatives. ITS applies technology and software to improve roadway operations and management, which in turn reduces congestion and GHG emissions, and improves safety. Most if not all states and many metropolitan regions are increasing their deployment of ITS investments as a cost-effective alternative to major capital expansion of the roadway system. Nevertheless, there are valid arguments that the pace of ITS investment and the deployment of promising emerging technologies lags behind the economic case for more rapid and comprehensive strategies for reducing congestion and improving travel reliability, which are both directly linked to economic growth. The seven actions intended to address these challenges involve the following:

1. Plan for the expansion of variable speed projects across the state by identifying opportunities, assessing feasibility, and determining priorities.

2. Develop communication materials that educate drivers on the benefits of variable speed limits.

3. Plan for the expansion of adaptive signal control technologies by identifying opportunities, assessing feasibility, and determining priorities across the state.

4. Develop a TripCheck smart phone application to provide improved access to traveler information while traveling.

5. Work with the Governor's Office, Oregon Solutions, and Traffic Incident Management stakeholder groups to strengthen interagency coordination related to highway incident management.

6. Work with the Oregon State Police to expand the Oregon Interoperability Server use, which allows for the electronic exchange of data among the ODOT, Oregon State Police, and 911 dispatch systems.

7. Improve awareness of Oregon's "move it" law which requires drivers of vehicles involved in a crash to remove their vehicle from the travel lane if it is operable.

Direct and Potential Costs

As a general rule, ITS actions that improve the operational efficiency of an existing roadway or interchange/intersection are some of the most cost-effective investments for improving travel time reliability and reducing recurrent congestion, and often represent a more cost-effective approach to achieving more capacity than physical system expansion.

Potential Economic Co-Benefits

The potential economic benefits of this program could be substantial depending on how well the ITS actions reduce crashes and recurrent congestion, and improve travel time reliability. Of the three direct benefits, the improvement to travel time reliability (through reduction of non-recurrent delay) would likely generate the most substantial economic benefits because of the disparities in the value between different trip purposes. In terms of economic impact, "on-the-clock" travel has much more impact on industry productivity than the other trip purposes such as commute, shop, school, social, or tourism. The majority of on-the-clock travel involves goods movement, and the benefits of reliable travel time for this trip purpose have grown exponentially as just-in-time inventory (JIT) control has spread from manufacturing and warehousing to most major retail operations. Unexpected delays caused by accidents, road or interchange closures, and inclement weather can inflict major disruptions on business operations. Shippers frequently are forced to buffer their schedules with significant additional travel time to ensure on-time deliveries, resulting in lost efficiency. In addition, more reliable travel times allow local distributors to serve the same demand with fewer routes and trucks and their customers can manage their inventories more efficiently.

The potential for ITS actions to reduce daily congestion (i.e., recurrent delay) would provide substantial economic benefits to Oregon employers, especially those reliant on knowledge workers. Less congestion for commuters creates a larger pool for labor which employers can recruit from within a given commute shed (e.g., a maximum of 40 minutes). This larger and often more diverse access to labor increases the quality of employment-worker matches. As the pool of accessible labor grows, odds increase that firms will find a good fit for their specialized skill needs. Good matches lead to higher productivity because they are more efficient and productivity drives economic expansion.

Program 6: Transportation Planning and Project Selection

Program Actions and Their Intended Economic Remedies

This program's actions attempt to ensure implementation of numerous STS strategies over time by influencing the direction of statewide policy and guidance documents. The Program's proposed actions are:

1. Consider the STS and work to move in the direction of the STS vision in all relevant statewide plans, plan updates, guidance documents, and policy documents such as, but not limited to:

    - Statewide Bicycle and Pedestrian Plan Update

    - Statewide Transportation Options Plan, including the development of an internal Transportation Options Program that focuses on agency operations and staff opportunities

- Statewide Rail Plan Update
- Statewide Public Transportation Plan Update
- Transportation System Plan Guidelines
- Least cost planning / Mosaic

2. Amend the Oregon Transportation Plan (OTP) to consider the STS, which is required in order to fulfill the STS legislative requirements of SB 1059 (2010). The amendment is likely to be minor, focused on the introductory language of Goal 4: Sustainability.

3. Consider the STS vision in the development of the 2017-2020 Statewide Transportation Improvement Program (STIP) through collaboration with the STIP Stakeholder Committee.

There are no direct economic impacts – i.e., neither significant benefits nor costs – associated with the long range planning activities this program would implement. However, these policy plans and documents should incorporate the STS vision within the overall future vision of the Oregon transportation system. The plans influence transportation funding decisions, which lead the state incrementally towards achievement of that vision. This program will embed STS strategies into the plans, policy documents, and guidelines so that statewide planning activities support STS strategies in general and will influence resource allocation decisions, project prioritization, and development approvals. While the integration of STS policies into the State's transportation plans will likely produce economic costs and benefits over time, the specific economic impacts on households and businesses cannot be identified in advance of the planning activities themselves.

Direct and Potential Costs and Benefits

The specific activity of incorporating STS provisions into policy, planning and guidance documents generates only small increments to the already-programmed costs of the various plan updates, and thus will not generate a meaningful economic cost. The potential downstream costs and benefits of actual plan implementation could be significant, but are impossible to determine quantitatively or even qualitatively until specific actions are selected for implementation within system plans or planning guidelines.

The potential for significant future economic costs depends on the aggressiveness with which ODOT, local jurisdictions, and other partners approach implementation. Typically, state and local plans and policies lay out guiding principles that result in criteria for prioritizing the expenditure of public funds. Local jurisdiction's transportation system plans can encourage specific patterns of development through project selection. The net impacts will likely depend on how well applications of Program 6 strategies remedy a market failure or help create new markets. For example:

- STS Strategy 8 targets improvements in intercity transit. Suppose the integration of the STS vision and goals into the Statewide Rail Plan and the Statewide Public Transportation Plan Updates leads to new intercity rail and transit service. The amount of benefit depends on how well this new or improved intercity mode provides a more effective option compared to the modes previously used by its new passengers, as well as how many new riders the service attracts. Additional benefits include the business generated for suppliers of transit vehicles, or commercial and retail service establishments that might locate around intermodal transit hubs served by the intercity modes. Potential costs include the loss of business to industries currently serving the intercity travel demand that has been diverted to this new mode. Passenger air travel in short-haul markets, for example, might be impacted by a diversion to intercity express bus or rail. Highway-oriented businesses such as restaurants, auto services, and lodgings might see a change in demand if any significant volume of long-distance auto travel was diverted to bus or rail. The net economic impact would be the value of the benefits minus the costs.

- Strategy 13 involves compact, mixed-use development. The integration of the STS vision provides more impetus and momentum for this strategy if the STS principles are articulated in both state and local bicycle and pedestrian plans and public transportation plans. To the extent that state policy favors higher-density residential and employment development, in conjunction with a complete streets approach to transportation infrastructure, there could be both economic benefits and costs to multiple parties. Short-term congestion costs might increase for those who continue to use private autos in dense locations, while accessibility benefits would increase for those who are able to take advantage of faster (in some cases) and lower cost modes such as cycling and transit. Over the longer term, the higher density of housing and its closer proximity to jobs (compared to a more sprawling residential land use pattern) will promote what economists call the economies of agglomeration. This effect involves placing a larger and potentially more diverse pool of labor nearer employers. These employers, all other conditions held constant, will enjoy higher productivity than their competition because they are more likely to find employees with the right skills (i.e., employee matching effects). Additionally, local jurisdictions could find that their cost per capita of building public infrastructure and delivering municipal services declines over the long-term as a result of higher density and closer proximity.

- Strategy 15 supports more efficient industrial land uses. Local transportation system plans and land use plans aligned with the STS recommendations might result in the creation of freight consolidation centers or eco-industrial parks, where shippers and producers enjoy close proximity to consumers, economies of agglomeration, and related benefits (STS elements 15.1 and 15.2.) Creation of more efficient freight distribution networks and corridors serving these centers (element 15.3) could prioritize freight movement over personal transportation in certain locations. These strategies could produce economic benefits such as faster and/or more reliable delivery times for shippers, but also higher congestion costs or reduced accessibility to operators of passenger vehicles. Determining the net economic impacts (i.e., benefits minus costs) requires quantitative analysis of specific investments and regulations that might be necessary to bring about the change in investment and system utilization.

These examples show how Program #6, by promoting the integration of the STS vision and goals into the State's planning activities, could accelerate or catalyze economic benefits and costs. To the extent the STS strategies help to achieve core OTP goals, such as improved accessibility, mobility, and operational efficiency, then Program #6 should ultimately contribute to reduced transportation costs (per capita or per unit of economic output) and overall improvement in the State's economic position.

Program 7: Stakeholder Coordination

This program directs ODOT to monitor and provide information about initiatives that align with the STS, and to pursue external and internal coordination to ensure efficiencies, remove redundancies, and identify leveraging opportunities where appropriate. Neither the proposed actions of this program nor the intended outcome of those actions (i.e., improved efficiency and leverage of time and money invested) are expected to generate economic costs or benefits.

Conclusion

Over the course of developing the STS and the *STS Short-Term Implementation Plan* some stakeholders expressed concerns regarding the potential economic impacts of implementing the STS vision. This paper aims to address some of those concerns. Furthermore, as ODOT moves forward with STS implementation, including the implementation of short-term actions and the development of future implementation plans, ODOT it is committed to a transparent process and ongoing stakeholder engagement, and will consider opportunities for more in-depth economic analysis.

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Metro | *Memo*

DATE: February 6, 2014

TO: MPAC, JPACT and Interested Parties

FROM: Kim Ellis, Principal Transportation Planner

SUBJECT: Climate Smart Communities Scenarios Project – Process for Shaping and Adoption of the Preferred Approach in 2014 – APPROVAL REQUESTED

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PURPOSE

This memo describes the eight-step process recommended for shaping and adoption of the preferred approach in 2014. The Transportation Policy Alternatives Committee (TPAC) and the Metro Technical Advisory Committee (MTAC) recommended JPACT and MPAC approval of the process on January 31 and February 5, respectively.

ACTION REQUESTED

MPAC and JPACT approval of the 8-step process for shaping and adoption of the preferred approach in 2014. Approval of the process means the policy committees are in agreement on how the project moves forward to shape and adopt the preferred approach in 2014.

With MPAC and JPACT approval, the project will move forward and Steps 3 and 4 will become the focus of upcoming engagement activities and policy discussions to develop a draft preferred approach by May 2014. The schedule of regional advisory committee discussions is provided in Attachment 1.

The Spring 2014 discussions will culminate in Step 5 when MPAC and JPACT will be requested to recommend a draft preferred approach to the Metro Council, pending final evaluation and public review. The Metro Council will then consider MPAC and JPACT's recommendation in June. Steps 6 through 8 will be completed between June and December 2014, and lead to final recommendations from MPAC and JPACT to the Metro Council on the preferred approach.

BACKGROUND

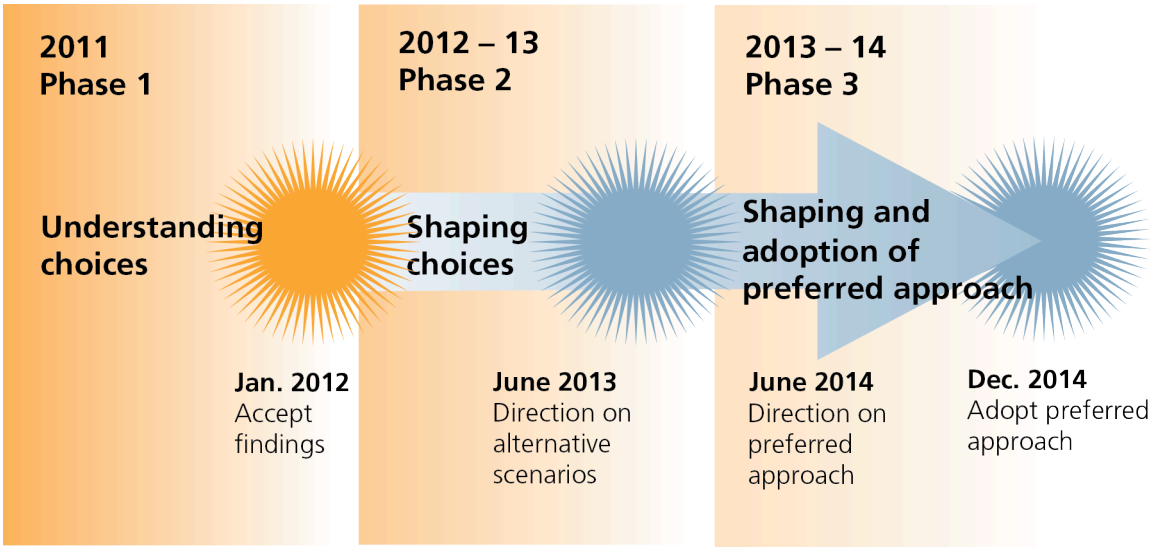
The Climate Smart Communities Scenarios Project was initiated in response to a mandate from the 2009 Oregon Legislature to reduce per capita greenhouse gas emissions from cars and small trucks by 20 percent below 2005 levels by 2035.

The goal of the Climate Smart Communities Scenarios Project is to engage community, business, public health and elected leaders in a discussion with their communities to shape a preferred approach that meets the state mandate and supports local and regional plans for downtowns, main streets and employment areas. To realize that goal, the Council directed staff to evaluate three illustrative approaches – or scenarios – over the summer of 2013 to better understand how best to

support community visions and a vibrant economy while reducing greenhouse gas emissions. Adopted local and regional land use and transportation plans served as the foundation for each scenario. The results will be used to frame the regional discussion about which investments and actions should be included in a preferred approach for the Metro Council to consider for adoption in December 2014.

Figure 1 shows the project timeline.

Figure 1. Climate Smart Communities Project Timeline



The project remains on track to meet its legislative and administrative mandates. In November, the committees discussed early results related to greenhouse gas emissions, housing, jobs, travel and air quality. In December, staff presented results related to economic and social equity outcomes. In January, the committees reviewed public health and additional cost-related results and the proposed process for developing the preferred approach in 2014.

CHANGES SINCE MPAC AND JPACT LAST CONSIDERED THIS ITEM

- On January 31 and February 5, the **Transportation Policy Alternatives Committee (TPAC)** and the **Metro Technical Advisory Committee (MTAC)** reviewed and recommended refinements to the process for developing the preferred approach in 2014. Both committees recommended MPAC and JPACT approval of the process. The refinements have been incorporated into this memo and attachments. **Attachment 2** illustrates the recommended process. This memo provides more information about each step of the process.
- The **Oregon Health Authority completed a technical review of a health impact assessment** of the three scenarios and prepared additional findings and recommendations for the region to consider as the Climate Smart Communities Scenarios Project moves forward. OHA staff will brief regional advisory committees in March and April.

- The **Oregon Department of Transportation staff updated the Statewide Transportation Strategy Short-Term Implementation Plan[1] and are scheduled to provide briefings to the regional advisory committees in March and April.** Accepted by the Oregon Transportation Commission in March 2013, the Statewide Transportation Strategy (STS)[2] Vision identifies 18 strategies for Oregon to pursue to reduce greenhouse gas emissions from transportation. The Short-Term Implementation Plan identifies priority actions ODOT will pursue in the next 2 to 5 years to move the STS vision forward. By design, the actions identified represent "low-hanging fruit:" strategies with a relatively high degree of political acceptance, actions that maximize existing work, or actions that can be pursued at a relatively low level of effort with moderate returns. The OTC is scheduled to discuss the implementation plan at its February 20 meeting.

- **Regional transportation planning staff initiated an analysis of the investment priorities submitted by ODOT, TriMet, the South Metro Area Rapid Transit (SMART) district, the Port of Portland and local governments for inclusion in the 2014 Regional Transportation Plan (RTP).** The investment priorities submitted by project sponsors reflect two levels of funding: a fiscally constrained level of investment and a more aspirational level of investment. A system performance analysis and draft 2014 RTP will be released for public review from March 21 to May 5, 2014. A preview of the analysis results and public review materials will be available in March.

- **The Oregon Department of Transportation and Land Conservation and Development Commission** submitted a progress report to the Oregon House and Senate interim committees related to transportation on progress toward implementing the land use and transportation scenario planning described in section 37 of House Bill 2001.[3] The 2014 report is the third of a series of three legislatively required reports in HB 2001. The report includes:

    - The rules adopted by the Land Conservation and Development Commission to guide Metro as it develops and selects a preferred land use and transportation scenario to meet their greenhouse gas emissions reduction target;

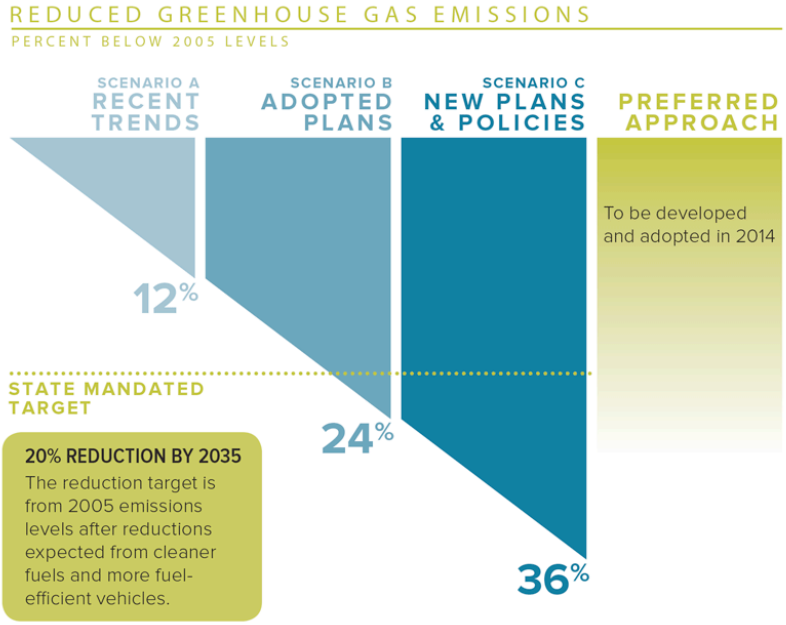
    - A description of Metro's completed planning and work remaining to be completed; and

    - ODOT and LCDC's recommendation on how the scenario planning requirements in HB 2001 should be extended to the Eugene-Springfield and Salem-Keizer metropolitan planning organization areas or to cities that have significant levels of commute trips to destinations within metropolitan areas.

[1] http://www.oregon.gov/ODOT/TD/OSTI/Pages/sts_implementation.aspx
[2] http://www.oregon.gov/ODOT/TD/OSTI/Pages/STS.aspx and http://www.oregon.gov/ODOT/TD/OSTI/docs/STS/AttachC_SummarySheets.pdf
[3] http://www.oregon.gov/ODOT/TD/OSTI/docs/Reports/LegRpt2014.pdf

8-STEP PROCESS FOR MOVING FORWARD IN 2014

The Portland metropolitan region is growing and changing. By 2035, the region's population is expected to grow to nearly 1.9 million people and 1.1 million jobs. This growth will bring more diversity, more travel, more economic activity and more infrastructure to maintain. Nearly two decades ago, the region agreed on a course for how to manage growth with the adoption of the 2040 Growth Concept – a blueprint for how the region grows over the next 50 years. For the last 20 years, the region has focused development and investment where it makes sense – in downtowns, main streets and employment areas.



The results of the Phase 2 scenario alternatives analysis demonstrate that implementation of the 2040 Growth Concept and locally adopted zoning, land use and transportation plans and policies make the state-mandated greenhouse gas emissions reduction target achievable – if we make the investments and take the actions needed to implement those plans.

The analysis also demonstrated there are potentially significant long-term benefits that can be realized by implementing adopted plans and new policies and plans, including cleaner air, improved public health and safety, reduced congestion and delay and travel cost savings that come from driving shorter distances and more fuel efficient vehicles.

MTAC AND TPAC RECOMMENDATION

Moving forward in 2014, an eight-step process for building consensus on what strategies are included in the region's draft preferred approach by December 2014 is recommended **(see Attachment 2)**.

STEP 1 - CONFIRM COMMITMENT TO IMPLEMENT ADOPTED PLANS: The Council, MPAC and JPACT confirm their commitment to implement locally adopted zoning, comprehensive plans, capital improvement programs and draft 2014 RTP investment priorities from local transportation system plans, ODOT, TriMet, SMART and the Port of Portland and recommend these investments and actions be carried forward for inclusion in the draft preferred approach. An analysis of the draft 2014 RTP investment priorities is being conducted using the regional travel demand model and other tools.

In May, MPAC and JPACT will be asked to recommend which level of RTP investment should be included in the draft preferred approach as part of Step 5, after consideration of the results of the

2014 RTP analysis, 2014 RTP comment period and further discussion of the policy areas identified in Steps 3 and 4.

Additional background information on Step 1: This step confirms the region's commitment to carry out local and regional investments & actions from adopted plans (e.g., locally adopted zoning, comprehensive plans, capital improvement programs and 2014 RTP investment priorities – once adopted by the Metro Council in July 2014) as part of the region's draft preferred approach. Project work to date has found that most of the investments and actions under consideration are already being implemented to varying degrees to realize community visions and other important economic, social and environmental goals. Many of these strategies are primarily local government responsibilities. These include implementing local transportation system plans, comprehensive plans and zoning; locating new schools, services and shopping close to where people live; managing parking; completing local and arterial street connections with sidewalks and bicycle facilities; and expanding access to electric vehicle infrastructure and car-sharing programs

The draft 2014 RTP investment priorities were identified locally and submitted by project sponsors to Metro in December 2013 for inclusion in the 2014 RTP. The submitted project lists reflect two levels of funding: (1) a fiscally constrained level of investment (RTP Federal), and (2) a more aspirational level of investment (RTP State). The fiscally constrained level of investment is used for the basis of demonstrating compliance with federal planning requirements, including the Clean Air Act. The more aspirational level of investment is used for the basis for demonstrating regional compliance with statewide planning goals, including Goal 12 (Transportation).

An evaluation of the draft 2014 RTP investment priorities is under way. Results of the analysis will be reported in mid-March, prior to the 2014 RTP update comment period that is scheduled from March 21 to May 5, 2014. Final adoption of the 2014 RTP is anticipated in July 2014 to meet federal planning requirements. The analysis will help inform MPAC and JPACT's recommendation on what level of RTP investment should be recommended for inclusion in the draft preferred approach.

Under state law, Metro has primary responsibility for managing the region's urban growth boundary and coordinating development of a regional population, housing and employment growth forecast to inform regional growth management decisions every five years. In November 2012, the Metro Council adopted a population and employment growth forecast for the year 2035. The growth forecast predicts localized distribution of jobs and housing for the metropolitan area and is based on policy and investment decisions and assumptions that local officials and the Metro Council agreed upon in 2012, including locally-adopted comprehensive plans and zoning, the local and regional investment priorities assumed in 2010 Regional Transportation Plan, and designation of urban and rural reserves. Prior to adoption, the regional population and employment growth forecast was developed with extensive review by local governments and includes estimates of expected housing and job growth by jurisdiction and land use type. Metro will submit these estimates to LCDC as part of documenting the planning assumptions upon which the preferred approach relies, as required by state administrative rules.

Updates to these planning assumptions are being made in consultation and collaboration with local governments as part of the growth management cycle that is also under way. The current growth management cycle provides an opportunity for local governments to update land use assumptions

to better reflect land use plans and visions adopted since 2010, including the Southwest Corridor land use vision. An updated Urban Growth Report will be finalized by the end of 2014, after which a new regional population and employment growth forecast will be developed for the year 2040. Future growth management decisions and updates to the Regional Transportation Plan will be evaluated for transportation-related greenhouse gas emissions as part of the periodic monitoring mandated by state administrative rules.

For purposes of evaluating the draft preferred approach in Step 6, staff recommends using a combination of the adopted 2035 growth forecast (which assumes locally adopted plans as of 2010 and an estimated 12,000 acres of urban growth boundary expansion), and the adopted 2014 Regional Transportation Plan, pending Council approval in July 2014. Other investments and actions may be identified in Steps 3 and 4.

STEP 2 - ASSUME STATE ACTIONS: The Council, MPAC and JPACT recommend investments and actions related to pay-as-you-drive insurance, clean fuels and more fuel-efficient vehicles and engines be carried forward for inclusion in the draft preferred approach. **Staff will confirm those assumptions with state agencies, and document them for consideration by MPAC and JPACT as part of Step 5.**

Additional background information on Step 2: Specific vehicle technology and fuel assumptions were specified by the Land Conservation and Development Commission when setting the region's per capita GHG emissions reduction target in 2011. The assumptions were developed based on the best available information and current estimates about improvements in vehicle technologies and fuels, and assumed in each of the three scenarios tested during the summer of 2013.

In addition, these investments and actions are primarily state and federal responsibilities, and significant work is already under way to implement them as outlined in the Governor's 10-year Energy Action Plan[4], the Oregon Global Warming Commission 2020 Road Map[5], the Statewide Transportation Strategy (STS) and STS Short-Term Implementation Plan. The Legislature will also consider Senate Bill 1570 to reduce the carbon intensity of Oregon's transportation fuels by 10 percent over the next 10 years in the 2014 session.

OAR 660-044-0040 directs Metro to identify the assumptions used for state-wide actions, such as pay-as-you-drive insurance and vehicle technology, fleet and fuels as part of documenting the planning assumptions upon which the preferred approach relies. This step reflects what is required by state administrative rules for these assumptions.

[4] http://www.oregon.gov/energy/pages/ten_year/ten_year_energy_plan.aspx
[5] http://www.keeporegoncool.org/sites/default/files/Integrated_OGWC_Interim_Roadmap_to_2020_Oct29_11-19Additions.pdf

STEP 3 - DISCUSS OPTIONS FOR THREE POLICY AREAS: From February to May 2014, the Council facilitates a regional discussion to identify how much transit service, transportation system efficiency strategies, and parking management should be included in the region's draft preferred approach to complement local, regional and state actions from Step 1 and Step 2.

Policy options will be developed for this discussion that reflect the range of what was tested in Scenario A (Recent Trends), Scenario B (Adopted Plans) and Scenario C (New Plans and Policies) for each policy area. **In May, MPAC and JPACT will be asked to make recommendations to the Metro Council on what policy option (for each policy area) should be carried forward to the draft preferred approach as part of Step 5.**

Additional background information on Step 3: This step recognizes the region's commitment to implement adopted plans and the need to work together to secure funding to implement them. The three policy areas represent opportunities for the region and communities to meet broader public health, social equity, economic and environmental goals.

The recommended policy areas are:

a. **Improve transit** to make it more convenient, frequent, accessible and affordable.

b. **Provide information and use technology and "smarter" roads** to manage traffic flow, boost system efficiency, and expand use of low carbon travel options and fuel-efficient driving techniques.

c. **Manage parking** with a market-responsive approach.

The policy discussions and engagement activities will aim to build understanding of the investments and actions needed to implement these policies and develop a recommendation on whether additional investments and actions (beyond what is in adopted plans) should be included in the draft preferred approach.

The first policy area, **improving transit**, has been identified during MPAC and JPACT discussions as being a key strategy for meeting the state-mandated target as well as other community and regional goals. Improving transit service is primarily the responsibility of TriMet and SMART; however, the state, Metro and local governments play important supporting roles. The analysis to date shows this policy provides a relatively high greenhouse gas emissions reduction benefit for a relatively moderate to high cost. TriMet is working with local governments and communities to develop community-based Service Enhancement Plans for each part of the region that go beyond what is in adopted plans. While this work will not be completed by the end of 2014, it provides an important opportunity for supporting adopted plans and meeting broader social equity, economic and environmental goals. More discussion is recommended to determine how much transit should be included in the draft preferred approach and how community-based transit solutions can help support more localized travel needs.

The second policy area relates to **providing information and incentives to make it easier for people to drive less by choice and improving the efficiency of the transportation system through technology and "smarter" roads**. This policy area has been identified as "low hanging"

fruit that provides a moderate greenhouse emissions reduction benefit for a relatively low cost, and addresses other important economic, social and environmental goals. This policy area is a region-wide responsibility that involves the collaboration of Metro, ODOT, local governments, transit providers and emergency responders. The region has successfully implemented these policies and programs, but could accomplish more with expanded resources and coordination. MPAC and JPACT members have called for the need to consider "low hanging" fruit in the draft preferred approach, considering GHG emissions reduction potential, cost, ease of implementation and political acceptance. More discussion is recommended to identify the actions and level of investment that should be included in the draft preferred approach.

The third policy area relates to **using market-based approaches to manage parking in commercial districts, downtowns, main streets and areas that are well-served by transit**. Parking is frequently a controversial issue in communities. Many business owners and operators feel their success relies on an ample and easily accessible supply of parking, as do the customers that want convenient access to the business. The same can be true for access to work and home for employees and residents. This policy area has been identified as providing a relatively moderate to high greenhouse gas emissions reduction benefit for a relatively low cost. This policy area is primarily a local responsibility, and is recommended for further discussion to determine whether other actions in this policy area (beyond adopted plans) should be included in the draft preferred approach.

STEP 4 - DISCUSS POTENTIAL FUNDING MECHANISMS: From February to May 2014, the Council facilitates a regional discussion to identify potential funding mechanisms to implement adopted plans and other key investments and actions recommended for inclusion in the preferred approach.

Policy options will be developed for discussion that reflect the range of what was tested in Scenario A (Recent Trends), Scenario B (Adopted Plans) and Scenario C (New Plans and Policies) for potential funding mechanisms. The policy options will identify a general estimate of the amount of funding needed to implement adopted plans and the range of potential funding mechanisms available for implementing adopted plans and other investments and actions (from Step 3) recommended for inclusion in the preferred approach.

In May, MPAC and JPACT will be asked to make recommendations to the Metro Council on the potential funding mechanisms that should be carried forward to the draft preferred approach as part of Step 5.

Additional background information on Step 4: This step recognizes the region's commitment to implement adopted plans (which already rely on increased revenue) and the need to work together to secure funding to implement them. More discussion is recommended to determine what potential funding mechanisms should be considered to help pay for the investments and actions recommended in the preferred approach the Metro Council considers for adoption in December 2014, and recommendations for continuing these finance discussions beyond the Climate Smart Communities Scenarios Project. This recommendation reflects what is required by state administrative rules, and may result in recommendations for a state and federal transportation legislative package for 2015.

Several transportation finance-related discussions are under way at the federal, state, regional and local levels about how to adequately maintain and improve transportation infrastructure, reflecting the need for new funding. Given the complex nature of transportation finance in combination with the number of discussions under way and the project timeline, staff are not able to conduct the an in-depth quantitative analysis or level of community engagement needed to inform policymakers about the regional economic and social equity implications of different mechanisms, such as a mileage-based road user fee and a carbon tax.

At the federal level, discussions have been under way about how to comprehensively address underinvestment in transportation infrastructure, the insolvency of the Highway Trust Fund and the lack of dedicated revenues for transit and active transportation investments. Legislation has been introduced to increase the federal gas tax, for example, as a step toward transitioning to other funding mechanisms such as a road user fee or carbon tax.

Since 2001, ODOT has studied the feasibility of road user fees and is currently implementing a statewide mileage-based road user fee program that allows up to 5,000 Oregon drivers to voluntarily pay 1.5 cents per mile in exchange for a gas tax reimbursement. The program will begin July 1, 2015. The STS Short-Term Implementation Plan calls for ODOT to prepare an economic impact analysis in the next biennium; this analysis is an important next step to further advance consideration of this funding mechanism in Oregon.

In addition, state-level technical analysis and policy discussions are under way related to a carbon fee. A Portland State University study released in March 2013 found that a carbon tax could deliver billions to the state's budget.[6] Subsequently, Senate Bill 306 directed the Oregon Legislative Revenue Officer to conduct an analysis of the feasibility of a statewide carbon fee and the potential impacts on key industries, traded-sector businesses, low-income households and local governments. A final report is mandated by November 15, 2014, and will likely inform further consideration of a fee or tax on greenhouse gas emissions in Oregon.

Locally, some cities and counties in the Portland metropolitan area are working to build community support for long-term solutions to fund existing and future transportation needs. For example, Washington County is considering a county-wide vehicle registration fee to complement the existing gas tax. [7]

Any effort to expand existing mechanisms or establish new transportation-related fees or taxes will be a long-term effort that may require support from the federal government and the Oregon Legislature and the participation of a broad range of stakeholders.

[6] http://www.pdx.edu/nerc/sites/www.pdx.edu.nerc/files/carbontax2013.pdf
[7] http://www.co.washington.or.us/LUT/TransportationFunding/vehicle-registration-fee.cfm

STEP 5 - RECOMMEND DRAFT PREFERRED APPROACH, PENDING FINAL EVALUATION AND PUBLIC REVIEW: In May, MPAC and JPACT will be requested to make a recommendation on which investments and actions should be included in the region's draft preferred approach for Steps 1 through 4.

In June 2014, the Metro Council will be asked to recommend approval of the draft preferred approach, pending final evaluation and public review. Outreach to local government officials will occur in the summer in advance of the final adoption process to be held in the fall. The draft approach will be evaluated in Summer 2014 and then released for final public review in September 2014.

STEP 6 – COMPLETE FINAL EVALUATION AND PREPARE PUBLIC COMMENT MATERIALS AND ADOPTION LEGISLATION: From June to September, staff will evaluate the draft preferred approach and prepare public comment materials, including the draft Regional Framework Plan amendments, adoption legislation and near-term implementation recommendations in consultation the Metro's regional advisory committees. This step will also define recommendations for monitoring progress in implementing the region's preferred approach as required by OAR 660-044-0060.

Additional background information on Step 6: The final action to select a preferred scenario is required to be in the form of an amendment to the Regional Framework Plan. The action is also anticipated to make recommendations to state agencies and commissions, the 2015 Legislature, and the 2018 Regional Transportation Plan (RTP) update. Concurrent with the comment period, the Fall advisory committee meetings will focus on reviewing results of staff's technical evaluation of the draft preferred approach and discussing proposed Regional Framework Plan amendments, a draft near-term implementation plan and potential refinements based on public comments received.

STEP 7 – CONVENE PUBLIC COMMENT PERIOD: From September to December 2014, the project will move into the final adoption stage. OAR 660-044 directs the Metro Council to select a preferred approach by December 31, 2014 after public review and consultation with local governments, the Port of Portland, TriMet and the Oregon Department of Transportation. A formal 45-day public comment period is planned from September 5 to October 20. On-line comment opportunities and public hearings are planned during this period.

STEP 8 -RECOMMEND PREFERRED APPROACH: Final recommendations from the regional policy advisory committees will be requested in November to allow sufficient legislative process time between MPAC and JPACT actions and the final Council action. **The Metro Council is scheduled to consider adoption of a preferred approach on December 11, 2014.**

Additional discussion on Step 8: In early 2015, Metro will submit the preferred approach to the Land Conservation and Development Commission in the manner of periodic review. According to OAR 660-044-0045, following Metro's plan amendment and LCDC review and order, Metro is

required to adopt functional plan amendments, if needed, to require cities and counties to update local plans as necessary to implement the preferred approach. A determination will be made on whether functional plan amendments are needed in 2015, concurrent with LCDC's review. Metro is required to adopt functional plan amendments, if needed, within one year of the LCDC's order approving the Metro Council's amendments to the Regional Framework Plan. No timeline is specified for LCDC to review Metro's plan amendment.

PUBLIC PARTICIPATION OPPORTUNITIES TO INFORM REMAINING COUNCIL MILESTONES

With MPAC and JPACT approval of the process for shaping and adoption of the preferred approach, the project will move forward and Steps 3 and 4 will become the focus of upcoming engagement activities and policy discussions to develop a draft preferred approach by May 2014. The Spring 2014 discussions will culminate in Step 5 when MPAC and JPACT will be requested to recommend a draft preferred approach to the Metro Council, pending final evaluation and public review. Steps 6 through 8 will be completed between June and December 2014, and lead to final recommendations from MPAC and JPACT to the Metro Council on the preferred approach.

Figure 2 provides a summary of Phase 3 engagement activities and Council milestones for reference.

FIGURE 2. PHASE 3 PROJECT MILESTONES AND PUBLIC PARTICIPATION OPPORTUNITIES

From January to May 2014, Metro will facilitate a Community Choices discussion to explore policy choices and trade-offs. The January through March policy committee meetings are proposed to focus on providing additional background information in advance of two joint Metro Council/MPAC/JPACT meetings proposed for April and May. During this period, community and business leaders, local governments and the public will also be asked to weigh in on which investments and actions should be included in the region's preferred approach, with a focus on the regional policy areas proposed for discussion and input. On-line comment opportunities, interviews, discussion groups, and public opinion research will be used to gather input. T

o the extent possible, these engagement activities will be coordinated with the 2014 RTP update comment period. A public engagement summary report and recommendations for the draft

preferred approach will be provided to Metro's technical and policy advisory committees prior to the second joint MPAC/JPACT meeting.

The April and May joint MPAC/JPACT meetings will use interactive, facilitated discussions to build consensus on what investments and actions should be included in the draft preferred approach for Steps 1-4, described previously. The May joint meeting is proposed to conclude with a formal recommendation to the Metro Council from each committee recommending preliminary approval of the draft preferred approach, subject to final analysis and public comment. The Metro Council will then consider MPAC and JPACT's recommendation in June. The action is anticipated to direct staff to move forward with Steps 6-8 of the process, which includes evaluating the agreed-upon draft preferred approach, reporting back on the results of the evaluation in September and preparing Regional Framework Plan amendments and near-term implementation plan for public review during the fall public comment period.

/Attachments

- Attachment 1. 2014 Regional Advisory Committee Meetings *(Feb. 6, 2014)*
- Attachment 2. Climate Smart Communities Scenarios Project: Process for Shaping the Preferred Approach in 2014 *(Feb. 6, 2014)*

February 6, 2014

2014 Regional Advisory Committee Meetings

This schedule identifies discussions and decision points for shaping and adoption of the Climate Smart Communities preferred approach.

TECHNICAL ADVISORY COMMITTEES

Transportation Policy Alternatives Committee (TPAC) | 9:30-noon | Council chamber

- **Jan. 3** – discuss results and proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014
- **Jan. 31** – make recommendation to JPACT on proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014
- **Feb. 28** – provide update on implementation of Oregon Statewide Transportation Strategy Vision and preview draft policy options for consideration by MPAC and JPACT
- **March 28** - discuss findings and recommendations from Health Impact Assessment conducted by Oregon Health Authority; discuss policy options for consideration by MPAC and JPACT
- **April 25** - review public engagement report and emerging ideas for draft preferred approach; make recommendations to JPACT on draft preferred approach
- **June 27** – discuss proposed RFP amendments and near-term implementation recommendations
- **July 25** – discuss proposed RFP amendments and near-term implementation recommendations
- **Aug. 29** – discuss evaluation results and public review draft preferred approach
- **Sept. 26** – discuss public comments & begin discussion of recommendation to JPACT
- **Oct. 31** – make recommendation to JPACT on adoption of the preferred approach

Metro Technical Advisory Committee (MTAC) | 10-noon | Council chamber

- **Jan. 15** – discuss results and proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014
- **Feb. 5** – make recommendation to MPAC on proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014
- **Feb. 19** – provide update on implementation of Oregon Statewide Transportation Strategy Vision
- **March 19** - preview draft policy options for consideration by MPAC and JPACT and discuss findings and recommendations from Health Impact Assessment conducted by Oregon Health Authority
- **April 2** - discuss policy options for consideration by MPAC and JPACT
- **May 7** - review public engagement report and emerging ideas for draft preferred approach; make recommendations to MPAC on draft preferred approach
- **July 16** – discuss proposed RFP amendments and near-term implementation recommendations
- **Aug. 6** – discuss proposed RFP amendments and near-term implementation recommendations
- **Sept. 3** – discuss evaluation results and public review draft preferred approach
- **Oct. 15** – discuss public comments & begin discussion of recommendation to MPAC
- **Nov. 5** – make recommendation to MPAC on adoption of the preferred approach

JOINT MTAC AND TPAC WORKSHOP | 2-4 p.m. | Council chamber

- **March 17** – discuss 2014 RTP system analysis

February 6, 2014

POLICY ADVISORY COMMITTEES

Joint Policy Advisory Committee on Transportation (JPACT) | 7:30-9 a.m. | Council chamber

- **Jan. 8** – discuss results and proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014
- **Feb. 13** – make recommendation to the Metro Council on the proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014; review recent opinion research; and update on implementation of Oregon Statewide Transportation Strategy Vision
- **March 13** – update on framing policy options and provide update on joint MPAC/JPACT meetings and engagement activities
- **April 4 or 11** – joint meeting with MPAC to discussion policy options
- **April 10** - discuss findings and recommendations from Health Impact Assessment conducted by Oregon Health Authority
- **May 8** - review public engagement report and emerging ideas for draft preferred approach
- **May 23 or 30** – joint meeting with MPAC to make recommendation to Metro Council on draft preferred approach, subject to final evaluation and public review
- **Aug. 14** – discuss proposed RFP amendments and near-term implementation recommendations
- **Sept. 11** – discuss evaluation results and public review draft preferred approach
- **Oct. 9** – discuss public comments, potential refinements & recommendation to the Metro Council
- **Nov. 13** – make recommendation to the Metro Council on adoption of the preferred approach

Metro Policy Advisory Committee (MPAC) | 5-7 p.m. | Council chamber

- **Jan. 8** – discuss results and proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014
- **Jan. 22** – discuss community case studies showcasing local efforts
- **Feb. 12** – make recommendation to the Metro Council on the proposed process & policy areas to be focus of engagement to shape preferred scenario in 2014 and review recent opinion research
- **Feb. 26** – provide update on implementation of Oregon Statewide Transportation Strategy Vision and discuss community-based transit solutions
- **March 26** – discuss local, regional and state approaches to make travel more safe, efficient and reliable
- **April 4 or 11** – joint meeting with MPAC to discussion policy options
- **April 9** - discuss findings and recommendations from Health Impact Assessment conducted by Oregon Health Authority
- **May 14** - review public engagement report and emerging ideas for draft preferred approach
- **May 23 or 30** – joint meeting with JPACT to make recommendation to Metro Council on draft preferred approach, subject to final evaluation and public review
- **Aug. 13** – discuss proposed RFP amendments and near-term implementation recommendations
- **Sept. 10** – discuss evaluation results and public review draft preferred approach
- **Oct. 8** – discuss public comments, potential refinements & recommendation to the Metro Council
- **Oct. 22** – discuss recommendation to the Metro Council
- **Nov. 12** – make recommendation to the Metro Council on adoption of the preferred approach

2/6/14 – TPAC rec'd to JPACT
MTAC rec'd to MPAC

www.oregonmetro.gov/climatescenarios

Climate Smart Communities Scenarios Project: Process for Shaping the Preferred Approach in 2014

	January	February	March	April	May
Council/MPAC/JPACT milestones	Council direction on process and policy areas to discuss in 2014 (1/7)	MPAC and JPACT approve process & policy areas to discuss in 2014 (2/12 & 2/13)		Joint Council/MPAC/JPACT meeting to discuss policy choices & funding mechanisms (4/4 or 4/11)	Joint Council/MPAC/JPACT meeting to recommend draft preferred approach (5/23 or 5/30)

Potential investments & actions

CONFIRM COMMITMENT TO IMPLEMENT ADOPTED PLANS
- Implement 2040 Growth Concept
- Implement local zoning, comp plans & transportation system plans
- Provide new schools, services and shopping near homes
- Manage the urban growth boundary
- Make streets and highways more safe and reliable
- Make it easy to walk and bike

ASSUME STATE ACTIONS
- Transition to cleaner & low carbon fuels
- Transition to low emission vehicles
- Promote vehicle insurance paid by the miles driven

DISCUSS OPTIONS FOR EACH POLICY AREA
- Make transit more convenient, frequent, accessible and affordable
- Provide information and use technology and "smarter" roads
- Manage parking with a market-responsive approach

DISCUSS POTENTIAL FUNDING MECHANISMS
- Identify potential funding mechanisms for implementing adopted plans and other key actions

  e.g. gas tax, carbon tax, road user fee based on miles driven

Step 1

MPAC, JPACT and Council confirm their commitment to implement local & regional investments & actions in adopted zoning, comprehensive plans, capital improvement programs, and transportation system plans and carry forward (Feb.)

MPAC and JPACT will recommend what level of RTP investment to include in the draft preferred scenario in May

Step 2

MPAC, JPACT and Council confirm state actions to carry forward (Feb.)

Staff will confirm pay-as-you-drive insurance and vehicle technology, fleet and fuel assumptions with state agencies and document for MPAC & JPACT recommendation in May

Step 3

MPAC, JPACT and Council discuss options and recommend approach for each policy area (April and May)

Community leaders and public provide input on policy areas
- Interviews, discussion groups and on-line tool
- Opinion research and focus groups

Community leaders and public provide input on potential funding mechanisms
- Interviews, discussion groups and on-line tool
- Opinion research and focus groups

Step 4

MPAC, JPACT and Council discuss potential funding mechanisms (April and May)

Step 5

Recommend draft preferred approach, pending final evaluation & public review

- Implement 2040 Growth Concept and local zoning, comp plans & transportation system plans
- Manage the urban growth boundary through regular regional growth management cycles
- Streets and highways level of investment TBD
- Walk and bike level of investment TBD
- Transition to cleaner & low carbon fuels
- Transition to low emission vehicles
- Promote vehicle insurance paid by the miles driven
- Transit approach TBD
- Information and technology approach TBD
- Market-responsive parking approach TBD
- Potential funding mechanisms TBD

2/6/14 – TPAC rec'd to JPACT
MTAC rec'd to MPAC

Process for Adopting the Preferred Approach in 2014

	June	July	August	September	October	November	December
Council/MPAC/JPACT milestones	Council action on draft preferred approach, pending final evaluation and public review (6/19)	*Council action on 2014 RTP investment priorities (7/17)*	Council/MPAC/JPACT discuss proposed RFP amendments and near-term implementation recommendations (8/5, 8/13 & 8/14)	Council/MPAC/JPACT discuss evaluation results and public review draft preferred approach (9/2, 9/10 & 9/11)	Council/MPAC/JPACT review public comments and discuss recommendation to Council (10/7, 10/8 & 10/9)	MPAC & JPACT recommendation to Council on preferred approach (11/12 & 11/13)	Council action on preferred approach (12/11)

Step 6

Complete final evaluation & prepare public comment materials and adoption legislation

Staff evaluates draft preferred approach
Staff documents planning assumptions and conducts performance evaluation with regional travel model and metropolitan GreenSTEP

Staff and technical advisory committees prepare draft Regional Framework Plan (RFP) amendments and adoption legislation
Staff and technical advisory committees draft Regional Framework Plan amendments and adoption legislation

Staff and technical advisory committees prepare Draft near-term implementation recommendations
Staff and technical advisory committees draft near-term implementation recommendations, which may include funding and other recommendations to state agencies and commissions, the 2015 Legislature and the 2018 RTP update

Step 7

Convene public comment period

- A 45-day public comment period will be held from Sept. 5 to Oct. 20
- Hearings and on-line comment opportunities

Step 8

Recommended preferred approach

- Implement 2040 Growth Concept and local zoning, comp plans & transportation system plans
- Manage the urban growth boundary through regular regional growth management cycles
- Streets and highways level of investment TBD
- Walk and bike level of investment TBD
- Transition to cleaner & low carbon fuels
- Transition to low emission vehicles
- Promote vehicle insurance paid by the miles driven
- Transit approach TBD
- Information and technology approach TBD
- Market-responsive parking approach TBD
- Potential funding mechanisms TBD
- Near-term implementation recommendations TBD

Materials following this page were distributed at the meeting.

2016-2018 DRAFT STIP FIX-IT PROJECTS

PROJECT NAME/LOCATION	ODOT FUNDING
FIX-IT (PRESERVATION)	
OR-99E: SE Harold Street to SE Harrison Street	$ 8,246,000
OR-99E: S Pine Street to SW Berg Parkway	$ 300,000
OR-99E: SW Berg Parkway to Pudding River	$ 1,866,000
OR-211: OR-213 to Meadowbrook	$ 255,000
OR-212: SE Richey Rd to US-26	$ 2,666,000
OR-213: Mulino to Blackman's Corner	$ 2,876,000
OR-213: SE Lindy Street to SE King Road	$ 2,500,000
US-26: NW Mountaindale Road to NW Glencoe Road	$ 1,566,000
US-30: NW McNamee Road to NW Bridge Avenue	$ 6,491,000
Region 1 Pavement Reserve	$ 2,423,000
FIX-IT (INTERSTATE MAINTENANCE)	
I-5: Marquam Bridge to Capitol Highway	$ 8,300,000
I-84: Jordan Road to Corbett Road	$ 4,050,000
I-84: Corbett Road to Multnomah Falls	$ 10,200,000
I-205: Johnson Creek to Glenn Jackson Bridge	$ 11,000,000
FIX-IT (BRIDGE)	
I-5 Bridge Over NE Hassalo Street and NE Holladay Street	$ 2,432,000
I-5 Marquam Bridge	$ 1,770,000
I-5: Morrison Interchange Ramp Bridges	$ 1,008,000
I-84: Tanner Creek Bridge	$ 1,159,000
US-26: Boring Road Bridge Overcrossing	$ 6,351,000
US-26: Ross Island Interchange Bridge	$ 1,261,000
FIX-IT (OPERATIONS)	
I-5: Denver Avenue Northbound Tunnel Illumination	$ 321,000
I-84: Farley Slide	$ 500,000
OR-8 Operational Improvements	$ 964,500
OR-99E: Railroad Tunnel Illumination	$ 1,940,000
OR-212: N Fork Deep Creek Culvert	$ 1,000,000
OR-213 Operational Improvements	$ 5,676,000
OR-217: SW Allen and Denney Interchange Illumination	$ 205,000
Region-Wide Culverts	$ 1,282,000
Region-Wide Rockfalls	$ 3,607,000
Region 1 LED Replacement	$ 200,000
Region 1 Loop Replacement	$ 300,000
Region 1 Misc. Hardware/Software	$ 500,000
Region 1 Operations Quick Hit Reserve	$ 350,000
Region 1 Striping	$ 200,000
FIX-IT (SAFETY)	
OR-8 at SE 44th/SE 45th Avenues	$ 504,000
OR-8 at OR-219	$ 500,000
OR-8: Tualatin Valley Highway	$ 1,875,000
OR-213: NE Couch to SE Pine Street	$ 1,140,726
OR-213: SE Clay Street to SE Mill Street	$ 1,087,929
OR-213 at S Union Mills Rd	$ 634,000
OR-224 and OR-281 Rural Systematic Improvements	$ 558,750
US-26: SE 20th Avenue to 33rd Avenue	$ 3,407,655
US-26/Mt. Hood Highway Systematic Improvements	$ 1,406,250
US-30B: NE 103rd Avenue to NE 107th Avenue	$ 504,000
SHELF READY PROJECT LIST (PE Only)	
OR-224/OR-212 Corridor ITS	$ 143,500
US-26 ATMS ITS	$ 645,750

OTC Enhance 20% Discretionary Funds - Quick View

Region	Project Name	Scenario A	Scenario B
Transit (R1/R2)	North I-5 Corridor POINT Bus Services	Y	Y
1	Historic Columbia River Highway State Trail: Summit Creek to Lindsey Creek	Y	y
1	I-205 SB/Auxiliary Lane: I-84 to Stark/Washington	Y	Y
1	OR224/OR212 Corridor ITS	Y	N
1	US26: NW 185th Ave - Cornelius Pass Rd	Y	Y
1	I-5 Rose Quarter Development	Y	y
1	US26 Corridor ITS	Y	N
2	I-5: Albany Knox Butte SB Ramp & Mainline Improvement	N	N
2	I-5: Aurora-Donald Interchange (Exit 278) IAMP & EA	Y	Y
2	US101: Spencer Creek EA & Geologic Reassessment	Y	N
2	US101: Camp Rilea Corridor	N	N
2	OR126W Spot Improvements	N	N
2	US30: Westport Ferry Access Rd	N	N
2	OR18: Ft. Hill Rd to AR Ford Road	Y	Y
3	I-5: Medford Viaduct Environmental Study	Y	Y
3	I-5: Southern Oregon Truck Climbing Lanes (Roberts Mountain)	Y	Y
3	I-5: Southern Oregon Truck Climbing Lanes Development	N	N
3	OR140: I-5 to OR 62 Upgrade	N	N
4	US97: O'Neil Jct/Prineville Jct Intermodal	Y	N
4	US97: South Century Drive - USFS Boundary 4 Lane Extension	Y	N
4	US97 @ Powers Rd Pedestrian Crossing (South Bend Parkway)	Y	N
4	US97 Bend - La Pine Variable Speed Limits	Y	N
4	US 97: Redmond to Bend Safety Corridor	Y	N
4	US97 Chemult–Spring Creek Hill Variable Speed Limits	N	N
4	US97 Wickiup Jct	N	Y
5	I-84/US395B Interchange Improvements - Pendleton (Ph1 PE)	Y	Y
5	US395 Canyon Creek Flood/Road Closure Mitigation	Y	Y
5	SW Perkins Avenue Extension (Pendleton)	N	N
5	I-84/US395B Interchange Improvements - Pendleton (Ph1 RW)	N	N

600 NE Grand Ave.
Portland, OR 97232-2736
www.oregonmetro.gov

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JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION
January 9, 2014
Metro Regional Center, Council Chamber

MEMBERS PRESENT	AFFILIATION
Jack Burkman	City of Vancouver
Carlotta Collette, Chair	Metro Council
Shirley Craddick	Metro Council
Nina DeConcini	Oregon Department of Environmental Quality
Denny Doyle	City of Beaverton, representing Cities of Washington County
Donna Jordan	City of Lake Oswego, representing Cities of Clackamas Co.
Neil McFarlane	TriMet
Diane McKeel	Multnomah County
Neil McFarlane	TriMet
Steve Novick	City of Portland
Roy Rogers	Washington County
Paul Savas	Clackamas County
Don Wagner	WSDOT

MEMBERS EXCUSED	AFFILIATION
Shane Bemis	City of Gresham, representing Cities of Multnomah Co.
Kathryn Harrington	Metro Council
Steve Stuart	Clark County
Jason Tell	ODOT
Bill Wyatt	Port of Portland

ALTERNATES PRESENT	AFFILIATION
Craig Dirksen	Metro Council
Susie Lahsene	Port of Portland
Lisa Barton Mullins	City of Fairview, representing Cities of Multnomah Co.

STAFF: Taylor Allen, Andy Cotugno, Kim Ellis, Tom Kloster, Ted Leybold, John Mermin, Brian Monberg.

1. CALL TO ORDER, DECLARATION OF A QUORUM & INTRODUCTIONS

Chair Carlotta Collette declared a quorum and called the meeting to order at 7:30 a.m.

2. CITIZEN COMMUNICATIONS ON JPACT ITEMS

Citizen testifier, Mr. Ed Barnes, former Washington State Transportation Commissioner provided an overview of the major steps and obstacles concerning the discussion and planning for the Columbia River Crossing Project. The massive, multi-billion dollar project would replace the I-5 Interstate bridges and improve several interchanges in South Vancouver and North Portland. Mr. Barnes distributed handouts which are included as a part of the meeting record.

3. UPDATES FROM THE CHAIR & COMMITTEE MEMBERS

Chair Collette updated members on the following items:

- The draft Regional Active Transportation Plan (ATP) is facilitated by a regional workgroup consisting of forty members, including Metro staff, advocacy and equity groups. The workgroup has provided input to finalize the draft Regional ATP and corresponding updates to the Regional Transportation Plan (RTP). A draft ATP and updated RTP presentation is scheduled for the March JPACT meeting prior to the plans' release for public comment period.
- The selection of three TPAC Community representatives, Carol Gossett, Mychal Tetteh and Stephen White, appointments were confirmed by the Metro Council on December 19, 2013.
- Mr. Andy Cotugno of Metro provided an update on the endorsement letter to Congressman Blumenhauer to increase and index the federal gas tax and T4America's Federal Transportation Revenue Proposal, which are both scheduled for further consideration at the February JPACT meeting.
- Ms. Susie Lahsene of the Port of Portland announced that the Port withdrew its current proposal for consent to annex West Hayden Island into the City of Portland on Wednesday January 8, 2014.
- Metro Council is scheduled to consider and vote on legislation to appoint JPACT members for 2014 which includes Council President Hughes nomination of Metro Councilor Craig Dirksen to serve as the new JPACT Chair, who will begin in February.
- Chair Carlotta Collette is recognized for her service as JPACT Chair on behalf of JPACT members.
- Ms. Nina DeConcini of Oregon Department of Environmental Quality (DEQ) announced that David Collier, Air Quality Manager, was determined as a new alternate.

4. CONSIDERATION OF THE MINUTES FOR DECEMBER 12, 2013

MOTION: Metro Councilor Shirley Craddick moved, Councilor Donna Jordan seconded, to adopt the JPACT Minutes from December 12, 2013 with the following amendments:

- Commissioner Roy Rogers, representing Washington County was present on December 12th;
- Commissioner Paul Savas requested language edits under the Member Comments section regarding Endorsing a Regional position on Federal Transportation Policy to include: "Commissioner Paul Savas suggested further evaluation and comparison of ~~the increasing gas tax as a federal versus state strategy~~ of state versus federal funding for transportation."

ACTION: With all in favor, the motion passed as amended.

5.1 ADDING THE POWELL BOULEVARD: I-205 TO SE 174TH PROJECT TO THE 2012-15 METROPOLITAN TRANSPORTATION AND IMPROVEMENT PROGRAM (MTIP) AND THE UNIFIED PLANNING WORK PROGRAM (UPWP)

Mr. Ted Leybold of Metro provided an overview of the amendments proposed to the MTIP and UPWP regarding the addition of the Outer Powell Boulevard Project. The 2013 State Legislature through House Bill 2322 directed that 4.9 million dollars of funding be utilized for project development of the Outer Powell Boulevard Project. The study area being proposed for additional planning is the Outer Powell Boulevard from Interstate 205 to approximately SE 176th Avenue. Some potential improvements may include storm water treatment, pedestrian, bicycle and transit access facilities and roadway improvements.

ODOT (Oregon Department of Transportation) is the agency spearheading this project, proposed to budget 2 million dollars as a planning phase to develop the NEPA documentation of the project. This planning phase is proposed to amend the 2013-15 UPWP for inclusion. The preferred alternative that emerges from the project planning phase will carry forward to preliminarily design and engineering. The remaining 2.9 million dollars is being programmed for preliminary design consistent with the outcome of the planning work and proposed to be added to the 2012-15 MTIP.

Member Comments Included:

There were none.

MOTION: Commissioner Steve Novick moved, Councilor Shirley seconded, to approve Resolution No. 14-4498.

ACTION: With all in favor and Ms. DeConcini abstained, the motion passed.

5.2 POWELL-DIVISION TRANSIT AND DEVELOPMENT PROJECT: APPROACH AND STEERING COMMITTEE FORMATION

Brian Monberg of Metro provided an overview of the Powell Division Transit and Development Project and the steering committee formation. The project originated from the Metro Regional High Capacity Transit (HCT) Study conducted in 2009, which identified the Powell-Division Corridor vicinity as the second highest HTC area of the three near-term regional priority corridors. The project is a partnership between Metro, TriMet, ODOT, City of Portland, City of Gresham and Multnomah County to identify preferred HCT investments in the corridor and implement a development strategy to support key places within the Powell-Division HCT Corridor for community and economic development. The project is currently initializing the formal planning stage that consists of four milestones: project foundation, identify alternatives, refine alternatives and project agreement concluding in Winter 2014. The formal planning stage will result in two outcomes: (1) A definition of a new transit line connecting Portland and Gresham, including vehicle mode, route and station (2) A development strategy for key places in the corridor considering areas that have changed and remained stable, policies and projects to support stations, and economic development to focus future desired development.

The steering committee will include community and business leaders that represent social, environmental and economic issues relevant to the Powell-Division Corridor. Some of the partnerships include, but are not limited to: Mount Hood Community College, Portland Community College, Coalition Gresham Neighborhoods and Division Midway Business. The Metro Council is anticipated to take action to convene the steering committee January 16, 2014.

Member Comments Included:

- Members highlighted the importance of access to business and freight traffic as critical elements within the Powell-Division Corridor and suggested including a business representative or business owner on the steering committee. Members committed to identifying names for consideration. Mr. Monberg confirmed the Project Team and Metro Council will review potential representatives based the current list, recognizing that additional members from the business community can be added.
- Members expressed interest in the funding and cost sharing for conducting the Powell-Division Transit and Development Project Study. Mr. Monberg stated that primary funding for the Cities of Portland and Gresham has been through the Community Planning and Development Grant Program and Federal Regional Corridor funding. The total cost for the study is approximately 1.1 million dollars.
- Chair Collette recognized that the Powell-Division Corridor was identified as a high priority corridor in both the High Capacity Transit Study (HCT) and the Regional Transportation Plan.
- Co-Chair Shirley Craddick recognized TriMet's support of the Powell-Division Transit and Development Project in respect to the work conducted through the system enhancement plans which improve north south connections to both the blue line and to the new route being developed.

MOTION: Ms. Nina DeConcini moved, Commissioner Steve Novick seconded, to recommend adoption of Resolution 14-4496.

ACTION: With all in favor, the motion passed.

5.3 PERMISSION TO USE FEDERAL STREAMLINNG PROVISION FOR REGIONAL AIR QUALITY CONFORMITY RESOLUTION NO. 13-4493

Ms. Nina DeConcini of DEQ introduced the proposed process to approve the use of federal streamlining provisions for regional air quality conformity determinations. Historically the Portland Metropolitan region has failed to meet national air quality standards for carbon monoxide pollution in the past and was designated as a non-attainment area. As a result, the region is required to conduct an air quality conformity analysis for each update of the Regional Transportation Plan (RTP) and the Metropolitan Transportation Improvement Program (MTIP) to demonstrate compliance with an adopted air quality maintenance plan in order for transportation projects to be eligible to receive federal funding.

Typically, Metro models three transportation networks for air quality analysis purposes (base year, final year of maintenance plan, and horizon year), but in preparation for the 2014 RTP updated and the 2015-2018 MTIP, federal requirements dictate five transportation networks will need to be constructed. This adds a significant workload to the relatively minor update of the 2014 RTP. The

2014 RTP update is operating under a strict timeline and must be completed by July 2014—streamlining helps the project maintain schedule.

Mr. Tom Kloster of Metro provides an overview of the proposed air quality conformity streamlining. The Transportation Conformity Regulations Section allows regions with approved maintenance plans to elect to shorten the timeframe of the conformity analysis to the end of the maintenance plan. For the Portland Metropolitan region, streamlining the conformity determination to the end of the maintenance plan means the air quality analysis would be conducted through the year 2017, which is the final year of the approved maintenance plan.

A 2017 conformity determination would not allow for a long-term picture of air quality impacts. Metro staff proposes conducting an air quality analysis for the base year (2010), end of the maintenance plan (2017) and long-range transportation plan horizon year (2040). This approach would utilize the shortening provision and reduce the number of transportation networks to develop, while also providing for the long-term air quality picture. The use of the provision would not have an impact on the air quality outcomes, as the region would still aim to meet or be below the emissions budget allocated by the state for 2040.

Member Comments Included:

- Members asked clarifying questions regarding participation and involvement of the public at the November 22, 2013 TPAC Meeting. Grace Cho of Metro confirmed that the traditional committee structure was utilized for soliciting public comment from nearly 200 people in an interested parties list consisting of citizens representing jurisdictions throughout the region.
- Commissioner Paul Savas asked about which specific pollutants are being assessed within the streamlining process timeframe. Ms. DeConcini confirmed that only carbon monoxide is being evaluated.

MOTION: Councilor Craig Dirksen moved, Mr. Neil McFarlane seconded, to recommend adoption of Resolution 13-4493.

ACTION: With all in favor, the motion passed.

6.1 2014 REGIONAL TRANSPORTATION PLAN PROCESS UPDATE AND DRAFT PROJECT LIST

Mr. John Mermin of Metro provided an overview of the 2014 Regional Transportation Plan Update (RTP) and Project List. The U.S. Department of Transportation (USDOT) requires metropolitan regions to maintain a Regional Transportation Plan with updates every four years and conform to federal clean air standards in order to take effect. The RTP must comprise a rolling 25-year planning horizon. The current RTP was shaped by regional goals adopted in 2010. Currently the RTP encompasses 1071 projects compiled from local plans representing a total of 19.8 billion federal, state and regional funds. The current RTP encompass a broad range of projects related to bicycle, pedestrian, transit demand management, system management auto and freight. Metro collaborates with a number of partners including cities, counties, TriMet, SMART, ODOT and Port of Portland to develop a single system that crosses boundaries. His presentation highlighted the general composition of the draft project list as well as the scale of projects. Mr. Mermin highlighted that in comparison to the 2010 RTP project list, the share of projects going towards active transportation has increased in all four sub-regions (Clackamas County, Washington County, East

Multnomah County, and Portland). The full presentation is included as a part of the meeting record. February 28, 2014 TPAC is anticipated to preview the draft RTP before public review.

Member Comments Included:

- Members asked clarifying questions about Clark County and Vancouver's role as a part of the Metropolitan Planning Organization (MPO) in the updated RTP Process. Mr. Mermin confirmed that their transportation projects are utilized in the model networks used to update the system performance for the RTP. Commissioner Jack Burkman explained that Vancouver has an independent RTP process operating under Washington state mandates however coordinates in their regional planning through review and shared membership in regional MPO bodies.
- Members expressed the critical importance of Metro collaborating with local jurisdictions on their transportation plans especially during the public comment period of the RTP update. Members also suggested including visual metrics that reflect the proportionality of funding already attained to conduct projects. Chair Collette confirmed that the RTP is composed of the transportation plans from local city jurisdictions throughout the region. She encouraged committee members to ensure that local plans within their respective jurisdictions effectively fit into the regional framework.
- Mr. Neil Mcfarlane of TriMet recognized increasingly important investments for TriMet as the RTP and MTIP are updated include maintaining the quality of service provided on the existing system.

6.2 CLIMATE SMART COMMUNITIES SCEENARIOS PROJECT: FIRST LOOK AT RESULTS PART 3

Ms. Kim Ellis of Metro provided an overview of the Climate Smart Communities Scenarios Project. In 2009, the Oregon Legislature mandated that the Portland metropolitan region reduce per capita greenhouse gas emissions for light duty vehicles by 20 percent below 2005 levels by 2035. Additionally, the region must select a preferred approach by December 31, 2014. The goal of the Climate Smart Communities Scenarios Project is to engage community, business, public health and elected leaders in a discussion to shape a preferred approach that meets the state mandate and supports local and regional plans for downtowns, main streets and employment areas. The Climate Smart Communities Scenarios Project is currently in Phase 3, transitioning from data development and analysis to policy discussions to shape a draft preferred scenario by May 2014.

Metro used the GreenSTEP model to compare and evaluate the following outcomes across the three approaches: greenhouse gas emissions, housing and jobs, travel, access to transit and destinations, and air quality. The GreenSTEP model also provides a methodology for monetizing social costs which are defined as costs paid for by society as a result of public health and environmental impacts.

The additional results discovered in Part 3 include public health, potential revenues raised and potential household costs which will be used in combination with previously reported results to inform regional discussions to shape the preferred scenario approach in 2014. The results reported include air pollutants, physical activity and reduced exposure to fatalities across the three

scenarios. The financial costs include passenger vehicle costs such as ownership and operating costs across the three scenarios.

Moving forward in 2014, staff recommends a four-step process for building consensus on what strategies are included in the region's preferred approach:

- **Step 1 and 2:** In January and February 2014, the Council, MPAC, and JPACT confirm initial areas of agreement to carry forward into the region's draft preferred approach without further discussion related to: (1) locally adopted comprehensive plans, zoning and draft 2014 RTP investment priorities from local transportation system plans, ODOT, TriMet, SMART and the Port of Portland, and (2) state assumptions for pay-as-you-drive insurance, clean fuels and more fuel-efficient vehicles and engines.
- **Step 3:** From February to May 2014, the Council facilitates a regional discussion to identify recommendations related to transportation information programs, transportation system efficiency, and transit service and parking management to be included in the region's draft preferred approach. TPAC and MTAC will help frame policy options for MPAC and JPACT discussion in April and May.
- **Step 4:** From February to December 2014, the Council facilitates a regional discussion to identify potential funding mechanisms to implement the preferred approach. TPAC and MTAC will help frame policy options for MPAC and JPACT discussion in April and May.

The full presentation is included as a part of the meeting record.

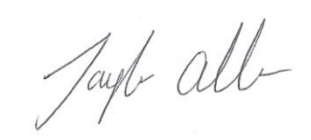
Member Comments Included:

- Members suggested during steps 3 and 4 to consider private investors like CII (Community Investment Initiative) to assist in funding infrastructure. Chair Collette suggested discussing this consideration at the joint JPACT/MPAC meetings in May and JPACT receiving an update on CII and Regional Infrastructure Strategic Enterprise (RISE).

7. ADJOURN

Chair Collette adjourned the meeting at 9:00 a.m.

Respectfully Submitted,



Taylor Allen

Recording Secretary

ITEM	DOCUMENT TYPE	DOC DATE	DOCUMENT DESCRIPTION	DOCUMENT NO.
2	Handout	01/09/13	Citizen Testifier Ed Barnes Re: Columbia River Crossing Project	01314j-01
3	Handout	11/12/13	Regional ATP Review & Refinement Timeline	01314j-02
3	Handout	01/09/14	Interstate Bridge Article	01314j-03
4	Handout	12/12/13	121213 Minutes	01314j-04
5.1	Legislation	01/09/13	Resolution No. 14-4498 with attached Staff Report and Exhibit	01314j-05
5.2	Legislation	01/09/14	Resolution No. 14-4496 with attached Exhibits	01314j-06
5.3	Legislation	01/09/14	Resolution No. 13-4493 with attached Staff Report	01314j-07
6.1	PPT	01/09/14	RTP Status Update & Summary of Updated Draft Project List	01314j-08
6.2	PPT	01/09/14	CSC First Look at Results Part 3	01314j-09

Short-Term Implementation Plan

Oregon Statewide Transportation Strategy

A 2050 Vision for Greenhouse Gas Emissions Reduction

Portland Metro
Joint Policy Advisory Committee on Transportation (JPACT)
February 13, 2014

Amanda Joy Pietz
Oregon Department of Transportation
Planning Unit Manager

Anne Russett
Oregon Department of Transportation
Senior Planner, Planning Unit

Why was the STS developed?

- Legislative Directive
  - Senate Bill 1059 (Chapter 85 Oregon Laws 2010 Special Session)

    …the Oregon Transportation Commission, after consultation with and in cooperation with metropolitan planning organizations, other state agencies, local governments and stakeholders…shall adopt a statewide transportation strategy on greenhouse gas emissions to aid in achieving the greenhouse gas emissions reduction goals set forth in ORS 468.205 [a 75% reduction below 1990 levels by 2050]…

  - Part of Oregon Sustainable Transportation Initiative
    - Helps the State strategically look at reduction strategies
    - Aids metropolitan areas required to reduce emissions

What is the STS?

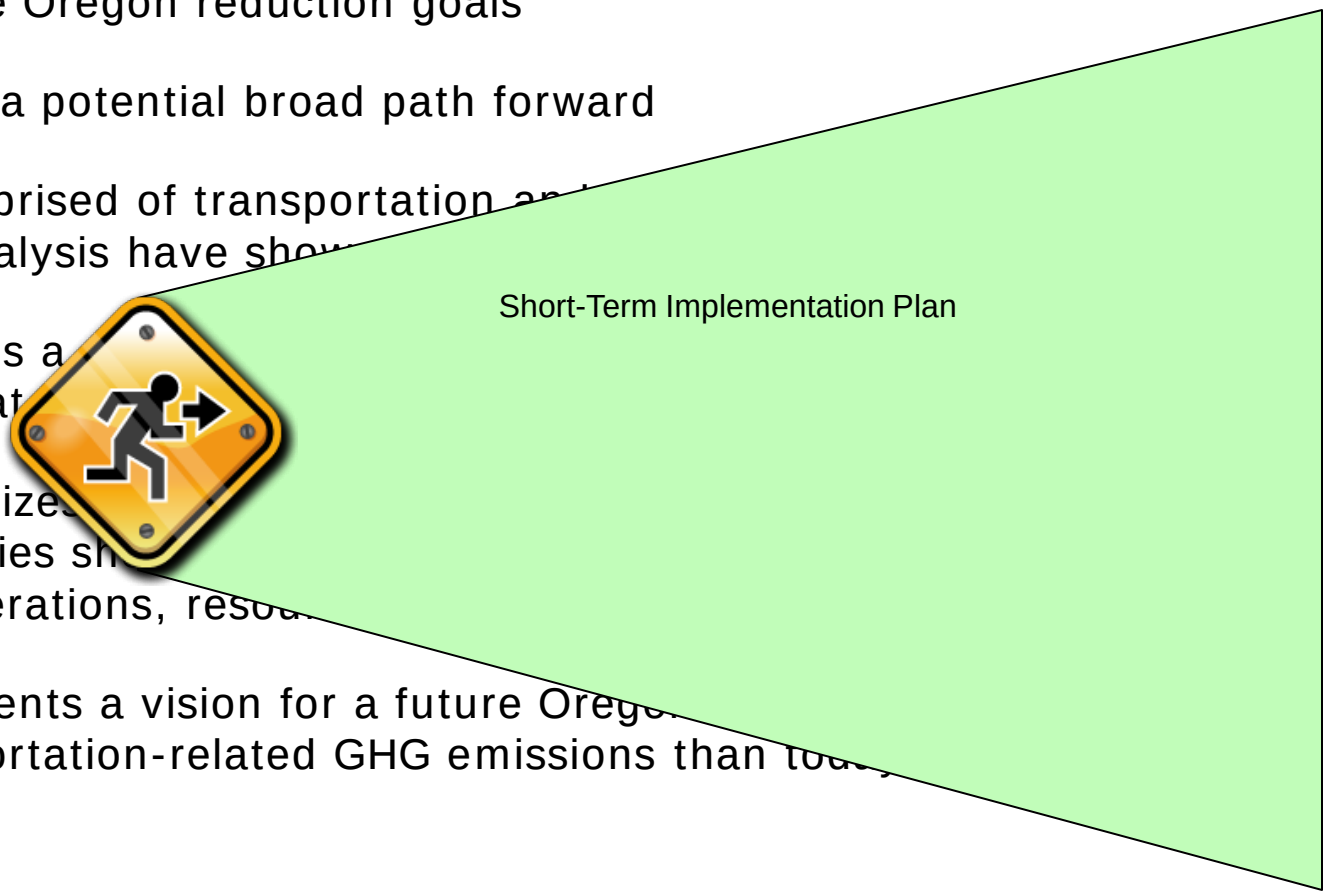
- Legislatively mandated, non-regulatory document
  - What would it take to substantially reduce emissions *while balancing other important societal goals*

Look into the future

Out to 2050

What is the STS?

- Identifies ways that transportation can reduce GHG emissions and help achieve Oregon reduction goals
- Charts a potential broad path forward
- Is comprised of transportation a
and analysis have sho
- Includes a
and that
- Recognize
strategies sh
considerations, reso
- Represents a vision for a future Oreg
transportation-related GHG emissions than to



How was the STS developed?

Stakeholder Engagement

Policy Committee

Associated Oregon Industries
Oregon Trucking Association
AAA of Oregon/Idaho
Port of Portland
Bend City Council
Jackson County
City of Monmouth
Portland Metro
Oregon Coastal Zone Management Association
Portland State University
Oregon Transportation Commission
Land Conservation and Development Commission
Environmental Quality Commission
Oregon Global Warming Commission
Oregon Environmental Council
Oregon Department of Energy
Oregon Department of Transportation

Technical Advisory Committee

Central Lane MPO
Portland Metro MPO
Corvallis Area MPO
Salem-Keizer MPO
Rogue Valley MPO
City of Albany
City of Astoria
Umatilla County
Multnomah County
Port of Portland
TriMet
South Metro Area Regional Transit
Federal Highway Administration
Bicycle and Pedestrian Advisory Committee
Dept of Land Conservation and Development
Oregon Department of Energy
Oregon Department of Environmental Quality
Oregon Department of Transportation

How was the STS developed?

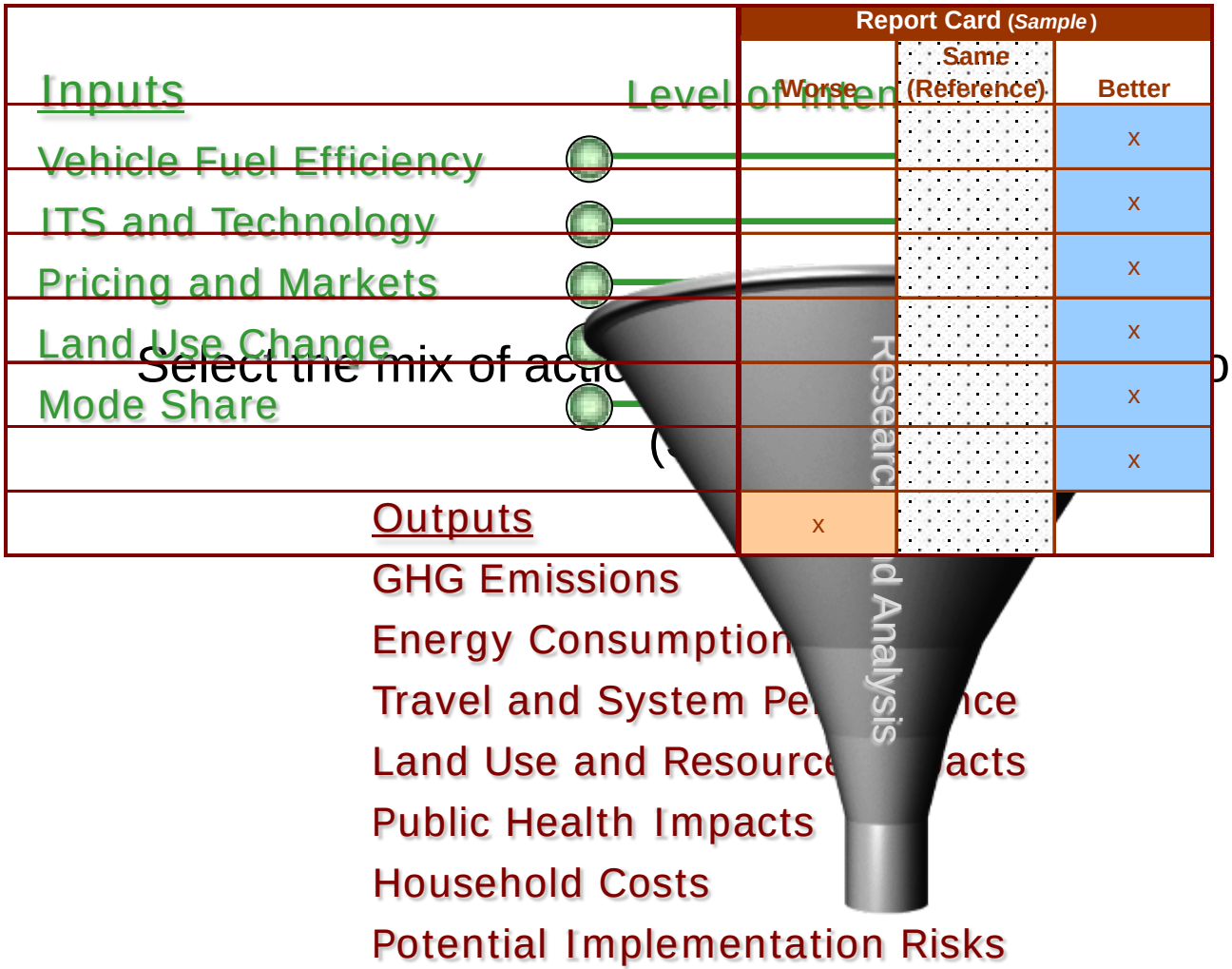
Research and Analysis

- First asked:
  - Where do the plans and trends of today take us in the future? (reference case)
- Findings:
  - Jurisdictions have done a lot already to reduce emissions
  - Transportation costs for households will rise
  - Congestion will get worse

How was the STS developed?

Research and Analysis

Test a range of potential land use options



Evaluate transportation and land

Select the mix of acti outcomes

Development process for Ground

Urban -46%
- X UGB expansion
- Ý Transit service (4x pop. growth)
- Ý TDM (65% PDX hh & 45% of employers)
- Ý Parking pricing (+30% pay to park)
- Ü 30% mode shift (for trips of <6 mi.)

Tech -45%
- Ü 30% mode shift (for trips of <6 mi.)
- Ý PHEV & EV (+30%)
- Ý Renewable energy
- Þ Fuel carbon intensity (-20%)
- Þ Light truck ownership (-29%-36%)

System Optimization -49%
- Ý Transit service (4x pop. growth)
- Ý Max System Ops & Mgmt.
- Ý Fuel efficiency priority (80% hh)
- Ý Carsharing rates up: high density (1/2,500), medium density (1/5,000)
- Ý TDM (65% PDX hh & 45% employers; more telecom.)
- Ý Speed smoothing
- Ü 30% mode shift (for trips of <6 mi.)

Pricing -43%
- Ý 100% PAYD insurance
- Ý Parking pricing (+30% pay to park)
- Ý Pay for all external costs (+$0.06 per mi)
- Ý Congestion pricing ($.20/mi)

Combo -63%

Includes all assumptions

Enhanced Combo -69%
- Ü 40% mode shift from SOV trips of <6 mi (was 30%)
- Ý More pay for parking and at higher cost
- Þ Ave. vehicle age 7.8 yrs (was 10 yrs)
- Ý Increase in PHEV and EV (43%)
- Ý Increase in TDM
- Ý Commercial services vehicles are all electric or natural gas

Enhanced + Price -74%
- Ý $0.15 per mile VMT Tax in addition to other taxes (~$0.06 per mile)

Enhanced + Tech -75%
- Ý Cleaner power generation
- Ý Increase PHEV & EV (53%)
- Ý EVs have longer range (cars = 300 mi)

What does the STS call for?

Strategies

Vehicle and Engine Technology Advancements

1 – More Efficient, Lower-Emission Vehicles and Engines

Fuel Technology Advancements

2 – Cleaner Fuels

Systems and Operations Performance

3 – Operations and Technology

4 – Airport Terminal Access

5 – Parking Management

6 – Road System Growth

What does the STS call for?

Strategies

Transportation Options

7 – Transportation Demand Management

8 – Intercity Transit Growth and Improvements

9 – Intracity (Urban) Transit Growth and Improvements

10 – Bicycle and Pedestrian Network Growth

11 – Carsharing

12 – More Efficient Freight Modes

Efficient Land Use

13 – Compact, Mixed-Use Development

14 – Urban Growth Boundaries

15 – More Efficient Industrial Land Uses

Pricing, Funding and Markets

16 – Funding Sources

17 – Pay-As-You-Drive Insurance

18 – Encourage a Continued Diversification of Oregon's Economy

How will the future be different?

The STS provides a relative sense of what the future could look like by using the best available information and trends of today.

But…

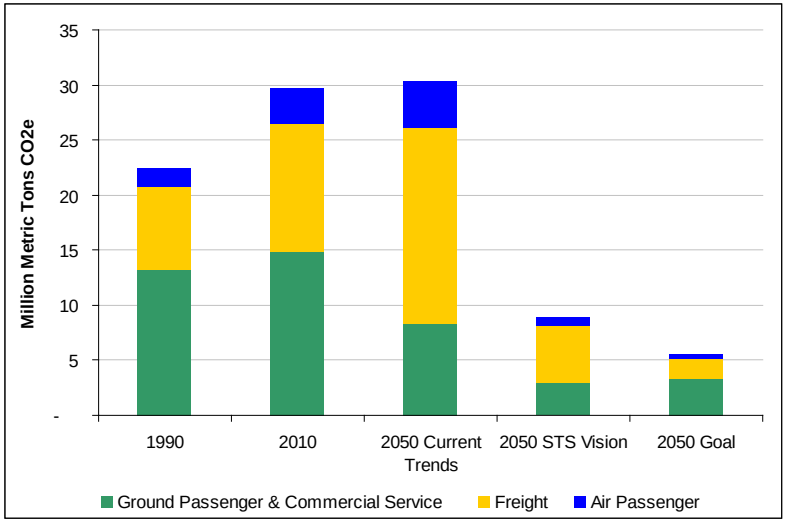
The future is uncertain.

Thus, the STS is designed to be agile and iterative. Performance measures will be used to track progress and adjustments can be made as needed.

How will the future be different?

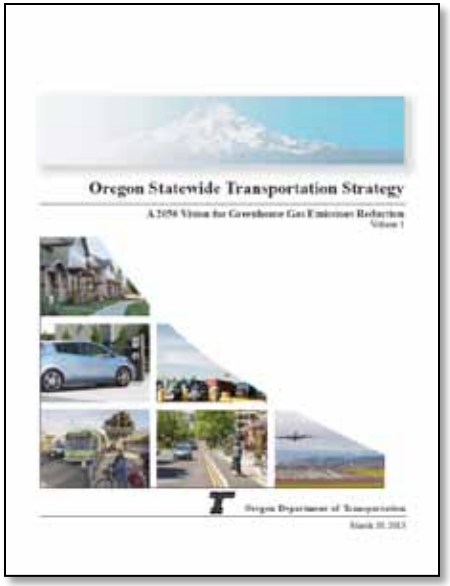
Analysis Results of Indicators

- Overall, 60% fewer GHG emissions than 1990 (83% per capita)
- Potential Benefits:
  - Improved transit, walking and biking
  - Fuel/energy efficient vehicles
  - Enhanced Intelligent Transportation Systems
  - More efficient goods movement
  - Walkable mixed use communities (improved health)



- Potential Costs:
  - Building infrastructure and providing services necessary to make multi-modal travel options available
- Economic Changes:
  - Impacts not fully clear
    - Indicators do not denote a rise in household or business costs
  - The economic effects of pricing strategies need to be assessed before implementation actions are considered

What Does the STS Mean?



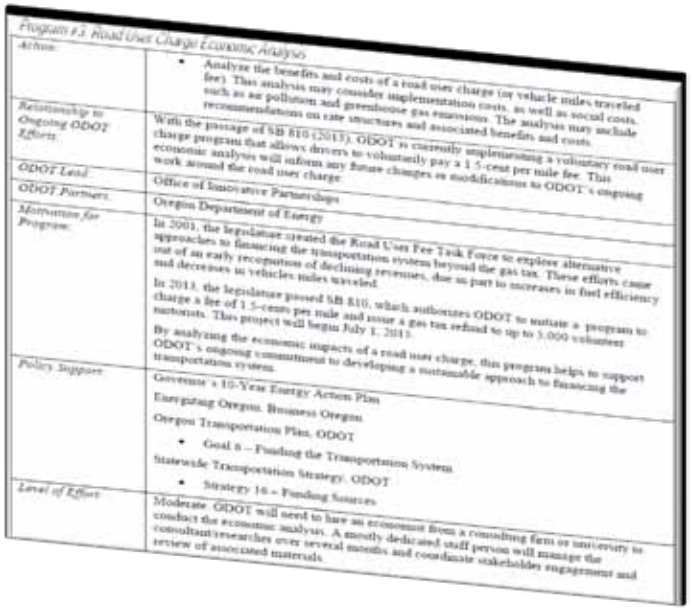
- OTC accepted in March 2013
- Is a statewide strategy
  - Includes *potential* actions for Federal and State Government, local jurisdictions, the private sector and individuals
- ODOT and others need to decide implementation next steps including:
  1. What to implement?
  2. How?
  3. When?

Developing an Implementation Plan

- Staff worked to develop an ODOT Work Plan
- Focused on the short-term (0-5 years)
- Conducted inreach and outreach to learn:
  - Actions being pursued that align with STS
  - Actions that could be enhanced to align with STS
  - Opportunities and challenges

Short-Term Implementation Plan

- Developed Short-Term Implementation Plan
  - Only highlights new or reprioritized work
    - ODOT is doing other things that further the STS
    - As are other external stakeholders
    - See “Summary Sheets”
  - Focused on actions that:
    - leverage existing work
    - are low cost or have a high degree of political acceptance, or
    - have outcomes with many apparent benefits



Program #3: Road User Charge Economic Analysis	
Action:	• Analyze the benefits and costs of a road user charge (or vehicle miles travelled fee). This analysis may consider implementation costs, as well as social costs, such as air pollution and greenhouse gas emissions. The analysis may include recommendations on rate structures and associated benefits and costs.
Relationship to Ongoing ODOT Efforts:	With the passage of SB 810 (2013), ODOT is currently implementing a voluntary road user charge program that allows drivers to voluntarily pay a 1.5-cent per mile fee. This economic analysis will inform any future changes or modifications to ODOT's ongoing work around the road user charge.
ODOT Lead:	Office of Innovative Partnerships
ODOT Partners:	Oregon Department of Energy
Motivation for Program:	In 2001, the legislature created the Road User Fee Task Force to explore alternative approaches to financing the transportation system beyond the gas tax. These efforts came out of an early recognition of declining revenues, due in part to increases in fuel efficiency and decreases in vehicles miles traveled. In 2013, the legislature passed SB 810, which authorizes ODOT to initiate a program to charge a fee of 1.5-cents per mile and issue a gas tax refund to up to 5,000 volunteer motorists. This project will begin July 1, 2015. By analyzing the economic impacts of a road user charge, this program helps to support ODOT's ongoing commitment to developing a sustainable approach to financing the transportation system.
Policy Support:	Governor's 10-Year Energy Action Plan Energizing Oregon, Business Oregon Oregon Transportation Plan, ODOT • Goal 6 – Funding the Transportation System Statewide Transportation Strategy: ODOT • Strategy 16 – Funding Sources
Level of Effort:	Moderate. ODOT will need to have an economist from a consulting firm or university to conduct the economic analysis. A mostly dedicated staff person will manage the consultant/researcher over several months and coordinate stakeholder engagement and review of associated materials.

Short-Term Implementation Plan

- Identified seven programs
  - Represents a small sampling of strategies and elements included in the STS
- Conducted an Economic Assessment
  - Focused on Programs included in Implementation Plan
  - Results showed no apparent adverse impacts

- Need to look beyond Short-Term Actions
  - ODOT plans to develop Mid- and Long-Term Implementation Plans


Economic Considerations:

Statewide Transportation Strategy (STS)
Short-Term Implementation Plan

Prepared by:
Chris Wornum, *Economist*
Steven Pickrell, *Principal-in-Charge*
Cambridge Systematics, Inc.

CAMBRIDGE SYSTEMATICS

Prepared for:
Oregon Department of Transportation
Transportation Planning Unit

December 2013

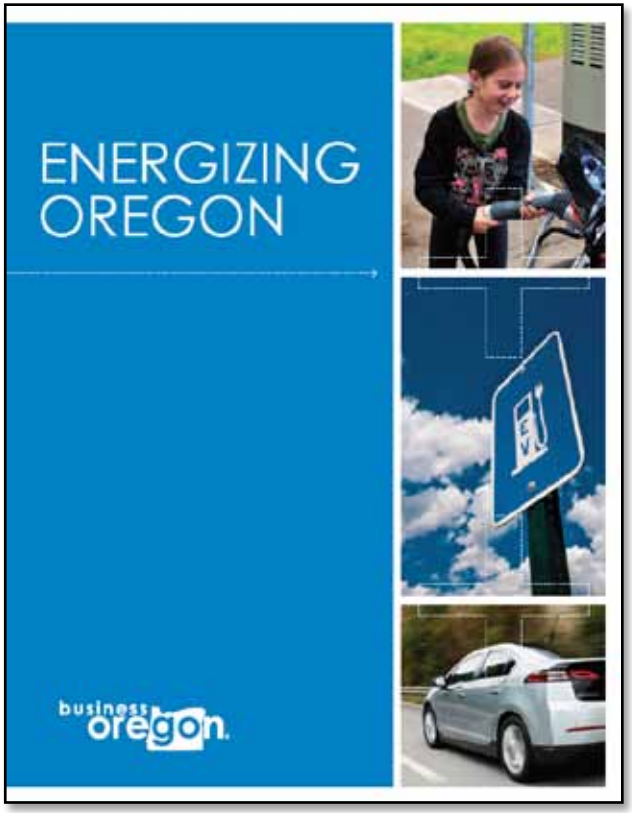
STS SHORT-TERM IMPLEMENTATION PLAN

Implementation Plan Components

- Implementation Programs:
  - Plan identifies seven programs that ODOT will implement in the next 2-5 years
- Tracking Progress:
  - includes an approach to monitoring and reporting on implementation progress

Program #1: Electric Vehicles and Low Emission Fuels

- Builds upon Oregon's ongoing work around EVs and other low-emission fuels.
- Supports the recommendations outlined in *Energizing Oregon.*
- Expands efforts around communication materials that highlight alternative fuel vehicles.
- Identifies the administration of $4M approved by the OTC for the the installation of natural gas fueling stations.



Program #2: Eco-Driving

- Launch deployment of ODOT eco-driving educational efforts.
- Explore developing an eco-driving certification program for transit operators, commercial fleets, and freight carriers.

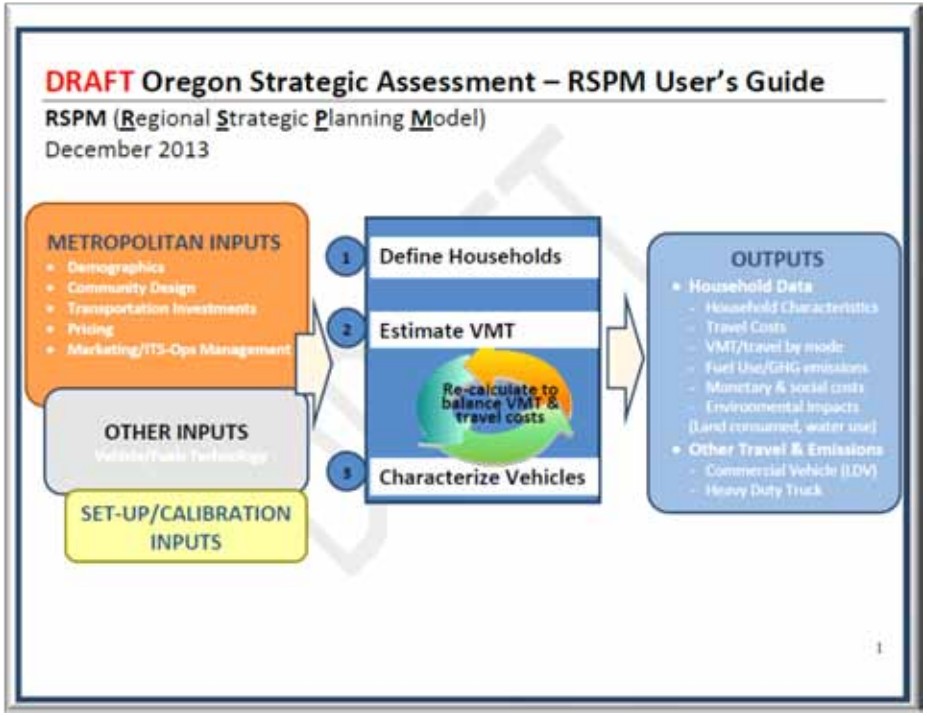
Program #3: Road User Charge Economic Analysis

- Analyze the benefits and costs of a road user charge (or vehicle miles traveled fee). This analysis may consider implementation costs, as well as social costs, such as air pollution and greenhouse gas emissions. The analysis may include recommendations on rate structures and associated benefits and costs.

Program #4: Strategic Assessment and Scenario Planning

- Work with metro areas on Strategic Assessments and scenario planning efforts, providing technical assistance and negotiating financial support.

- Through the Oregon Modeling Steering Committee, collaborate on appropriate tools to support GHG reduction planning and other planning efforts.

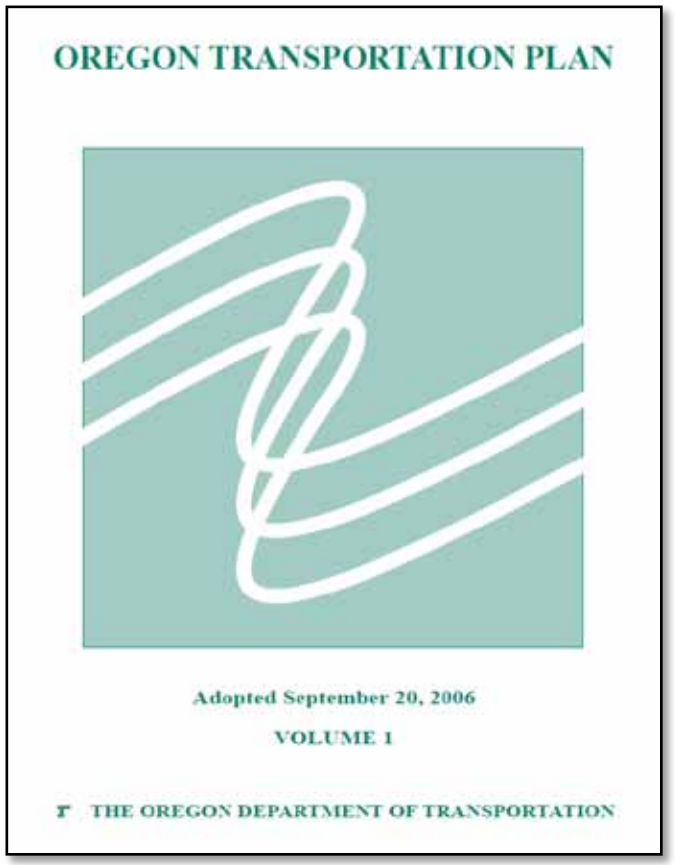


Program #5: Intelligent Transportation Systems (ITS)

- Focuses on supporting and expanding the following ongoing ITS efforts:
  - Variable Speed Limits
  - Adaptive Signal Control
  - Traveler Information
  - Traffic Incident Management
    - Including enhanced interagency coordination

Program #6: Transportation Planning and Project Selection

- Evaluate the STS strategies and elements for inclusion, as appropriate, into all relevant planning documents to help achieve the STS trajectories.
- Amend the Oregon Transportation Plan (OTP) to consider the STS.
- Consider the STS in the development of the 2017-2020 STIP.



Program #7: Stakeholder Coordination

- Monitor and provide information on initiatives that align with the STS (e.g. Oregon Clean Fuels, Governor's 10-Year Energy Action Plan) and ensure external and internal coordination to ensure efficiencies, remove redundancies, and identify leveraging opportunities, as appropriate.

Tracking Progress

- Monitoring:
  - Cumulative change in state GHG emissions
  - Program effectiveness
- Reporting:
  - Biennial progress report that provides a status update on the implementation programs and emissions tracking

NEXT STEPS

Next Steps

- Presentations to Metro committees:
  - Joint Policy Committee on Transportation
  - Metro Policy Advisory Committee
  - Metro Technical Advisory Committee
  - Transportation Policy Alternatives Committee
- Oregon Transportation Commission's review of STS Short-Term Implementation Plan

Next Steps

- Commence implementation of the programs outlined in the STS Short-Term Implementation Plan
- Monitor statewide change in emissions and program effectiveness
- Prepare biennial progress reports
  - Complete first report within four years
- Explore other STS strategies and consider including them in the mid-term and long-term implementation plans

Questions and Comments

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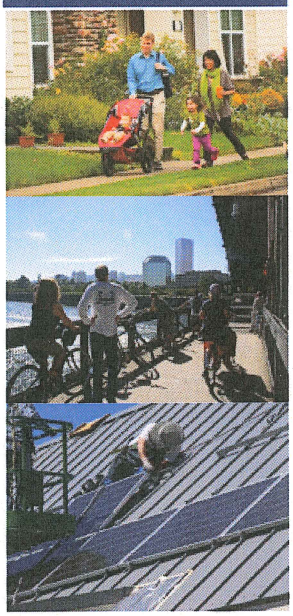
CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

Metro



SAVE THE DATE

Joint JPACT/MPAC Meetings

8 a.m. to noon, Friday, April 11
8 a.m. to noon, Friday, May 30
Location TBD

The Oregon Legislature has required the Portland metropolitan region to develop a plan to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.

The Climate Smart Communities Scenarios project is working with community, business, public health and elected leaders to shape a preferred approach that meets the state mandate and supports local and regional plans for downtown, main streets and employment areas.

In May, JPACT and MPAC will be asked to recommend a draft preferred approach for strategies to meet a state mandate to reduce greenhouse gas emissions from cars and small trucks. Over the past several months, regional advisory committees have received updates on the results of the Climate Smart Communities work and will continue to get more information and engage in discussion in the coming months.

The **April 11** meeting will review the project findings, cover public and stakeholder feedback on the proposed policy areas, and offer policymakers an opportunity to engage in discussions to draft a preferred approach.

The **May 30** meeting will allow JPACT and MPAC members to share feedback from their communities and culminate in a final recommendation to the Metro Council on a draft preferred approach. Staff will do more analysis on this draft approach, which will lead to a public comment period, final MPAC and JPACT recommendations, and a final preferred approach in the fall leading to Council adoption by the end of 2014.

www.oregonmetro.gov/climatescenarios

For more information, contact Valerie Cuevas at 503-797-1536

Attitudes About Strategies to Address Greenhouse Gas Emissions

-An Opinion Research Review-

Prepared For:
Climate Smart Communities Scenarios Project

February 2014

dhm RESEARCH
DAVIS, HIBBITTS & MIDGHALL, INC.

General Perceptions

Top values about living in Oregon are closely tied to the environment. Residents want to preserve these quality of life values

What do you personally value about living in Oregon?
(open-end responses)

- Natural beauty
- Clean air and water
- Outdoor recreation opportunities
- Sense of community/neighborliness
- Climate

Protection of environmental quality is considered a very important public service

Protection of water and air quality was ranked 3rd in importance out of 20 different public services (after K-12 education services and public safety like police and fire protection)

Importance around the environment can get lost with other pressing issues

Most Important Statewide and Local Issues
(open-end responses)

- Public education
- Jobs/economy
- Government spending/taxation

Specifically, reducing greenhouse gas emissions is not a top of mind issue, unprompted

There is greater concern for:

Air quality

Water quality

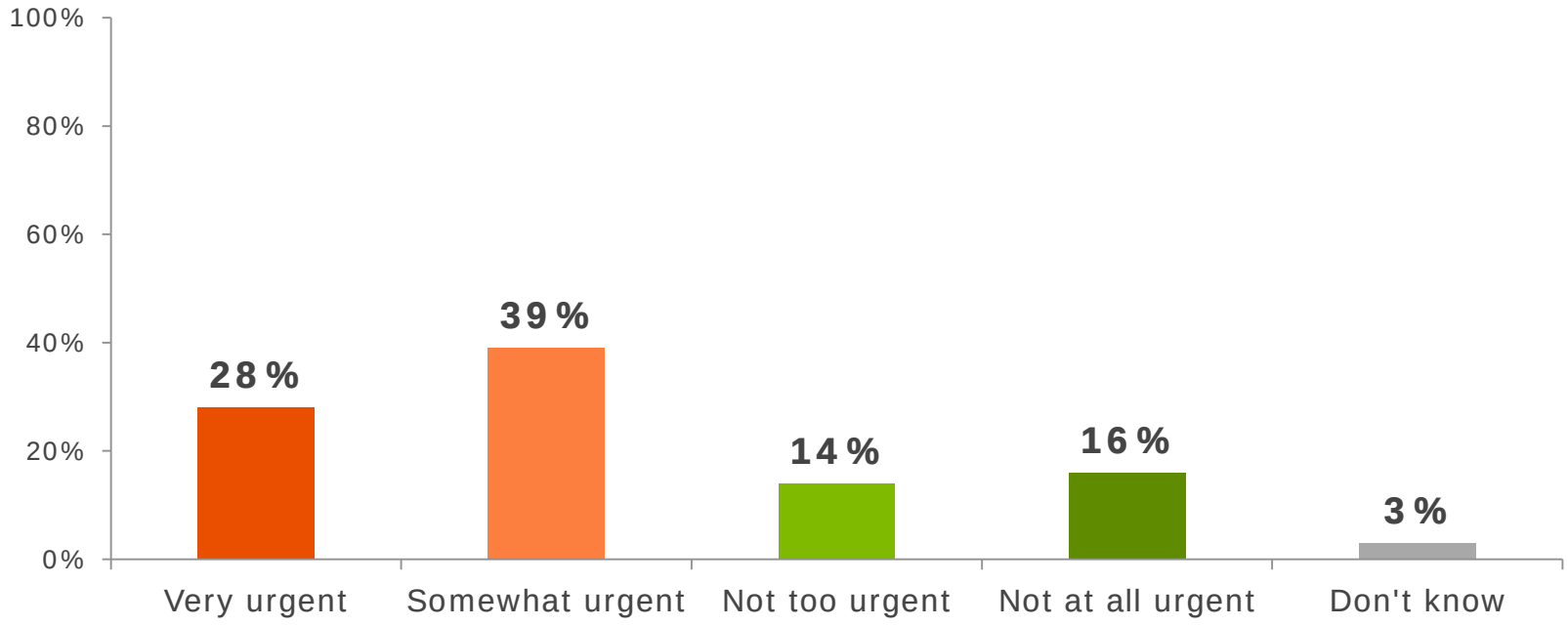
Forests

Wildlife habitat

Farmland

However, large majority of Oregonians agree reducing greenhouse gas is important for government to address

67% very/somewhat urgent
to address greenhouse gas emissions

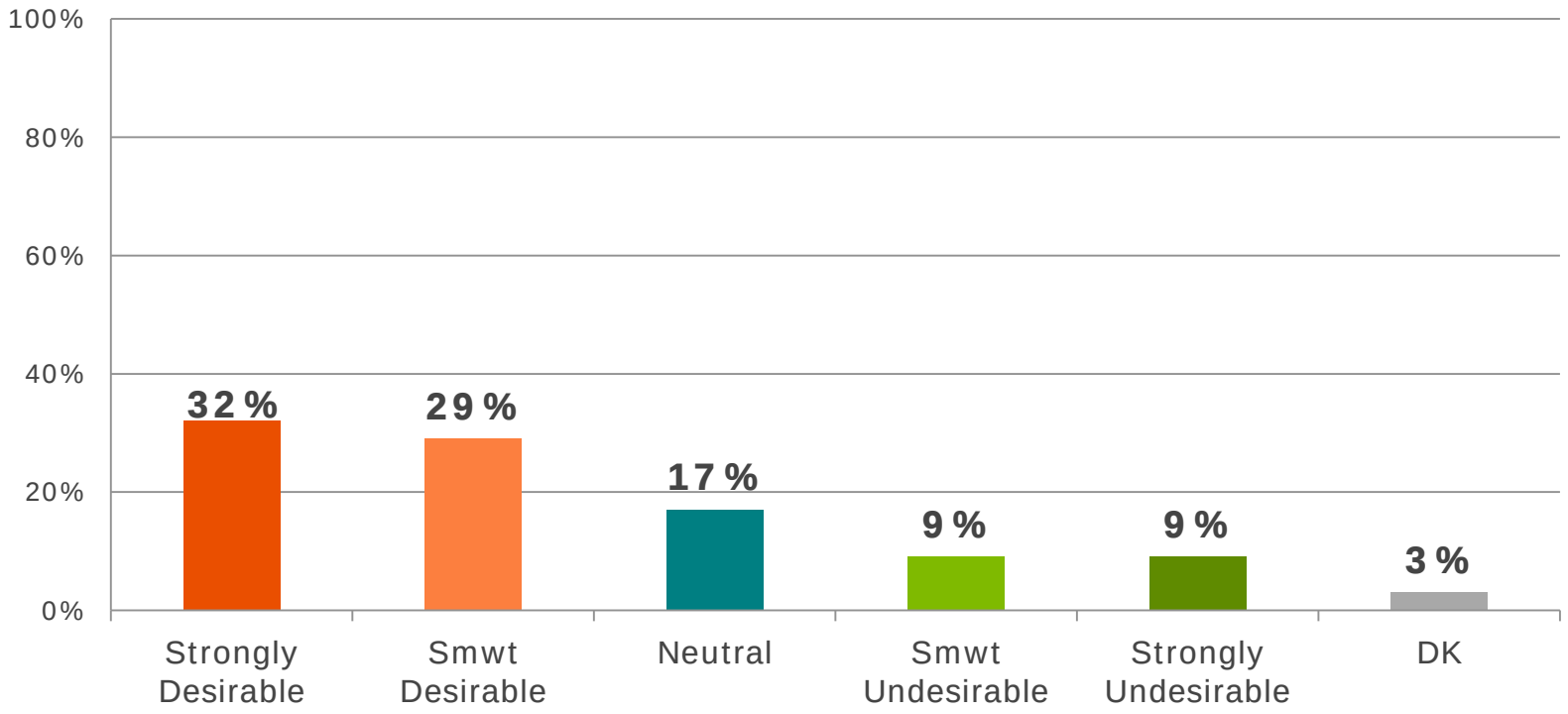


Source: Metro Climate Change, DHM Research; 2011

Finding validated in 2013 Oregon Values and Beliefs Study

61% strongly/somewhat desirable

There should be stronger government policies to reduce greenhouse gas emissions



2013 Oregon Values & Beliefs Study found Metro residents neutral or supportive of specific environmental actions related to the reduction of greenhouse emissions

Response Category	Total	Metro	W. Valley	Central	Eastern	Southern
A carbon emission tax established to discourage greenhouse gas emissions and used to invest in green jobs and technologies						
Strongly Desirable $$	21%	**23%**	22%	24%	16%	14%
Somewhat Desirable $	29%	**29%**	31%	27%	27%	26%
Neutral	20%	**19%**	19%	16%	11%	27%
Somewhat Undesirable	10%	**10%**	10%	12%	9%	12%
Strongly Undesirable	16%	**15%**	14%	17%	30%	21%
Don't know	3%	**4%**	3%	4%	6%	1%
A consumption tax to discourage waste and excess						
Strongly Desirable $$	18%	**18%**	20%	18%	16%	15%
Somewhat Desirable $	30%	**29%**	32%	22%	22%	34%
Neutral	22%	**22%**	21%	25%	15%	20%
Somewhat Undesirable	13%	**13%**	11%	11%	13%	17%
Strongly Undesirable	13%	**12%**	12%	18%	28%	12%
Don't know	3%	**4%**	3%	6%	5%	1%

Source: Oregon Values and Beliefs, DHM Research; 2013

2013 Oregon Values & Beliefs Study found Metro residents neutral or supportive of specific environmental actions related to the reduction of greenhouse emissions (continued)

Response Category	Total	Metro	W. Valley	Central	Eastern	Southern
Increase investments in public transportation						
Strongly Desirable $$	22%	**20%**	26%	20%	19%	23%
Somewhat Desirable $	34%	**36%**	33%	33%	27%	37%
Neutral	23%	**24%**	21%	24%	22%	25%
Somewhat Undesirable	10%	**8%**	12%	9%	12%	9%
Strongly Undesirable	7%	**8%**	6%	10%	16%	5%
Don't know	3%	**3%**	3%	4%	4%	1%
Tax breaks for conservation like weatherization & efficiency						
Somewhat desirable $$	26%	**24%**	29%	23%	32%	29%
Somewhat Desirable $	42%	**43%**	42%	42%	33%	43%
Neutral	19%	**20%**	19%	17%	19%	19%
Somewhat Undesirable	6%	**7%**	4%	11%	7%	6%
Strongly Undesirable	3%	**3%**	2%	3%	5%	1%
Don 't know	3%	**3%**	3%	4%	3%	1%

Source: Oregon Values and Beliefs, DHM Research; 2013

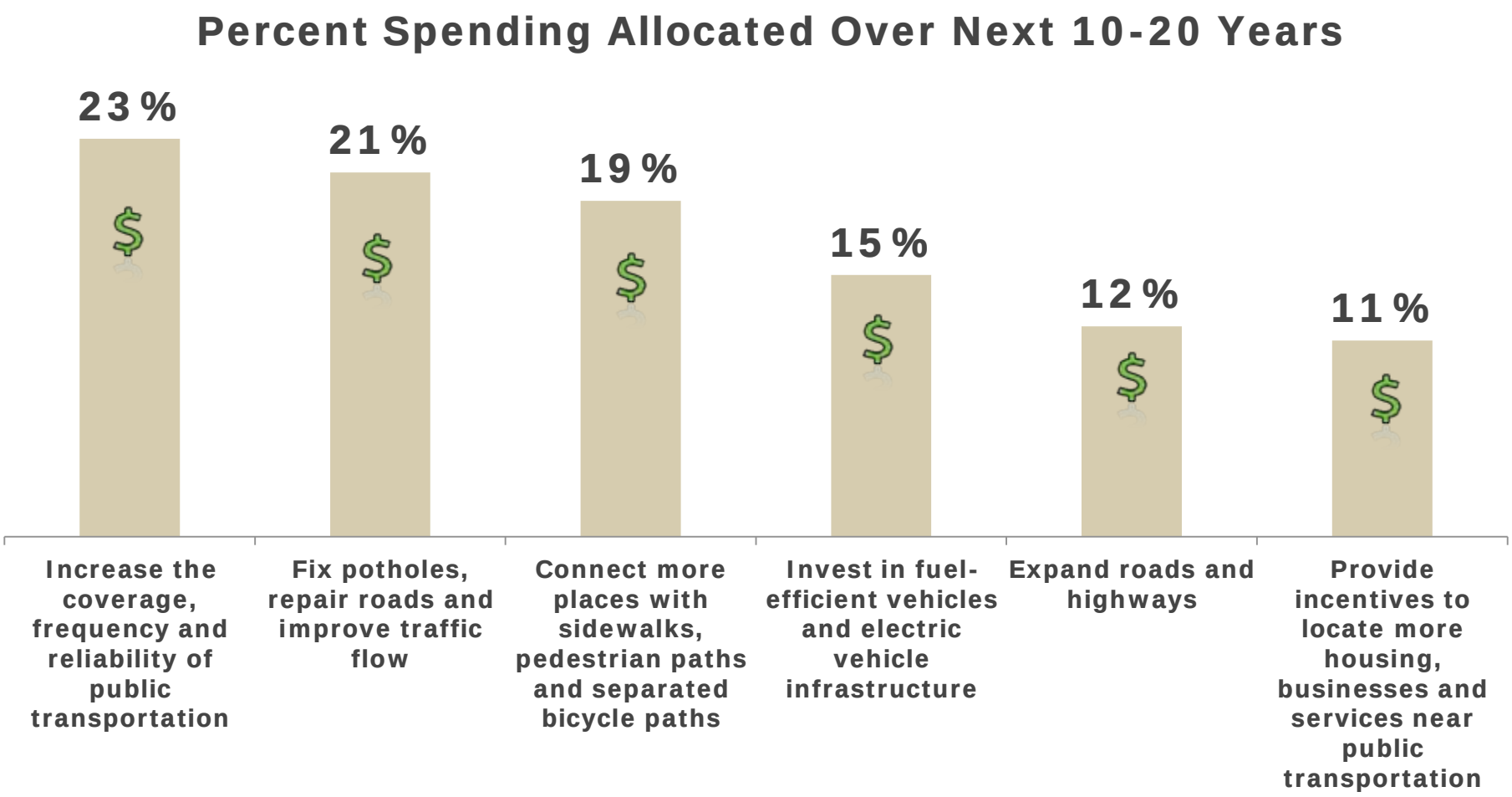
Transportation

2013 Oregon Values & Beliefs Study found residents in the Metro region support investments in public transit

Service	Very/Somewhat Important to Fund
Road & highway maintenance	71%
Public transportation like buses and trains	59%
New roads & highways	49%

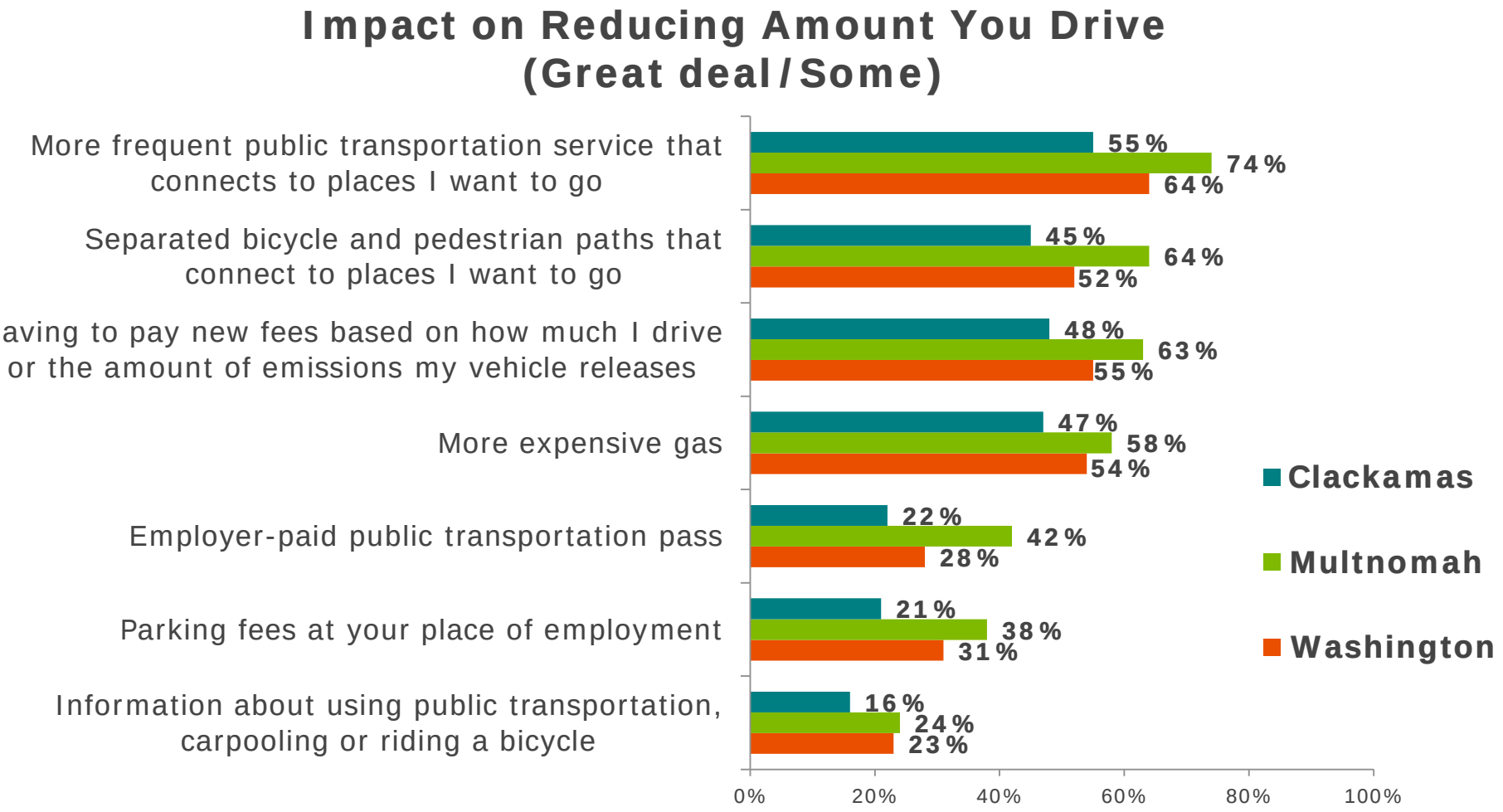
Response Category	Total	Metro	W Valley	Central	Eastern	Southern
A. We should invest more in roads for cars						
Feel strongly	16%	**18%**	14%	19%	19%	14%
Lean towards	22%	**19%**	25%	26%	27%	24%
B. We should invest in more in public transit						
Lean towards	30%	**31%**	30%	29%	26%	28%
Feel strongly	23%	**24%**	23%	19%	19%	25%
Don't know	8%	**8%**	9%	7%	9%	8%

Participants' highest priorities for spending are increasing the coverage, frequency, and reliability of public transportation, and on fixing potholes, repairing roads and improving traffic flow



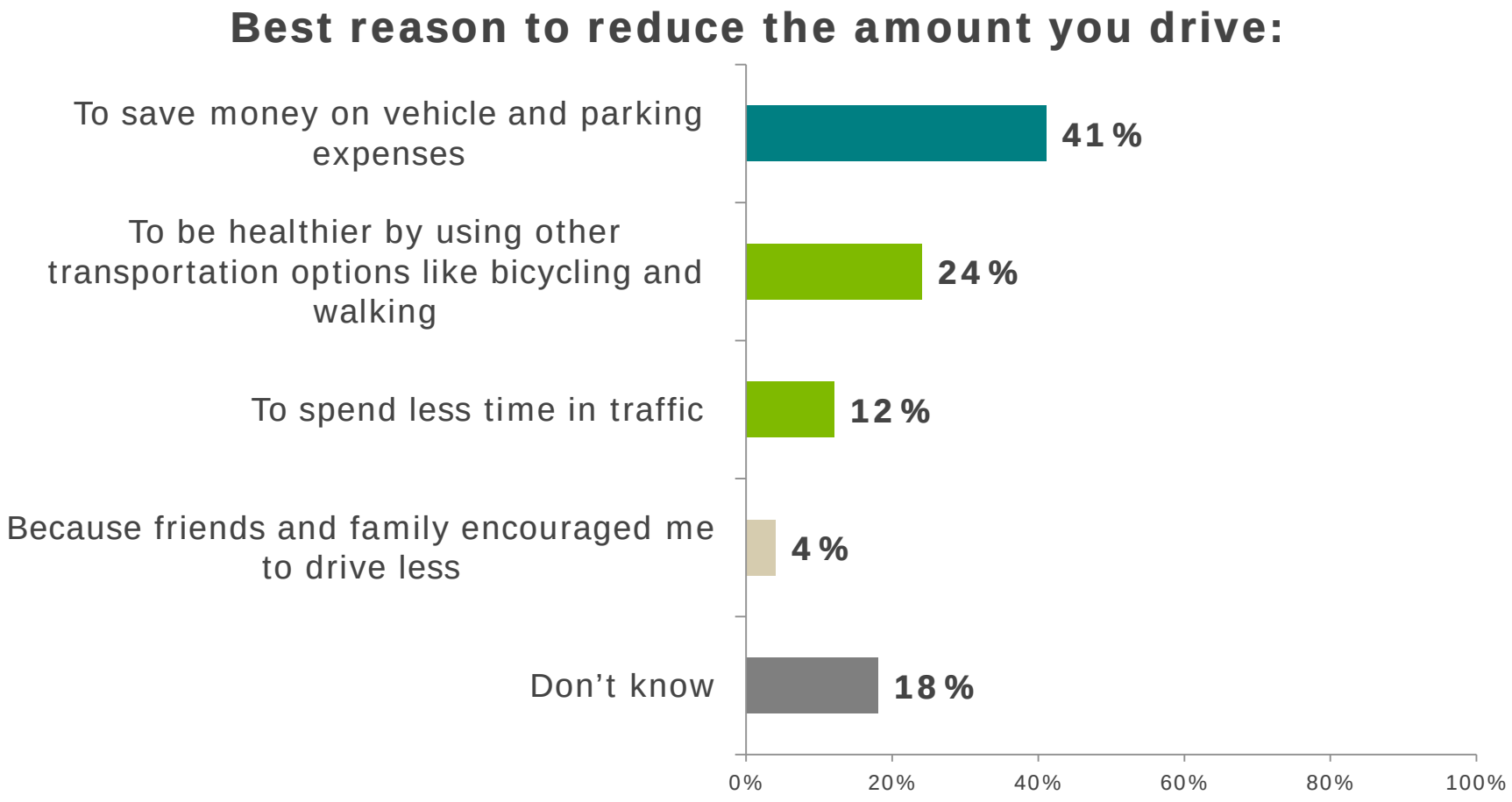
Source: Opt In Climate Smart Communities, DHM Research; 2013

Frequency and convenience is the low hanging fruit for public transit



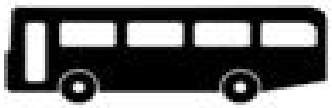
Source: Opt In Climate Smart Communities, DHM Research; 2013

Residents self-report that saving money is their biggest motivator to reduce the amount of driving



Source: Metro RTO Study; 2012

Metro RTO study shows an increase in people walking, using transit, and biking as a form of transportation



	2010	2012
	23%	33%
	8%	20%
	6%	9%

Source: Metro RTO Study; 2012

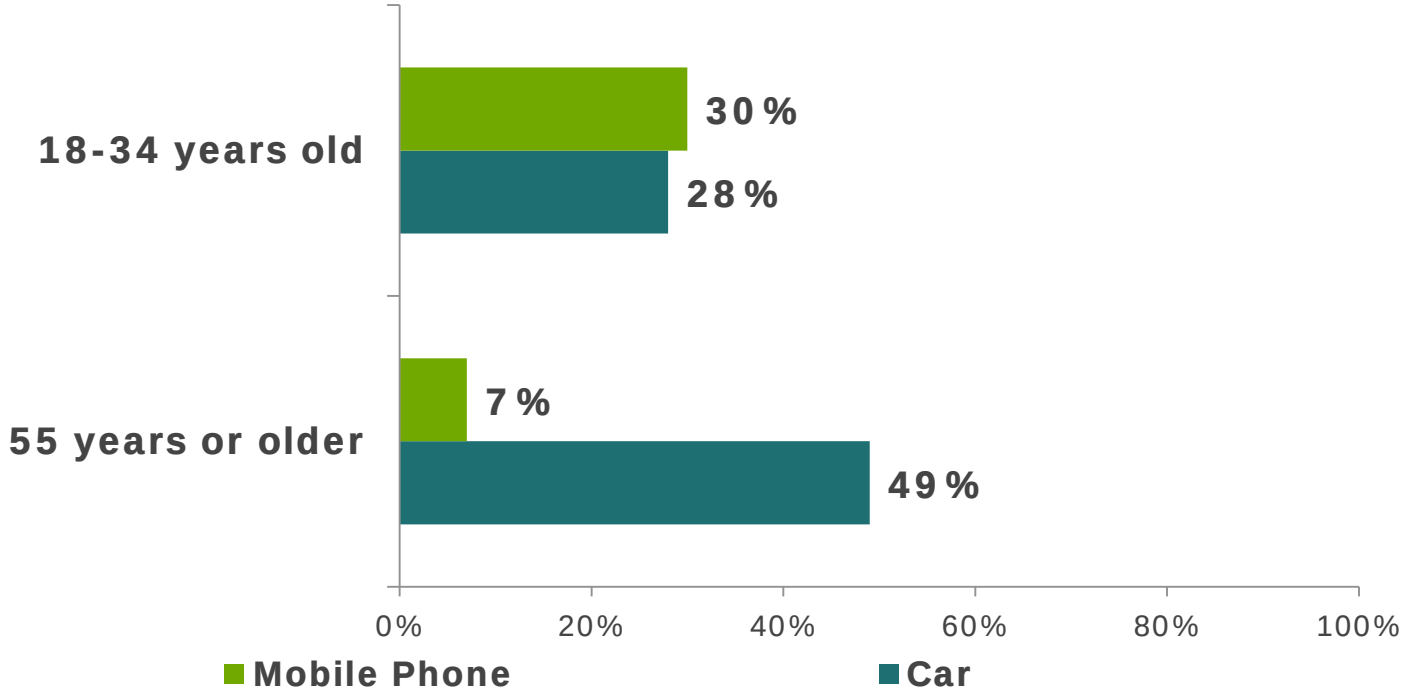
Millennials (born 1983-2000) are leading the change in transportation trends

Recent study by U.S. PIRG Education Fund found Millennials:

- Drove 23% fewer miles on average in 2009 than in 2001—the greatest decline in driving of any age group
- More open to non-driving forms of transportation
- More likely to live in urban and walkable neighborhoods
- First generation to fully embrace mobile Internet-connected technologies spawning new transportation options

Recent study by Zipcar shows declining importance of cars among Millennials

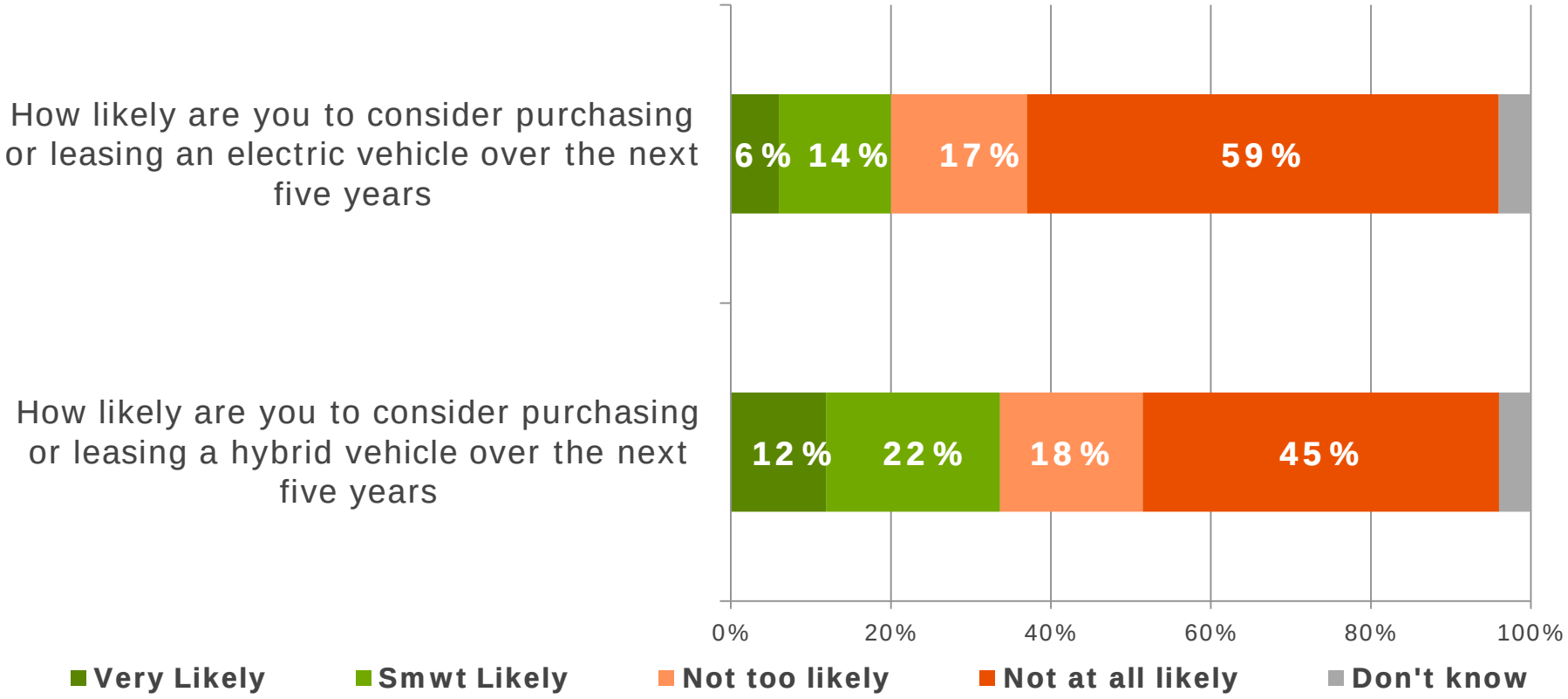
In your daily routine, losing which piece of technology would have the greatest negative impact on you?



Source: Zipcar; 2010

Residents tend to be more receptive to the idea of purchasing a hybrid vehicle than an electric vehicle

Likeliness To Purchase Electric / Hybrid Vehicles



Source: ODOT/DHM; 2013

Land Use

29.

2013 Oregon Values & Beliefs Survey showed Metro area residents value farm land

Response Category	Total	Metro	W Valley	Central	Eastern	Southern
A. New development should occur within existing cities and towns to save farmland and stop sprawl						
Feel strongly	36%	**40%**	34%	34%	35%	34%
Lean towards	30%	**29%**	33%	29%	28%	26%
B. New development should be allowed to occur outside urban growth boundaries						
Lean towards	17%	**15%**	18%	18%	22%	20%
Feel strongly	9%	**8%**	8%	13%	8%	10%
Don't know	8%	**7%**	7%	6%	6%	10%

29.

New population growth will be directed toward existing cities and towns, not into natural areas and farmlands

Response Category	Total	Metro	W. Valley	Central	Eastern	Southern
Probability						
Very likely	22%	**22%**	19%	26%	26%	23%
Somewhat likely	38%	**36%**	41%	33%	40%	37%
Neutral	14%	**14%**	16%	11%	10%	14%
Somewhat unlikely	16%	**16%**	15%	18%	10%	18%
Very unlikely	6%	**7%**	5%	4%	6%	5%
Don't know	4%	**3%**	4%	7%	7%	2%
Desirability						
Very desirable	31%	**37%**	29%	24%	24%	22%
Somewhat desirable	27%	**23%**	32%	25%	20%	32%
Neutral	21%	**21%**	20%	23%	26%	22%
Somewhat undesirable	10%	**8%**	9%	14%	13%	14%
Very undesirable	5%	**4%**	4%	9%	11%	4%
Don't know	4%	**4%**	3%	4%	7%	3%

The choice of language is important in describing land use actions

Looking out into the future, over the next 25 years or so, please think about the kind of place you want the Portland metropolitan area to be to live, work, and play in?

Response Category N=600	Strongly Support	Somewhat Support	Neither Support or Oppose	Somewhat Oppose	Strongly Oppose	Don't know
Building more compact neighborhoods	16%	20%	14%	21%	27%	2%
Building more neighborhoods where people can get where they need to go by walking, biking, or taking public transit	55%	25%	5%	6%	8%	1%

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1.1 | Summary

Tri-county residents and those across the state show strong support for protection of the environment and often will prioritize this over the economy.

- However, climate change or greenhouse gas is not a top of mind issue for the public. Air and water quality are mentioned most when it comes to the environment.
    - Further messaging is needed for the public to connect better air and water quality to reducing greenhouse gas emissions.
- Oregonians are most optimistic about the future of Oregon because of the state's environmental values. Environmental awareness and protection is the number one reason Oregonians mention why Oregon will be a better place to live in 10 years.
- Furthermore, a majority contend that environmental protection should be given priority over economic growth.
- A majority of residents support a law to reduce greenhouse gas emissions to 10% below 1990 levels by 2020, of which, over half show "strong" support.
- A strong majority of Oregonians believe that climate change should be a very/somewhat urgent priority to address. However, unprompted, the specific mention of climate change or greenhouse gas emission is low and often in the single percentages.

While driving alone continues to be the most frequent mode of transportation in the region, alternative modes like walking, bicycling, and transit show an upward trend.

- Oregonians generally support more investment in public transit and consider these investments a higher priority over new roads. Overall support for public transit has been increasing over the past decade in the region and across Oregon.
    - Frequency and convenience is the low hanging fruit for increasing public transit use.
- The trend in alternative mode use may continue as younger generations adopt non-vehicle lifestyles. Millennials (people born between 1983 and 2000) are far more likely to be multi-modal than previous generations.
    - They are embracing alternatives like walking, bicycling, and transit use.
    - They are adopting car-sharing and ride-sharing.
    - Many are choosing not to own a vehicle or even get a driver's license.
    - Millennials also had the greatest decline in driving over the past decade of any age group.
- Saving money is the most significant motivator to reduce the amount of driving.
    - Personal health benefits are important but less so than saving money.

Metro residents prefer that new development occur within existing cities and towns to protect against sprawl.

- A majority of Metro residents show preference for development to occur within existing cities.
    - A lower level of support was seen for building more compact neighborhoods.
- There is strong support for developing neighborhoods that offered more eco-friendly modes of transport (walking, biking, or public transit).

1.2 | Fact Sheet

Greenhouse Gas Emission and Climate Change

- Oregonians mentioned environmental awareness (24%) as the number one reason Oregon will be a better place to live in 10 years, even ahead of a stronger economy and economic growth (18%). *Source: 2013 Oregon Values and Beliefs Study*
- 62% of Oregonians agreed that protection of the environment should be given priority even at the risk of slowing economic growth, while 30% wanted more emphasis in the economy. *Source: 2013 Oregon Values and Beliefs Study*
- 67% in the tri-county said climate change should be a very/somewhat urgent priority for their local government to address. *Source: 2011 Metro Climate Change Study*
- 58% in the tri-county would support a law to reduce emissions to 10% below 1990 levels by 2020, with one third (33%) supporting it "strongly." A common reason was to maintain and improve environmental conditions *Source: 2011 Metro Climate Change Study*

Transportation and Land Use

- Residents in the Metro region support investments in public transit (59%) more so than new roads and highways (49%). *2013 Metro Opt in Climate Change Study*
- When answering a forced choice question about investing in cars or public transportation, half of those living in the Metro Region (55%) agreed that we should invest more in public transit, while fewer than four in ten (37%) would rather invest more in roads for cars. *2013 Metro Opt in Climate Change Study*
- 69% believe more frequent public transportation that connects to their desired destination would have a great deal or some impact on reducing the amount they drive. *2013 Metro Opt in Climate Change Study*
- Metro Regional Transportation Options study found more people walked, bicycled, and used public transit for transportation between 2010 and 2012 (3% increase in bicycling, 10% increase in walking, 12% increase in public transportation). *Source: 2012 Metro RTO Study*
- 41% of Metro residents report that saving money is their biggest motivator to reduce the amount they drive. While not as important, personal health benefits were the biggest motivator for 24% of respondents. *Source: 2012 Metro RTO Study*
- 57% in the tri-county said they would walk or bike more often if there were more bike paths and sidewalks in their neighborhood. *Source: 2013 Metro Opt in Climate Change Study*
- 59% of Oregonians rated public transportation important to fund, while 49% felt that way about new roads and highways. *Source: 2013 Oregon Values and Beliefs Study*
- Over 40% of Oregonians were very or somewhat likely to consider purchasing a hybrid vehicle in the near future, and 19% would consider an electric vehicle. *Source: 2013 Road Usage Charging Study*
- 77% "strongly" supported developing neighborhoods that offered more eco-friendly modes of transport (walking, biking, or public transit). *Source: 2011 Opt In Climate Smart Communities Study*
- Presented with two opposing statements, 69% of Metro residents agree that new development should occur within existing cities and towns to save farmland and stop sprawl rather than allowing new development to occur outside of the urban growth boundary. *Source: 2013 Oregon Values and Beliefs Study*
- 60% of Metro residents desire new population growth to be directed toward existing cities and towns, not into natural areas and farmlands. *Source: 2013 Oregon Values and Beliefs Study*