

Target Rulemaking Advisory Committee Recommendations on Greenhouse Gas Reduction Targets

Target Recommendations to LCDC per House Bill 2001 and Senate Bill 1059

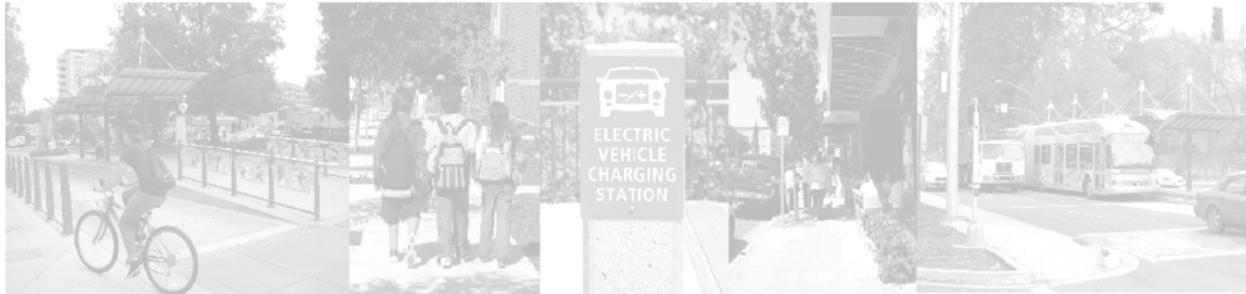


Table of Contents

Executive Summary	3
Target Rulemaking Advisory Committee Process.....	5
Background	7
<i>Oregon’s Greenhouse Gas Emissions Reduction Goals.....</i>	<i>7</i>
<i>Oregon Sustainable Transportation Initiative.....</i>	<i>8</i>
<i>Statewide Transportation Strategy.....</i>	<i>9</i>
<i>Metropolitan Scenario Planning</i>	<i>9</i>
<i>Support for Metropolitan Scenario Planning.....</i>	<i>11</i>
Target Rule Recommendations.....	12
<i>Overview of Statutory Requirements</i>	<i>12</i>
<i>Reductions Needed by 2035 to Meet the 2050 Greenhouse Gas Reduction Goal</i>	<i>14</i>
<i>Expected Improvements in Vehicle Technologies and Fuels through 2035</i>	<i>15</i>
<i>Equitably Allocating Responsibility for Reductions Among Metropolitan Areas.....</i>	<i>18</i>
<i>Accounting for Congestion and Congestion Reduction Measures.....</i>	<i>19</i>
<i>Recommended Greenhouse Gas Reduction Targets.....</i>	<i>20</i>
Major Issues and Considerations.....	23
<i>The target rule should clearly explain the purpose of targets and how they relate to land use and transportation scenario planning as provided in House Bill 2001 and Senate Bill 1059</i>	<i>23</i>
<i>The target rule should include a clear description of the process and assumptions that were used in target setting.....</i>	<i>24</i>
<i>The target rule should include a provision requiring LCDC to review and revise the targets to reflect new information about policies and actions to reduce greenhouse gas emissions</i>	<i>24</i>
<i>The targets should be designed to allow local governments flexibility on ways to meet the reduction targets....</i>	<i>25</i>
<i>Reduction targets should allow local governments to count actions that they have already taken to accomplish greenhouse gas reductions</i>	<i>26</i>
<i>Targets should reflect the difference in the abilities of metropolitan areas to meet the greenhouse gas reductions.....</i>	<i>26</i>
<i>Reduction targets should take into account the amount of through travel and regional travel (i.e., travel that begins or ends outside a metropolitan area) which occurs in each metropolitan area</i>	<i>27</i>
<i>Scenario planning will require additional funding.....</i>	<i>27</i>
<i>Scenario planning should be conducted as part of comprehensive statewide effort to reduce greenhouse gas emissions and climate change</i>	<i>28</i>
Supporting Information.....	30



Executive Summary

House Bill 2001 (Regular Session 2009) and Senate Bill 1059 (Special Session 2010) direct the Land Conservation and Development Commission (LCDC) to adopt by June 1, 2011, rules setting targets for Oregon's metropolitan areas to use as they conduct land use and transportation scenario planning to reduce greenhouse gas emissions from light vehicle travel. Scenario planning is a way to explore the benefits and costs of possible local efforts in combination with state efforts to reduce greenhouse gas emissions from light vehicle travel.

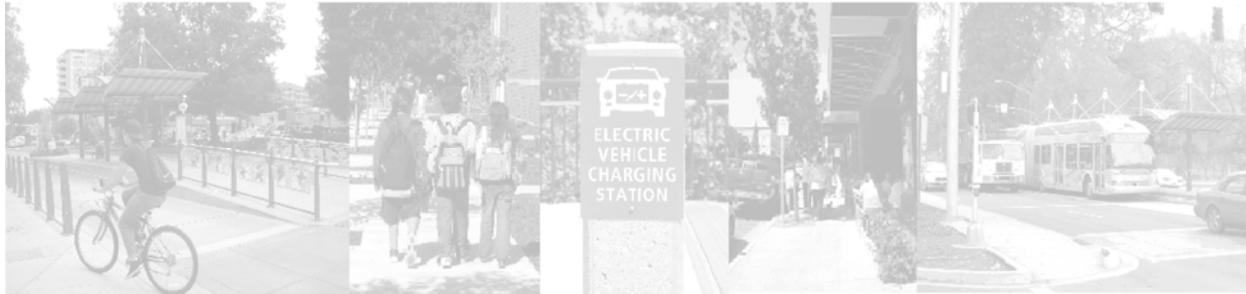
Targets and scenario planning are part of a broader statewide effort to reduce Oregon's greenhouse gas emissions to 75% below 1990 levels by the year 2050. Targets and scenario planning are also closely tied to other state-level efforts, including the development by the Oregon Department of Transportation (ODOT) of a statewide strategy for reducing greenhouse gas emissions from the transportation sector.

In June 2010, LCDC appointed the Target Rulemaking Advisory Committee (TRAC) to advise and assist LCDC in developing a draft administrative rule and recommend proposed targets. TRAC met seven times between September 2010 and March 2011 to develop recommendations to LCDC. In developing its recommendations, TRAC considered relevant statutory requirements; reviewed information from ODOT, the Oregon Department of Environmental Quality (DEQ), and the Oregon Department of Energy (ODOE) in their *Agencies' Technical Report* about needed reductions and expected changes in vehicle technologies and fuels; and evaluated how targets might be met through land use and transportation scenario planning.

This report outlines TRAC's recommendations for targets for the state's six metropolitan areas—Portland, Eugene-Springfield, Salem-Keizer, Rogue Valley, Bend and Corvallis—for LCDC to fulfill its obligations under House Bill 2001 and Senate Bill 1059. The report also includes recommendations from TRAC about additional work to implement the targets. TRAC concludes and recommends:

1. The *Agencies' Technical Report* recommends that emissions from light vehicle travel in metropolitan areas need to be reduced to 52% below 1990 levels by 2035 in order to be on track to meet the 2050 goal. To account for expected population growth, emissions *per capita* need to be reduced to 74% below 1990 levels by 2035.

2. The *Agencies' Technical Report* provides a range of plausible alternatives for the use of improved vehicle technologies and fuels. An aggressive but reasonable mid-level baseline assumption is Technology Level 3 and Fleet Level 3. These improvements to vehicle technologies and fuels and changes to the vehicle fleet are expected to accomplish roughly four-fifths of the reductions needed to meet the 2035 goal.
3. Targets should specify *additional* reductions needed beyond baseline assumptions, which are to be accomplished through a combination of local, state and federal efforts outlined in a land use and transportation scenario.
4. Targets should be expressed as percentage reductions *per capita* in order to equitably account for differences in population growth rates among metropolitan areas.
5. Targets should be measured from the reference year 2005, for which better data is available.
6. Targets should be to reduce emissions *per capita* from 2005 levels by 2035 by an *additional*:
 - 21% for the Portland metropolitan area;
 - 21% for the Eugene-Springfield metropolitan area;
 - 18% for the Salem-Keizer metropolitan area;
 - 24% for the Rogue Valley metropolitan area;
 - 25% for the Bend metropolitan area; and
 - 23% for the Corvallis metropolitan area.
7. LCDC should review the targets by June 1, 2015, in light of new information.



Target Rulemaking Advisory Committee Process

In June 2010, the Land Conservation and Development Commission (LCDC) directed the Department of Land Conservation and Development (DLCD) to begin the rulemaking process to meet the legislative requirements outlined in House Bill 2001 and Senate Bill 1059. LCDC appointed the Target Rulemaking Advisory Committee (TRAC), whose members represent local governments and other groups that will be affected by the proposed rule. The TRAC's charge was to assist DLCD and LCDC in drafting a proposed rule. The TRAC met seven times between September 2010 and March 2011. The TRAC members are:

- John VanLandingham, Committee Chair, LCDC
- Gail Achterman, Oregon Transportation Commission
- Ken Williamson, Environmental Quality Commission
- Angus Duncan, Oregon Global Warming Commission
- Carlotta Collette, Metro Council
- Mark Capell, Bend City Council
- Linda Modrell, Benton County Board of Commissioners
- Dan Clem, Salem City Council
- Al Densmore, Medford City Council
- Alan Zelenka, Eugene City Council
- Andrea Riner, Lane Council of Governments
- Tom Schwetz, Lane Transit District
- John Oberst, Mayor, City of Monmouth
- Sarah Miller, Business Oregon
- Kelly Clifton, Portland State University
- Craig Campbell, Victory Group (for AAA)
- Mary Kyle McCurdy, 1000 Friends of Oregon
- Don Greene, State Citizen Involvement Advisory Committee (CIAC)
- State Representative Terry Beyer, District 12, Springfield

During the TRAC meetings, the committee reviewed technical information and identified and discussed the issues to be addressed in the rule. In the course of its meeting the TRAC:

- Reviewed the statutory requirements in House Bill 2001 and Senate Bill 1059;

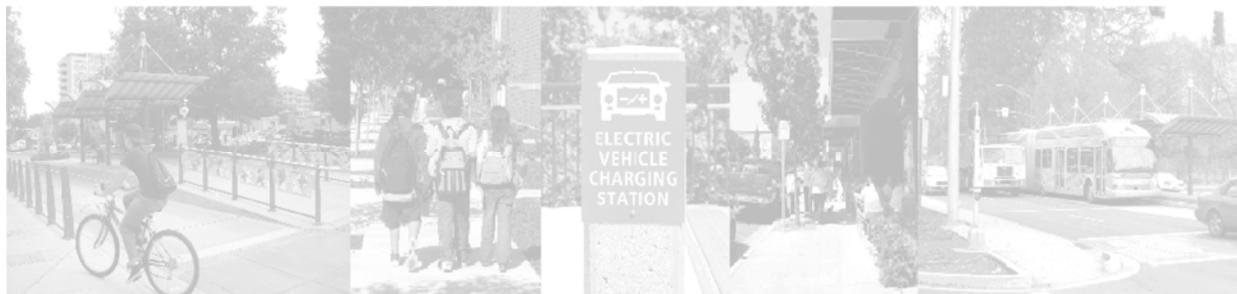
- Identified and discussed the issues pertaining to local scenario planning to meet the targets;
- Reviewed modeling and analysis of greenhouse gas emissions;
- Reviewed and discussed the *Agencies' Technical Report*; and
- Reviewed and commented on the Statement of Need & Fiscal Impact and the Housing Cost Impact Statement.

TRAC's recommendations to LCDC represent a consensus of the TRAC members. The TRAC meetings were noticed, open to the public, and the TRAC's agenda provided an opportunity for public comment.

The TRAC process was facilitated by Jamie Damon and other staff from Oregon Consensus.

In addition to its regular meetings, the metropolitan area representatives on the TRAC invited DLCD staff to discuss with elected officials, staff and others in their communities the rulemaking process, and the role of technology and changing land use patterns and transportation systems in reducing greenhouse gas emissions from light vehicle travel. The TRAC considered these comments in preparing its recommendation to LCDC.¹

¹ A summary of workshop comments is available at <http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/Mtg5/TRAC5-WorkshopsSummary.pdf>.



Background

Targets and metropolitan land use and transportation scenario planning are part of statewide efforts to respond to the challenges of climate change, in particular, efforts to reduce greenhouse gas emissions to sustainable levels. Scenario planning is a way to explore the benefits and costs of possible local efforts in combination with state efforts to reduce greenhouse gas emissions from light vehicle travel.

Oregon's Greenhouse Gas Emissions Reduction Goals

In 2007 with House Bill 3543, the Oregon Legislature found that “[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources and environment of Oregon” and that “[a]ctions to reduce greenhouse gas emissions will reduce Oregon’s reliance on foreign sources of energy, lead to the development of technology, attract new businesses to Oregon and increase energy efficiency throughout the state, resulting in benefits to the economy and to individual businesses and residents.”

The Legislature declared “that it is the policy of [the state of Oregon] to reduce greenhouse gas emissions in Oregon pursuant to the following greenhouse gas emissions reduction goals:

- By 2010, arrest the growth of Oregon’s greenhouse gas emissions and begin to reduce greenhouse gas emissions.
- By 2020, achieve greenhouse gas levels that are 10 percent below 1990 levels.
- By 2050, achieve greenhouse gas levels that are at least 75 percent below 1990 levels.”

The Legislature also established the Oregon Global Warming Commission to “recommend ways to coordinate state and local efforts to reduce greenhouse gas emissions in Oregon consistent with the greenhouse gas emissions reduction goals.”²

As Figure 1 shows, the transportation sector accounts for roughly one-third of all greenhouse gas emissions in Oregon. Light vehicles (cars, SUVs, vans, and pickup trucks) account for roughly 60% of the emissions from the transportation sector, or roughly 20%

² House Bill 3543 is codified at ORS 468A.200 to 260, available at <http://www.leg.state.or.us/ors/468a.html>.

of Oregon's total emissions.³ Metropolitan areas are in a position to take steps to reduce emissions from light vehicles.

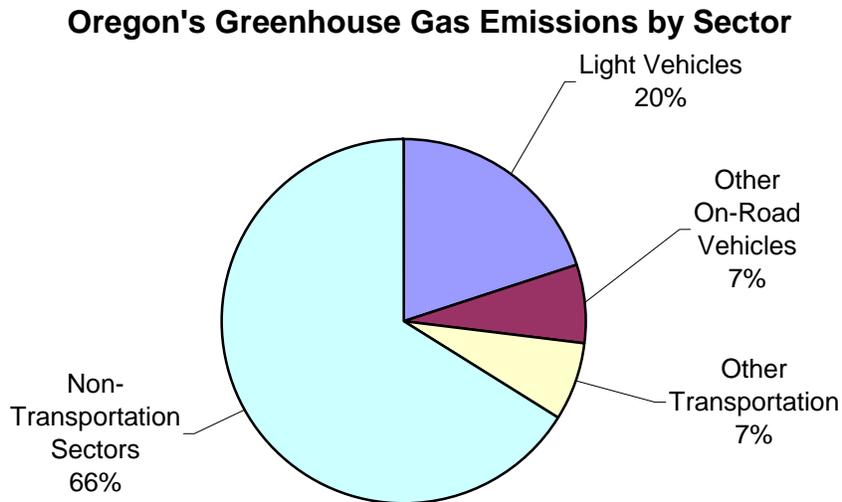


Figure 1. Light vehicles account for roughly 20% of Oregon's total greenhouse gas emissions.

Oregon Sustainable Transportation Initiative

Targets and metropolitan land use and transportation scenario planning are part of the Oregon Sustainable Transportation Initiative, which aims to reduce Oregon's greenhouse gas emissions from the transportation sector. Established by House Bill 2001 (2009 Regular Session)⁴ and Senate Bill 1059 (2010 Special Session),⁵ this effort consists of several components:

- Statewide Transportation Strategy,
- Metropolitan Scenario Planning, and
- Support for Metropolitan Scenario Planning.

³ *Legislative Concepts Report: Responding to House Bill 2186 Section 10*, Metropolitan Planning Organization Greenhouse Gas Task Force, 1/11/2010, p. 5, available at <http://www.oregon.gov/ODOT/TD/TP/docs/HB2186page/Report.pdf>.

⁴ House Bill 2001 was signed into law as Oregon Laws 2009, chapter 865, available at <http://www.leg.state.or.us/09orlaws/sess0800.dir/0865.htm>.

⁵ Senate Bill 1059 was signed into law as Oregon Laws 2010, chapter 85, available at <http://www.leg.state.or.us/10ssorlaws/0085.htm>.

Statewide Transportation Strategy

Senate Bill 1059 directs the Oregon Transportation Commission to adopt, as part of the Oregon Transportation Plan, a “statewide transportation strategy on greenhouse gas emissions to aid in achieving [Oregon’s greenhouse gas emissions reduction goals].”

The Statewide Transportation Strategy, currently being developed by the Oregon Department of Transportation (ODOT), with the assistance of advisory committees and consultants, will seek to achieve significant reductions in greenhouse gas emissions, both inside and outside metropolitan areas of the state, from all modes of transportation: light vehicles, heavy vehicles, air, rail and marine. The Statewide Transportation Strategy could include efforts to encourage the use of improved vehicle technologies and fuels; efforts to improve the state’s transportation system and provide more options; and efforts to encourage people to travel less or in ways that produce fewer emissions.

Metropolitan Scenario Planning

In 2009 with House Bill 2186,⁶ the Legislature established the Metropolitan Planning Organization Greenhouse Gas Task Force. The task force concluded that:

Revising transportation and land use plans in metropolitan areas will be a necessary part of a broader statewide effort to meet state greenhouse gas reduction goals. Planning our metropolitan areas in ways that build in transportation options can reduce the need for travel and significantly reduce greenhouse gas emissions from automobiles. The Task Force acknowledged that revising plans will be a challenging, long-term effort, and also concluded that it is also necessary, doable, and should start now. Done soon, and done well, it can help create safer, healthier, and more prosperous communities and expanded transportation choices for Oregonians, and can avoid the need for more dramatic measures later.⁷

Metropolitan scenario planning is a way to explore the benefits and costs of possible local efforts in combination with state efforts. An “alternative land use and transportation scenario” is a what-if vision. It outlines what a metropolitan area’s land use and transportation systems could look like in the future and suggests actions that, if implemented, would likely achieve such a vision. It can include local actions to change land use patterns, expand transportation options, and encourage the use of electric or other low-emission vehicles. It should assume and build on state and federal programs, including policies and incentives in the Statewide Transportation Strategy. This would include actions both inside and outside metropolitan areas, and actions to promote the use of improved vehicle technologies and fuels. Finally, it should be detailed enough to enable

⁶ House Bill 2186 was signed into law as Oregon Laws 2009, chapter 754, available at <http://www.leg.state.or.us/09orlaws/sess0700.dir/0754.htm>.

⁷ *Legislative Concepts Report: Responding to House Bill 2186 Section 10*, Metropolitan Planning Organization Task Force, 1/11/2010, p. 1, available at <http://www.oregon.gov/ODOT/TD/TP/docs/HB2186page/Report.pdf>.

estimates of the benefits and costs of implementing it, including an estimate of the likely reduction in greenhouse gas emissions from light vehicle travel inside the metropolitan area.

Results of metropolitan scenario planning—especially the benefits and costs of scenarios—will help the Legislature, the Oregon Global Warming Commission, the Oregon Transportation Commission, and others determine how to better respond to the challenges of climate change.

Requirements to conduct metropolitan scenario planning vary, as described below.

Portland metropolitan area. House Bill 2001 directs local governments in the Portland metropolitan area to conduct scenario planning. On or before January 1, 2012, local governments are required to develop two or more alternative land use and transportation scenarios that accommodate planned population and employment growth while meeting greenhouse gas reduction targets set by LCDC.

Local governments in the Portland metropolitan area are further required to select a preferred scenario and to amend comprehensive plans and land use regulations to be consistent with the preferred scenario. House Bill 2001 anticipates that significant progress on these efforts will be made by early 2014.

Eugene-Springfield metropolitan area. House Bill 2001 directs local government in the Eugene-Springfield metropolitan area to conduct scenario planning. Local governments are required to develop two or more alternative land use and transportation scenarios that accommodate planned population and employment growth while achieving a reduction in greenhouse gas emissions from light vehicles, and to select a preferred scenario.

House Bill 2001 does not require local governments to amend comprehensive plans and land use regulations to be consistent with the preferred scenario. Moreover, House Bill 2001 does not require that such scenarios meet reduction targets set by the LCDC. Rather local governments are directed to “take into account the amount of greenhouse emissions, caused by [light vehicles], that need to be reduced in 2035 in order to meet [Oregon’s greenhouse gas emissions reduction goals].”

Other metropolitan areas. In 2010 with Senate Bill 1059, the Legislature, anticipating that metropolitan areas other than Portland *might* similarly develop alternative land use and transportation scenarios, directed LCDC to set reduction targets to guide such scenarios. Senate Bill 1059 does not *require* metropolitan areas other than Portland to undertake scenario planning subject to these targets.

Support for Metropolitan Scenario Planning

Senate Bill 1059 directs ODOT and DLCD to provide various kinds of assistance to local governments conducting metropolitan scenario planning:⁸

- **Scenario Planning Guidelines** for developing and evaluating alternative land use and transportation scenarios;
- **Toolkit** to assist local governments in developing and executing actions and programs to reduce greenhouse gas emissions from light vehicles;
- **Public education** about the need to reduce greenhouse gas emissions from light vehicles and about the costs and benefits of reducing greenhouse gas emissions; and
- **Technical assistance and funding** to local governments required to conduct scenario planning, and a *Financing Report* estimating the cost to conducting scenario planning outside the Portland metropolitan area.⁹

⁸ For more information about other components of the Oregon Sustainable Transportation Initiative, visit <http://www.oregon.gov/ODOT/TD/TP/OSTI.shtml>.

⁹ Based on the best available information for the cost of regional transportation plan (RTP) elements similar to scenario planning for greenhouse gas emissions reduction in Oregon, and based on local and national efforts involving scenario planning, it is estimated that scenario planning, through selection of a preferred scenario, could cost from \$200,000 to \$1.5 million for each of the five metropolitan areas covered by Senate Bill 1059: Eugene-Springfield, Salem-Keizer, Rogue Valley, Bend, and Corvallis. Estimated costs do not necessarily take into account the unique aspects, needs, or relationships between each metropolitan planning organization (MPO) and associated counties and cities. Some costs may be more and some may be less because of these differences.

The Oregon Transportation Commission has designated \$5.9 million for the 2009–2011 biennium and \$8 million for the 2011–2013 biennium to support greenhouse gas emissions reduction planning mandated in House Bill 2001 and Senate Bill 1059, as well as least-cost planning work identified in House Bill 2001. The portion of funds for greenhouse gas emissions reduction planning is intended to support scenario planning in the state’s metropolitan areas and efforts by ODOT and DLCD. The \$5.9 million for the 2009–2011 biennium has been committed. A portion of the \$8 million designated for the 2011–2013 biennium will need to be used to support continuing work on statewide efforts including the Statewide Transportation Strategy, the Toolkit, and scenario planning work for Portland Metro and the Eugene-Springfield metropolitan area. It is recognized that at the current level of funding, it will take several biennia to support this work.

For more information, see the *Financing Report*, available at <http://www.oregon.gov/ODOT/TD/TP/docs/OSTI/FinanceRpt.pdf>



Target Rule Recommendations

TRAC's major responsibility has been to advise and assist LCDC and DLCD in developing targets and a target rule that responds to statutory requirements in House Bill 2001 and Senate Bill 1059. Much of the information to support TRAC's recommendations is drawn from the *Agencies' Technical Report*—a technical analysis prepared by ODOT, DEQ and ODOE. This section of the report reviews the key requirements in House Bill 2001 and Senate Bill 1059 that guide target rulemaking, summarizes relevant information and conclusions from the *Agencies' Technical Report*, and outlines TRAC's comments and recommendations to LCDC for target rulemaking to meet the statutory requirements.

Overview of Statutory Requirements

Metropolitan Reduction Targets

House Bill 2001 and Senate Bill 1059 direct LCDC, on or before June 1, 2011, to adopt rules identifying targets for the state's six metropolitan areas to use as they conduct land use and transportation scenario planning to reduce greenhouse gas emissions.¹⁰

¹⁰ For the Portland metropolitan area, House Bill 2001 §37(6) provides:

On or before June 1, 2011, the Land Conservation and Development Commission, in consultation with the Oregon Transportation Commission, shall adopt rules for metropolitan service districts. The rules must identify each district's needed reduction by 2035 in those greenhouse gas emissions caused by motor vehicles with a gross vehicle weight rating of 10,000 pounds or less, based upon the goals stated in ORS 468A.205 and taking into consideration the reductions in vehicle emissions that are likely to result by 2035 from the use of improved vehicle technologies and fuels. ...

For other metropolitan areas, Senate Bill 1059 §5(1) provides similarly:

Except as provided in subsection (3) of this section, on or before June 1, 2011, the Land Conservation and Development Commission, after consultation with and in cooperation with the Oregon Transportation Commission, local governments and metropolitan planning organizations, shall adopt rules identifying a reduction target for greenhouse gas emissions caused by motor vehicles with a gross vehicle weight rating of 10,000 pounds or less to be met by each region served by a metropolitan planning organization. The rules must reflect the greenhouse gas emissions reduction goals set forth in ORS 468A.205 and must take into consideration the reductions in vehicle emissions that are likely to result by 2035 from the use of improved vehicle technologies and fuels. The rules must also take into consideration methods of equitably allocating reductions among the metropolitan areas given differences in population growth rates. ...

In brief, the metropolitan reduction targets:

- Must be consistent with achieving Oregon's greenhouse gas emissions reduction goals;
- Must be for 2035;
- Must be for light vehicle travel;
- May be different for each metropolitan area;
- Should take into account differences in population and employment growth rates;
- Should take into account improved vehicle technologies and fuels; and
- Should be informed by the *Agencies' Technical Report*.

Agencies' Technical Report

To support LCDC in setting targets, House Bill 2001 and Senate Bill 1059 direct ODOT, DEQ and ODOE to provide technical information and recommendations to support target rulemaking. In broad terms, the agencies are required to estimate the level of emissions reduction that is needed in 2035, and estimate the amount of reduction that will result from expected changes to vehicle technology, fuels and the vehicle fleet. Specifically, the agencies are required to provide the following information:

- (a) Estimate of 1990 light vehicle miles traveled (VMT) for each metropolitan area (ODOT);
- (b) Estimate of 2035 light vehicle fleet for each metropolitan area (ODOT);
- (c) Estimate of 1990 greenhouse gas emissions from light vehicles for each metropolitan area (DEQ/ODOE);
- (d) Estimate of average greenhouse gas from light vehicles in 2035 for each metropolitan area (DEQ/ODOE);
- (e) Estimate of percentage reduction in light vehicle emissions to the year 2035 needed to achieve the 2050 greenhouse gas goals (DEQ/ODOE);
- (f) Calculation of estimated VMT for each metropolitan area needed to meet the 2035 goal (DEQ/ODOE); and
- (g) Modeling tools or methods to adjust VMT targets to account for congestion reduction measures (ODOT/DEQ/ODOE).

Agencies began work on the *Agencies' Technical Report* and supporting information in Fall 2010, using ODOT's GreenSTEP model and related analysis that ODOT is conducting to support development of the Statewide Transportation Strategy. As required by statute, the *Agencies' Technical Report* was completed and submitted to LCDC on March 1, 2011. The agencies presented the report to TRAC at its March 8 meeting.¹¹

¹¹ The transmittal memo for the *Agencies' Technical Report* is available at <http://www.oregon.gov/ODOT/TD/TP/docs/OSTI/TransMemo.pdf> and the full report is available at <http://www.oregon.gov/ODOT/TD/TP/docs/OSTI/TechRpt.pdf>.

Reductions Needed by 2035 to Meet the 2050 Greenhouse Gas Reduction Goal

Statutory Requirements

LCDC is required to set targets for greenhouse gas emission reductions for the year 2035. Since Oregon's adopted goals do not include a statewide goal for this particular year, House Bill 2001 and Senate Bill 1059 require LCDC to consider what reduction is needed by the year 2035 to support the longer term state goal of a 75% reduction in overall greenhouse gas emissions by the year 2050. House Bill 2001 and Senate Bill 1059 also direct that DEQ and ODOE provide a recommendation to LCDC about the level of reduction that should be achieved by 2035:

The Department of Environmental Quality and the State Department of Energy shall recommend to LCDC a percentage light vehicles emissions need to be reduced below their 1990 levels by 2035 in order to achieve an overall reduction of 75% below 1990 levels by 2050.

House Bill 2001—which applies to target setting for the Portland metropolitan area—includes an additional direction that the agencies assume that the reduction to 2035 will be a midpoint between the statutorily established goals for 2020 and 2050.¹² (The statutory goals call for reducing total greenhouse gas emissions by 10% below 1990 levels by 2020 and by 75% below 1990 levels by 2050.)

Agencies' Technical Report Analysis

The *Agencies' Technical Report* includes an evaluation of the statutory targets and a recommendation on reductions that are needed by 2035 to support meeting the 2050 goal.

Key findings from the *Agencies' Technical Report* are as follows:

- Because the state does not have an overall state plan or strategy allocating responsibility for achieving emissions reductions, the agencies recommend assuming that reductions in the transportation sector, and for light vehicle travel in metropolitan areas, will be the same as the overall statewide goals (i.e., a 75% reduction by the year 2050).
- The 2035 goal should assume steady progress throughout the planning period (i.e., through 2050) in reducing greenhouse gas emissions. To account for expected population growth, the agencies estimate that a 5.1% reduction in emissions per capita per year will be needed to meet the 2050 goal. The agencies find that the equal annual percent reduction method is more supportable than a straight-line reduction per year method because the straight-line method is overly optimistic. The straight-line method does not consider the potential for diminishing returns from improvements in vehicle technology.

¹² For the Portland metropolitan area, House Bill 2001 provides that DEQ and ODOE shall explain their reasons for any recommendations other than the midpoint between the 2020 (10%) and the 2050 (75%) emission reduction goals.

- Using the 5.1% annual rate of reduction per capita, the agencies calculate that *total* light vehicle emissions in 2035 need to be 52% below 1990 levels to be on track to achieve the 2050 goal of a 75% reduction below 1990 levels.
- To account for expected population growth, the 52% reduction in total emissions translates to a reduction *per capita* of 74% below 1990 levels by 2035.

TRAC Evaluation and Recommendation

TRAC supports the conclusions and recommendations provided in the *Agencies' Technical Report* which indicate that the appropriate mid-point goal for 2035 is a 52% reduction and that this corresponds with a *per capita* reduction of 74% below 1990 levels by 2035.

Overall, TRAC is supportive of these goals with the understanding that they are a starting point to guide scenario planning. As the agencies note, the state has yet to develop an overall strategy that assigns responsibility for achieving reductions to individual sectors. Given the statutory timeline for target setting, TRAC agrees that LCDC lacks information or guidance to assume that light vehicle travel in metropolitan areas should accomplish more or less of the needed statewide reduction goals. Similarly, TRAC is supportive of the assumptions about the level of reductions needed by 2035 to meet the statewide goal for 2050 and the underlying assumption of a constant year by year reduction in emissions per capita.

TRAC is supportive of these assumptions as a starting point because better information is not available and because the proposed rule includes provisions which require that LCDC review targets on a regular basis—starting in 2015. LCDC's review will include consideration of new information about vehicle technology, changes in state policy and other factors.

Expected Improvements in Vehicle Technologies and Fuels through 2035

Statutory Requirements

In setting targets, LCDC is required to take into consideration the reductions in vehicle emissions that are likely to result by 2035 from the use of improved vehicle technologies and fuels. To support LCDC's consideration of this factor, the Department of Environmental Quality and the State Department of Energy are required to estimate the average greenhouse gas emissions in 2035 emitted by light vehicles. Their estimate must, in turn, take into account the motor vehicles that the Department of Transportation predicts will have replaced existing vehicles. The statute further directs that the estimate must be based on available reasonable data provided by public or private entities concerning the improvements in vehicle technologies that will be available for use by 2035.

Agencies' Technical Report Analysis

The *Agencies' Technical Report* identifies and evaluates a range of plausible improvements in vehicle technologies and fuels and changes to the vehicle fleet to the year 2035. The agencies have identified four options for vehicle technologies and fuels; and three options

for changes to the vehicle fleet (which affects the rate at which new technologies are adopted).

All of the options presented by the agencies estimate that there will be significant improvements in technology and these improvements are likely to achieve most—but not all—of the reduction needed to meet the 2035 goal. The report estimates that improvements in vehicle technology, fuels and the vehicle fleet would result in a reduction in emissions for all metropolitan areas of between 58% and 71% *per capita*.

Key findings in the *Agencies' Technical Report* include:

- Average fuel efficiency of new passenger cars is expected to more than double—from about 28 miles per gallon today to between 60 to 68 miles per gallon in 2035.
- Correspondingly, greenhouse gas emissions per mile driven will drop sharply—from an average of about 600 grams per mile for passenger cars in 1990 to about 200 grams per mile in 2035.
- About 8% of the vehicle fleet in 2035 will be plug in hybrid electric vehicles (PHEVs) or electric vehicles (EVs).

The agencies also conclude that there is a high level of uncertainty about likely improvements in vehicle technologies and fuels and changes in the vehicle fleet. The rate of adoption of improved technologies depends on state policy actions that are likely to be addressed further by ODOT as it develops the Statewide Transportation Strategy. To address this uncertainty the agencies recommend that LCDC include provisions in the target rulemaking that acknowledges that the Statewide Transportation Strategy and scenario planning are expected to identify actions that could result in more rapid adoption of vehicle technology.

TRAC Evaluation and Recommendation

TRAC agrees with the analysis in the *Agencies' Technical Report* that there is a considerable range in possible improvements to vehicle technology and changes in the vehicle fleet. TRAC also agrees that changes vehicle fleet and adoption of new technology will depend in large part on federal and state policy actions, as well as market conditions that are difficult to predict.

TRAC has evaluated the range of technology and fleet assumptions included in the *Agencies' Technical Report* and recommends that LCDC use one of the mid-level assumptions about expected improvements in vehicle technology and changes in fleet in setting emission reduction targets. In particular, TRAC recommends that LCDC use the “Technology Level 3” and “Fleet Level 3” options provided in the *Agencies' Technical Report* as the basis for target rulemaking.

TRAC recommends mid-level options in general and “Technology Level 3, Fleet Level 3” combination for the following reasons:

- Mid-level values for improvements in vehicle technology represent a substantial improvement in vehicle efficiency. As summarized above, this level of change

represents increasing average fuel efficiency of new vehicles from about 28 mpg today to more than 60 mpg in 2035. TRAC believes that this increase, while aggressive, is reasonable given current federal rulemaking which proposes increasing automobile fuel economy standards for 2025 to between 47 and 62 mpg. This range of possible standards supports an assumption for additional increases in new car fuel efficiency standards to the year 2035.

- TRAC considered the higher level of technology included in “Technology Level 4”. TRAC notes that “Technology Level 4” anticipates that more than 50% of new passenger cars in 2035 would be electric vehicles, which would represent a dramatic increase in the availability and adoption of electric vehicles (plug in hybrids and battery electric vehicles.) While such changes are possible, TRAC considers these potentially over-optimistic at this time.
- TRAC recommends use of “Fleet Level 3,” which assumes that the mix of cars and light trucks will shift in favor of passenger cars over the next 25 years. “Fleet Level 3” estimates that the percentage of light trucks will drop from current levels, where light trucks are slightly less than 50% of light vehicles, back to 1990 levels, when light trucks made up about one-third of the light vehicle fleet. TRAC noted several factors that are likely to cause a shift in the fleet mix and a reduction in average vehicle age:
 - The historically high rate of light truck ownership corresponds with historically low gas prices. Gas prices are likely to increase significantly over the next 25 years encouraging a shift in consumer preferences toward passenger cars.
 - Recent high rates of light truck ownership are a result, in part, of federal policies and incentives that encouraged purchase of light trucks. These policies are likely to be changed to increasingly favor purchase of more fuel efficient passenger cars.
 - Changing demographics, especially an aging population, are likely to result in a shift in consumer demand in favor of passenger cars.
 - The average age of the fleet could be expected to drop if state and federal governments establish tax or other incentives, like the “Cash for Clunkers” program that encourage consumers to replace older vehicles with new less fuel efficient vehicles.

Overall, TRAC believes that these assumptions, while aggressive, provide a reasonable starting point for scenario planning. TRAC notes that the proposed target rule makes it clear that the estimated improvements in technology listed here are to be used as “baseline assumptions” for scenario planning. The proposed rule would allow local governments through scenario planning to consider other actions that would result in adoption of improved vehicle technology at a rate greater than provided in the “baseline assumptions.” This would include measures that are identified through metropolitan area scenario planning or that are included in the Statewide Transportation Strategy—now being developed—that are expected to result in more rapid adoption of new technology than estimated in the baseline assumptions.

In addition, the proposed rule includes a provision requiring LCDC to review the targets by June 1, 2015, (and at regular intervals thereafter). A major purpose of this review would be

to assess new information about vehicle technology, fuels and changes to the vehicle fleet. Specific provisions in the rule would direct LCDC to consider new information about expected improvements in vehicle technology as well as state actions, including provisions of the State Transportation Strategy to be developed by ODOT.

Equitably Allocating Responsibility for Reductions Among Metropolitan Areas

Statutory Requirements

In setting targets for the state's five smaller metropolitan areas, Senate Bill 1059 directs LCDC to take into consideration methods of equitably allocating reductions among metropolitan areas given differences in population growth rates. This requirement was adopted to recognize the fact that some metropolitan areas have grown much more rapidly than others since 1990, and that targets tied to 1990 emission levels would create a hardship for faster growing areas. For example, the population of the Bend metropolitan area is expected to grow by 200% between 1990 and 2050, while overall state population is expected to grow by only 80%. Consequently, a target based on total 1990 emissions would create a much stricter standard for Bend than for other metropolitan areas.

To support LCDC's analysis, ODOT and DEQ are required to estimate the amount of reduction in greenhouse gas emissions that are needed in each metropolitan area to achieve the 2035 reduction goal.

Agencies' Technical Report Analysis

The *Agencies' Technical Report* includes an analysis of the reductions in emissions that are needed at a statewide level by 2035 to support achieving the 2050 goal of a 75% reduction below 1990 levels. The *Agencies' Technical Report* evaluates reduction that would be needed in each area considering expected population growth to 2035. The *Agencies' Technical Report* concludes that the percentage reductions that are needed on a per capita basis to achieve to meet the 2035 goals in each metropolitan area are effectively the same—at about 74% per capita:

The percentage reductions in per capita emissions needed in 2035 are very similar among the metropolitan areas. The overall metropolitan average is 74%. The metropolitan area values differ from this overall average by no more than 2 percentage points.¹³

The agencies support use of a percentage reduction per capita as the preferred way to address differences in population growth and assure that burden of reduction is equitably allocated among metropolitan areas.

¹³ *Agencies' Technical Report*, 3/1/2011, p. A-16.

TRAC Evaluation and Recommendation

TRAC supports expressing the emission reduction targets in the form of percentage reductions per capita. TRAC notes that the State of California has adopted a similar approach to its targets. (California's targets, adopted by the California Air Resources Board (CARB) in September 2010, set emission reduction targets as percentage per capita reductions from 2005 emission levels for the year 2035.) TRAC also notes the use of percentage reduction targets has several other advantages:

- Per capita reductions are likely to be more easily understood by the public.
- Per capita reductions allow for measurement of progress independent of the rate of population growth. (If an area grows more slowly or more rapidly than expected, it will still be able to assess progress in per capita reductions.)

Accounting for Congestion and Congestion Reduction Measures

Statutory Requirements

House Bill 2001 and Senate Bill 1059 direct ODOT, DEQ and ODOE to recommend to LCDC methods for adjusting targets to account for changes in emissions due to traffic congestion or congestion reduction measures:

The Department of Transportation, the Department of Environmental Quality and the State Department of Energy shall recommend to the Land Conservation and Development Commission modeling tools or other methods that each region served by a metropolitan planning organization may use to adjust its recommended number of miles of travel to account for additional greenhouse gas emissions resulting from increased traffic congestion or reductions in emissions resulting from measures that reduce traffic congestion.

Agencies' Technical Report Analysis

The *Agencies' Technical Report* identifies four promising options that metropolitan areas might use to adjust vehicle miles traveled (VMT) or greenhouse gas emission estimates to better account for congestion impacts and congestion relief projects. These include:

- Improvements to metropolitan travel models to more accurately estimate distribution of VMT by speed and different classes of facilities;
- Adoption of more advanced travel models that include improved capabilities to estimate trip generation;
- Adapting available air quality models to provide improved greenhouse gas emission estimates; and
- Improving ODOT's GreenSTEP model to improve its sensitivity to congestion relief projects.

TRAC Evaluation and Recommendation

Local government representatives on TRAC expressed strong support for expressing targets in a manner that recognizes the potential contribution of measures to reduce traffic congestion in meeting targets. The proposed rule sets targets in the form of greenhouse gas reductions. This allows local governments to consider a broad range of actions that would reduce emissions, including congestion reduction projects. In its discussion, TRAC members noted that analysis of congestion reduction measures would also need to consider and address the potential for congestion reduction measures to encourage additional travel that might partially offset greenhouse gas reduction benefits of such measures. In addition, staff notes that the estimates of greenhouse gas reduction benefits will need to consider expected improvements in vehicle technology that are likely to reduce congestion-related emissions.

Recommended Greenhouse Gas Reduction Targets

Statutory Requirements

House Bill 2001 and Senate Bill 1059 require LCDC to adopt rules identifying a reduction target for greenhouse gas emissions caused by light vehicles for each metropolitan area for the year 2035. As described above, the targets must reflect the statewide greenhouse gas emission reduction goals, and take into consideration the reduction in vehicle emissions that are likely to result by 2035 from the use of improved vehicle technologies and fuels.

Agencies' Technical Report Analysis

As described above, the *Agencies' Technical Report* estimates the level of greenhouse gas emission reduction that is needed by the year 2035 to support meeting the statewide goal of a 75% reduction from 1990 levels in 2050. The *Agencies' Technical Report* also provides estimates of the expected contribution of different combinations of improvements to vehicle technology and fuels and changes to the vehicle fleet. Based on this analysis the *Agencies' Technical Report* includes estimates of the additional reductions in greenhouse gas emissions that would be needed in each metropolitan area based on the different assumptions about vehicle technology, fuels and changes to the fleet.

Table 7 in the *Agencies' Technical Report* illustrates the range of additional¹⁴ emission reductions that would be needed in each metropolitan area based on “Low”, “Medium” and “High” alternatives for improvements to vehicle technology and fuels and changes to the vehicle fleet. The level of average additional reductions needed to meet the 2035 goal varies from 8% in the High Technology/Fleet alternative to 46% in the Low Technology/Fleet Alternative.

¹⁴ “Additional” here means in addition to the expected reduction from the effect of improvements to vehicle technology and fuels and changes to the vehicle fleet.

**Percentage Additional Reduction from 2005 to Reach 2035 Goal
(Agencies' Technical Report Table 7, revised & expanded).¹⁵**

2035 Alternative		Portland Metro	Eugene-Springfield	Salem-Keizer	Rogue Valley	Bend	Corvallis	Statewide Weighted Average
Tech 1	Fleet 1 ¹⁶	42%	44%	41%	45%	46%	44%	43%
	Fleet 2	35%	37%	34%	38%	40%	37%	36%
	Fleet 3	33%	34%	31%	36%	37%	35%	34%
Tech 2	Fleet 1	33%	34%	31%	36%	38%	35%	33%
	Fleet 2	24%	26%	22%	27%	29%	26%	25%
	Fleet 3	22%	23%	20%	25%	26%	24%	23%
Tech 3	Fleet 1 ¹⁷	32%	34%	30%	35%	37%	34%	33%
	Fleet 2	23%	24%	21%	26%	28%	25%	24%
	Fleet 3	21%	21%	18%	24%	25%	23%	21%
Tech 4	Fleet 1	30%	27%	28%	34%	35%	33%	30%
	Fleet 2	20%	13%	18%	25%	24%	24%	20%
	Fleet 3 ¹⁸	17%	8%	15%	22%	21%	21%	17%

TRAC Evaluation and Recommendation

As noted above, TRAC has reviewed the *Agencies' Technical Report* evaluation of plausible options for future vehicle technology fuels and fleet. Based on this review, TRAC is recommending that LCDC use one of the mid-level technology and fleet alternatives recommended in the *Agencies' Technical Report* as a basis for target rulemaking. In particular TRAC is recommending that LCDC use the Technology Level 3, Fleet Level 3 as the basis for setting targets.

Based on these assumptions about improvements in vehicle technology and fuels and expected changes to the vehicle fleet, TRAC recommends that targets should be to reduce emissions *per capita* from 2005 levels by 2035 by an *additional*:

- 21% for the Portland metropolitan area;
- 21% for the Eugene-Springfield metropolitan area;
- 18% for the Salem-Keizer metropolitan area;
- 24% for the Rogue Valley metropolitan area;
- 25% for the Bend metropolitan area; and
- 23% for the Corvallis metropolitan area.

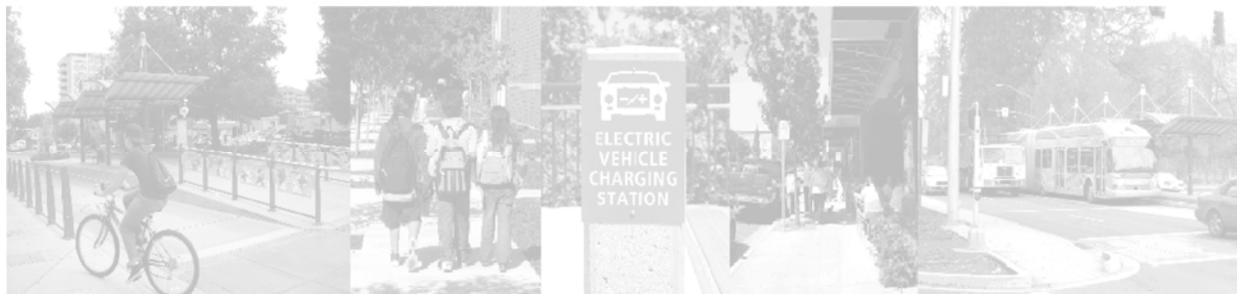
¹⁵ *Agencies' Technical Report*, revised and expanded in "Summary Calculations for Agencies Technical Report," Brian Gregor, Oregon Department of Transportation, Transportation Planning Analysis Unit, 3/18/2011.

¹⁶ Tech 1, Fleet 1 is the "Low" alternative in the *Agencies' Technical Report*, p. 9, and in Table 7, p. 13.

¹⁷ Tech 3, Fleet 1 is the "Medium" alternative in the *Agencies' Technical Report*, p. 9, and in Table 7, p. 13.

¹⁸ Tech 4, Fleet 3 is the "High" alternative in the *Agencies' Technical Report*, p. 9, and in Table 7, p. 13.

TRAC is recommending that LCDC set as percentage per capita reductions using 2005 as a reference year. Staff from state agencies and metropolitan planning organizations have recommended use of 2005 as a base year for targets because (1) better data is available for 2005 than 1990; and (2) 2005 corresponds more closely to existing plans. Both these factors make measurement of targets and development and evaluation of scenarios easier, as well as more understandable to the public and elected officials. At the same time, TRAC notes that while targets would be based on the 2005 reference year, they are set at a level that achieves reductions to 1990 levels, consistent with the overall statutory requirement.



Major Issues and Considerations

In developing its recommendations on the proposed rule, TRAC identified a number of issues that relate to target setting or scenario planning that go beyond specific considerations listed in House Bill 2001 and Senate Bill 1059 that guide LCDC in setting targets. These issues were discussed by TRAC and also reflect input and comments from metropolitan area planning staffs and from local officials. These issues also reflect comments received at a series of workshops conducted in metropolitan areas around the state in February and March 2011.

Major issues and concerns, and TRAC recommendations for addressing them—either through the proposed target rulemaking or otherwise—are discussed below.

The target rule should clearly explain the purpose of targets and how they relate to land use and transportation scenario planning as provided in House Bill 2001 and Senate Bill 1059

Issue

TRAC members and local governments expressed concern that adoption of targets through an administrative rule by LCDC conveys the sense that targets are a regulatory requirement and that scenario planning by metropolitan areas to meet the targets either is or will be mandated.

TRAC Recommendation

TRAC members felt strongly that the purpose of the targets should be clearly explained so that local governments, the public, and others clearly understand that the role of targets is to guide an initial round of scenario planning as provided for in House Bill 2001 and Senate Bill 1059. The committee discussed several ways that this might be accomplished, including this report or a staff report to LCDC that would provide a legislative history explaining the intent of the targets and their role in guiding scenario planning. TRAC members concluded that the nature of the target rule—which anticipates an iterative process between metropolitan areas and the state to conduct scenario planning and develop a statewide strategy for reducing greenhouse gas emissions—is best addressed by including an explanation of the role of targets in the rule itself. Section 0010 of the

proposed rule includes a detailed description of the purpose of the targets as they relate to scenario planning.

The target rule should include a clear description of the process and assumptions that were used in target setting

Issue

Local officials and others have expressed concern that LCDC clearly explain the information and analysis that is used to support the targets. This information is needed so that the public, local governments and others can understand how the targets were developed, and to monitor changes in information over time.

TRAC Recommendation

TRAC agrees that the rule should include an explanation of the process and assumptions used to establish the targets, and that this explanation should be adopted as part of the rule. Section 0015 of the proposed rule describes the target setting process and considerations that were used to prepare the proposed rule. These summarize major findings from the *Agencies' Technical Report* and set forth baseline assumptions about vehicle technologies, fuels and fleet to be used in applying the targets during scenario planning.

TRAC notes that the concept of greenhouse gas reduction targets is a new one, and as such will require building public understanding and support. Providing information in the rule about how targets were developed, and describing how targets are to be measured will help local officials and planners as they conduct scenario planning. Because targets are based on a series of assumptions about future vehicle technologies, fuels and fleet that are likely to change over time, it is also important to lay out these assumptions in the rule so that they can be evaluated, and revised as necessary, when LCDC conducts periodic review of the rule as provided in Section 0035 of the proposed rule.

The target rule should include a provision requiring LCDC to review and revise the targets to reflect new information about policies and actions to reduce greenhouse gas emissions

Issue

Local governments and others have expressed concern that much of the information upon which targets are based is likely to change over the next several years, in response to changes in technology, prices, government policies, and consumer preferences. There is concern that targets based on current information will be out of date, or that targets may not properly reflect available information or policies.

TRAC Recommendation

TRAC members agree that the targets should be reviewed on a regular basis to reflect new information about technology, evolving state and federal policies and the results of scenario planning. Section 0035 of the proposed rule requires LCDC to review the targets by June 1, 2015, and lists a range of factors to be considered, including new information, input from local governments and MPOs, and the results from scenario planning.

The targets should be designed to allow local governments flexibility on ways to meet the reduction targets

Issue

Local governments, including some TRAC members, have indicated that they want the rule to provide as much flexibility as possible in selecting tools or actions to meet the targets. The concern is that the targets will be set in a way which may limit local actions they might take to accomplish greenhouse gas reductions.

TRAC Recommendation

TRAC members generally supported the concern expressed by local governments and agreed that targets should be expressed in a way that allows local governments to count a broad range of local actions that reduce greenhouse gas emissions from light vehicle travel in metropolitan areas. TRAC members also agreed that targets should be set in a way that allows local governments to consider actions or programs that would reduce greenhouse gas emissions resulting from traffic congestion and that increase adoption of low emission vehicles.

TRAC also agreed with concerns expressed by several local governments that reduction targets not be set in the form of targets for vehicle miles traveled (VMT) reduction. At the same time, TRAC notes that actions to reduce VMT are likely to be a major means by which scenario planning accomplishes emission reductions.

TRAC notes that the proposed targets are for a reduction in greenhouse gas emissions from light vehicle travel. Provisions in the proposed rule specifically allow for local governments to count measures that increase adoption of improved vehicle technology—above and beyond the baseline assumptions—as they conduct scenario planning. In addition, Section 0030 of the proposed rule provides that local governments may use tools recommended by ODOT to account for greenhouse gas emission reductions from congestion reduction measures.

Reduction targets should allow local governments to count actions that they have already taken to accomplish greenhouse gas reductions

Issue

Local governments have done considerable work over the last 20 years to promote compact land use patterns, expand transportation options, and take other actions that are likely to help reduce greenhouse gas emissions. Local governments have asked that targets recognize work local governments have done and, in some way, allow local governments to count these efforts toward meeting the targets.

TRAC Recommendation

TRAC believes that the proposed targets address this issue. The proposed targets are expressed as reductions to be achieved from 1990 emission levels. This means that actions taken since 1990 that have resulted in reduced emissions would contribute towards meeting the target. For example, data presented in the *Agencies' Technical Report* shows that between 1990 and 2005 emissions per capita grew more slowly in some metropolitan areas than in others. Those areas that had lower increases in emissions would effectively get credit for that result because they would have proportionately less to do meet the reduction targets.

Targets should reflect the difference in the abilities of metropolitan areas to meet the greenhouse gas reductions

Issue

Local government officials, including some TRAC members, observed that individual metropolitan areas each face somewhat different challenges and opportunities and have different capabilities to make changes in land use and transportation patterns that would reduce greenhouse gas emissions. There is a general view that the Portland metropolitan area, given its higher densities, more extensive transit service, success in promoting compact development and unique regional governance structure is better positioned than other metropolitan areas to develop scenarios that achieve additional reductions in greenhouse gas emissions. By contrast, other metropolitan areas have relatively low densities and less experience and consequently more work to do to develop major new efforts to reduce greenhouse gas emissions.

TRAC Recommendation

TRAC members agree that LCDC should consider these differences in circumstances and capabilities of metropolitan areas as it sets reduction targets for individual areas. However, in the course of its work, TRAC did not receive information to enable it to make a specific recommendation about how to accomplish this, and the *Agencies' Technical Report* was not required by statute to provide such information.

Without this additional analysis, TRAC is unable to make a specific recommendation about how the proposed targets should be adjusted to address different situations and

capabilities of individual metropolitan areas. TRAC concludes that this is an unresolved issue that warrants further analysis as metropolitan areas conduct scenario planning and as ODOT conducts further work on the Statewide Transportation Strategy.

TRAC also recommends that LCDC consider the difference in the abilities of metropolitan areas to meet the reductions targets as it assesses the results of scenario planning when it conducts reviews of the target rule. The results of scenario planning should help illustrate differences in capabilities of individual metropolitan areas to achieve reductions given their unique circumstances and allow LCDC should to adjust the targets to account for these differences.

Reduction targets should take into account the amount of through travel and regional travel (i.e., travel that begins or ends outside a metropolitan area) which occurs in each metropolitan area

Issue

Light vehicle travel in metropolitan areas includes a combination of local travel—trips that begin and end within the metropolitan area—as well as trips that pass through the metropolitan area, or that begin or end outside the metropolitan area. The portion of travel that begins and or ends outside each metropolitan area varies. Local governments observe that they have little ability to affect external traffic and are concerned that the targets be set in a way that recognizes that they have little or no ability to accomplish reductions in through traffic and other external trips.

TRAC Recommendation

TRAC was not able to address this issue in detail. TRAC had hoped to have more detailed information about the extent of “external” travel that occurs in each of the metropolitan areas, but information was not available within the timeframe for preparing target recommendations. TRAC notes that this issue will likely be addressed through additional analysis to develop the Statewide Transportation Strategy. TRAC also expects that metropolitan areas will use scenario planning to evaluate and report on effect of longer-distance trips, as well as potential for growth in nearby areas to increase travel within metropolitan areas. In addition, the proposed rule calls for LCDC to review new information on this subject as part of periodic reviews of the target rule.

Scenario planning will require additional funding

Issue

Scenario planning to reduce greenhouse gas emissions is a new planning effort that will require new analytical tools and broad outreach to effectively engage the public and decision-makers in a meaningful discussion and evaluation of possible choices. Local officials advise they have limited staff and resources to conduct long-range planning and that these resources are fully subscribed meeting existing obligations. Consequently, in

order for scenario planning to happen, local governments will need both financial and technical assistance to conduct scenario planning.

TRAC Recommendation

TRAC concludes that additional funding and technical assistance will be needed to support metropolitan scenario planning.

Local governments have made it clear that scenario planning is unlikely to occur without additional funding support. The *Financing Report* prepared by ODOT and DLCD earlier this year indicates that scenario planning will require \$200,000 to \$1.5 million for each metropolitan area. TRAC also notes that the Oregon Transportation Commission has allocated \$5.9 million for the current biennium and \$8 million for the next biennium to support greenhouse gas emission reduction planning (and other planning work mandated by House Bill 2001).

TRAC also notes that technical assistance to conduct scenario planning is now underway as part of other work directed by Senate Bill 1059. This includes:

- Preparation of scenario planning guidelines;
- Development of a toolkit of greenhouse gas emission reductions programs and actions; and
- Development of a public outreach and engagement plan.

In addition ODOT has developed the GreenSTEP model to help support development of the Statewide Transportation Strategy and expects to adapt the model to help metropolitan areas evaluate alternatives as they conduct scenario planning.

Scenario planning should be conducted as part of comprehensive statewide effort to reduce greenhouse gas emissions and climate change

Issue

Local governments and others have expressed concern that target rulemaking and scenario planning are moving forward without the benefit of a comprehensive state plan or strategy for addressing climate change or reducing greenhouse gas emissions. Most want to make sure that the burden to reduce greenhouse gas emissions is not being unfairly or disproportionately directed to local governments or to reducing emissions from automobile travel.

TRAC Recommendation

TRAC members agree scenario planning should move forward in conjunction with development of a broader statewide strategy that addresses all sources and sectors of greenhouse gas emissions, and that includes comprehensive actions at the state level to reduce emissions in the transportation sector. TRAC believes that a statewide plan or strategy is also needed to address concerns expressed by some that climate change is not real or that efforts to reduce emissions in Oregon would be ineffective.

Development of state-level efforts for reducing emissions from light vehicle travel in metropolitan areas is especially important to the success of scenario planning in several ways:

- The recommended targets are to be achieved through a combination of state, regional and local efforts. Consequently, close coordination between state agencies and local governments will be needed as the State Transportation Strategy is developed and as scenario planning is conducted.
- Increased funding for transit and other modes of transportation, and expanded incentives or other programs to encourage or support use of alternative modes will be needed to achieve significant greenhouse gas emission reductions from light vehicles. Federal and state governments play a key role in providing financial support for transit and other modes.
- A significant portion of metropolitan travel and emissions result from trips that begin and/or end outside of metropolitan areas. Local governments' ability to affect these trips is limited. The state—through the Statewide Transportation Strategy—has a key role to address longer distance trips through efforts at the state-level, such as expanded intercity transit or expanded transportation demand management programs or incentives.

TRAC notes that other efforts are underway at the state level that will support planning by local governments. These include:

- Scientific study of the effects of climate change on Oregon's environment, communities and industries;
- Adaptation planning to minimize adverse effects and prepare Oregon communities for the effects of climate change; and
- Outreach and public engagement to expand public awareness of the effects of climate change on local communities and the importance of reducing greenhouse gas emissions from all sources.



Supporting Information

The following supporting information is available online or by request:

Proposed Rule

Metropolitan Greenhouse Gas Reduction Targets Rule, 4/1/2011:

<http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/PublishedDraftTargetsRuleapril1.pdf>

Legislation

Senate Bill 1059 (signed into law as Oregon Laws 2010, chapter 85):

<http://www.leg.state.or.us/10ssorlaws/0085.htm>

House Bill 2001 (signed into law as Oregon Laws 2009, chapter 865):

<http://www.leg.state.or.us/09orlaws/sess0800.dir/0865.htm>

House Bill 2186 (signed into law as Oregon Laws 2009, chapter 754):

<http://www.leg.state.or.us/09orlaws/sess0700.dir/0754.htm>

House Bill 3543 (codified at ORS 468A.200 to 260):

<http://www.leg.state.or.us/ors/468a.html>

Reports

"Summary Calculations for Agencies Technical Report," Brian Gregor, ODOT, Transportation Planning Analysis Unit, 3/18/2011

Agencies' Technical Report, ODOT, DEQ & ODOE, 3/1/2011:

transmittal memo: <http://www.oregon.gov/ODOT/TD/TP/docs/OSTI/TransMemo.pdf>

full report: <http://www.oregon.gov/ODOT/TD/TP/docs/OSTI/TechRpt.pdf>

Financing Report, ODOT & DLCD, 1/27/2011:

<http://www.oregon.gov/ODOT/TD/TP/docs/OSTI/FinanceRpt.pdf>

Legislative Concepts Report: Responding to House Bill 2186 Section 10, Metropolitan Planning Organization Greenhouse Gas Task Force, 1/11/2010:

<http://www.oregon.gov/ODOT/TD/TP/docs/HB2186page/Report.pdf>

Target Rulemaking Advisory Committee

“Summary of Comments from Target Rulemaking Briefings and Workshops,” Robert Cortright, DLCD, 3/1/2011:

<http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/Mtg5/TRAC5-WorkshopsSummary.pdf>

Summary notes for TRAC Meeting #1, 11/2/2010:

http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/TRAC_Mtg1Notes_2010-11-02.pdf

Summary notes for TRAC Meeting #2, 12/21/2010:

http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/TRAC_Mtg2NotesRv_2011-02.pdf

Summary notes for TRAC Meeting #3, 1/20/2011:

http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/TRAC_Mtg3Notes_2011-01-20.pdf

Summary notes for TRAC Meeting #4, 2/9/2011:

http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/Mtg5/TRAC_Mtg4_Summary_2011-02.pdf

Summary notes for TRAC Meeting #5, 3/8/2011:

http://www.oregon.gov/LCD/docs/rulemaking/2009-11/TRAC/Mtg6/TRAC_Notes_Mtg5_2011-03-08.pdf

Summary notes for TRAC Meeting #6, 3/30/2011

Additional information about the Target Rulemaking Advisory Committee:

http://www.oregon.gov/LCD/target_rulemaking_advisory_committee.shtml

Oregon Sustainable Transportation Initiative

Additional information about the Oregon Sustainable Transportation Initiative:

<http://www.oregon.gov/ODOT/TD/TP/OSTI.shtml>