Driving down GHG from Transportation: Assessing Efforts in Four States

Next Generation Transportation for a Sustainable Future Summit

May 29, 2015
Rebecca Lewis, Robert Zako, Alexis Biddle, Rory Isbell, Emily Kettell, Elizabeth Miller
Outline

• Project Background
• Conceptual Framework
• State approaches to climate, transportation, land use in case study states
  • California, Maryland, Oregon, Washington
• Synthesis
• Preliminary Findings and Recommendations
Research Questions & Objectives

1. **Policy Framework**: What is the framework for reducing GHGs from the transportation sector via transportation and land use strategies?

2. **Assessment**: What are strengths and weaknesses of the transportation-land use-climate policy framework at the state level? What are the obstacles to achieving GHG reduction goals?

3. **Knowledge Transfer**: What approaches are working well in the four case study states and what can they learn from each other? What can other states learn?
Share of Emissions from Transportation

Transportation: Share of Total Emissions (Source: State Level GHG Inventories, 2006-2009)

Transportation: Share of Carbon Dioxide Emissions from Fossil Fuel Consumption (Source: U.S. Energy Information Administration, 2011)
Carbon Dioxide Emissions from Fossil Fuel Consumption (1980 - 2011)

http://www.eia.gov/environment/emissions/state/state_emissions.cfm
Vehicle Miles Traveled Per Capita, 1997-2012

Conceptual Framework

Climate
- mitigation
- transportation sector (VMT)

Transportation
- options (modes)
- cost of driving

Land Use
- development patterns
GHG Reduction Targets

Other

Transportation

VMT (Transportation & Land Use)

Mode Choice (Transit, Bicycling, Walking)

Increasing Cost of Driving

Development Patterns

Fuel Content

Vehicle Efficiency

"3 legged stool"
Conceptual Framework

Goals

Efforts

Results
## Goals: Statutory GHG Targets

<table>
<thead>
<tr>
<th>State</th>
<th>Targets</th>
<th>Key Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>By 2020, 10% below 1990 Levels. By 2050, 75% below 1990 Levels.</td>
<td>2007: HB 3543- Global Warming Actions</td>
</tr>
</tbody>
</table>
California

- Climate
  - SB 375: Regional per-capita targets, MPOs develop Sustainable Communities Strategies (SCSs), voluntary local implementation

- Transportation
  - CalTrans updating CTP 2040
  - Regional RTPs integrating SCSs

- Land Use
  - Local general plans (no state level growth management program)
  - Relax CEQA to support infill (LOS to VMT in CEQA – SB743)

- Nexus
  - Coordinated regional level transportation planning to reduce GHGs(SCS)
Maryland

- Climate:
  - GHG Reduction Act Plan of 2013: state level multi-sector and multi-agency plan
- Transportation
  - Maryland Transportation Plan 2035 (updated in 2014);
  - Annual: Consolidated Transportation Program, Attainment Report
- Land Use
  - Required local comprehensive plans addressing key elements and visions
  - Smart Growth: Priority Funding Areas
  - PlanMaryland (2011)
- Nexus
  - All 3 plans updated recently: cross-referencing and mention of integration
• **Climate**
  • HB 2815: GHG and VMT Per Capita Targets
    – EO 09-05: Delegate to regional level (Regional Transportation Planning Organizations)
• **Transportation**
  • Washington Transportation Plan 2030 (2010)
  • Statutory VMT Target
• **Land Use**
  • Growth Management Act – 14 goals; required Urban Growth Areas in some cities
  • County Wide Planning Policy (CWPP)
• **Nexus**
  • Local plans consistent with regional transportation plans
  • SB 6580: linking Growth Management Act to GHG targets and policies
Oregon

• Climate
  • Statewide Transportation Strategy - all modes statewide
  • Metropolitan targets (% per capita) & scenario planning - GHG from light duty vehicles only

• Transportation
  • Oregon Transportation Plan + modal plans
  • Goal 12: Transportation
  • Statewide Transportation Improvement Program

• Land Use
  • UGBs; 19 Statewide Goals; required local plans
• Nexus
  • Oregon Transportation and Growth Management Program (ODOT/DLCD)
  • Statewide Transportation Strategy / OSTI
Synthesis

Goals
- By 2020: range from reaching baseline to 10% below 1990 levels
- MD: State, sector level
- CA, OR, WA: regional and per capita

Vertical
- CA, OR, WA: regional level develops the plan and local implementation voluntary

Horizontal
- MD: several state agencies involved in climate plan; integration of transportation and land use plans
- OR: OSTI and TGM
- WA: integration with state growth management program
- CA: Strategic Growth Council, Climate Action Team

Monitoring
- CA, MD, OR: GHG inventories; implementation reporting
- WA: GHG and VMT levels

NO REAL ACCOUNTABILITY MECHANISM FOR REACHING TARGETS
Preliminary Findings: Process

Source: Portland Metro

Source: http://www.oregon.gov/ODOT/TD/OSTI/Pages/scenario_planning.aspx

Source: Tescher, Mintier, Hammond
Preliminary Findings & Recommendations: Implementation
Key Takeaways

• Initial legislation setting goals and requiring plans is a starting place
• But sustained leadership and momentum is essential
• Plans and scenarios will not be realized without adequate funding and a reorientation of transportation spending
• And selling co-benefits is important to gaining broad citizen support
Next Steps

• Completing interviews
• Synthesizing information
• Publishing policy briefs and academic publications
• Next project:
  • Effectiveness of Transportation Funding for Achieving Livability Goals (proposed)
Driving down GHG from Transportation: Assessing Efforts in Four States

Next Generation Transportation for a Sustainable Future Summit
May 29, 2015
Rebecca Lewis, Robert Zako, Alexis Biddle, Rory Isbell, Emily Kettell, Elizabeth Miller