

ASSESSING STATE EFFORTS TO INTEGRATE TRANSPORTATION, LAND USE AND CLIMATE CHANGE

Final Report

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by

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16. Abstract <p>Climate change is increasingly recognized as a threat to life on earth. "Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions" (<i>International Panel on Climate Change 2014</i>, 8).</p> <p>The transportation sector accounts for almost one-third of all greenhouse gas emissions (GHG) in the United States. Reducing GHG from transportation rests on the "three-legged stool" of improving vehicle efficiency, reducing the carbon content of fuels, and reducing vehicle miles traveled (VMT). But "technological improvements in vehicles and fuels are likely to be offset by continuing, robust growth in VMT" (<i>Ewing et al. 2007</i>, 2). Thus, a crucial strategy in curbing GHG from transportation relies on reducing total VMT by promoting alternative modes of transportation hand-in-hand with promoting development patterns that support the use of such modes, possibly along with attaching a price to GHG. In developing climate action plans, states have begun to acknowledge the connection between transportation and development patterns.</p> <p>This project explores the institutional barriers and opportunities for reducing VMT, hence GHG, through improved transportation options and smarter development patterns in four states: California, Maryland, Oregon and Washington. The research team analyzes existing policy frameworks around transportation, land use and climate change, outlining the statutory context around plans and actions within state agencies and metropolitan planning organizations (MPOs). The research team uses content analysis to analyze existing plans under these agencies and conducted interviews with over 40 stakeholders to evaluate strengths and weaknesses of state approaches. The research team assesses the existing policy framework within the case study states and offers recommendations for improving existing frameworks. Finally, lessons learned from these four states can inform other states attempting to reduce GHG from transportation.</p>					
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EXECUTIVE SUMMARY

Background

Climate change is increasingly recognized as a threat to life on earth. “Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions” (*International Panel on Climate Change 2014, 8*).

The transportation sector accounts for almost one-third of all greenhouse gas emissions (GHG) in the United States. Reducing GHG from transportation rests on the “three-legged stool” of improving vehicle efficiency, reducing the carbon content of fuels, and reducing vehicle miles traveled (VMT). But “technological improvements in vehicles and fuels are likely to be offset by continuing, robust growth in VMT” (*Ewing et al. 2007, 2*). Thus, a crucial strategy in curbing GHG from transportation relies on reducing total VMT by promoting alternative modes of transportation hand-in-hand with promoting development patterns that support the use of such modes, possibly along with attaching a price to GHG. In developing climate action plans, states have begun to acknowledge the connection between transportation and development patterns.

The overall goal of this research is to evaluate and learn from state-level efforts to reduce GHG from the transportation sector through improved transportation and land use policies, and to make recommendations for continuing and improving state-level efforts. Through examining the policy framework in four innovative states, studying the implementation of strategies to reduce GHG from transportation, and assessing the strengths and weaknesses of the approach, this research provides recommendations for integrating state transportation plans, state or regional land use planning, and state climate action plans to achieve GHG reduction goals.

Conceptual Framework and Study Methods

Jurisdictions set *goals* for reducing GHG, or closely related quantities such as VMT. To make progress towards these goals, jurisdictions create *plans* including strategies and policies to reduce GHG. In some cases, these plans are statewide and created by state agencies, but in some states this authority is delegated to regional or local governments. Based on the strategies adopted in plans, jurisdictions take *actions* in the form of regulations, processes, incentives or financial investment. Such efforts are intended to produce *results*, i.e., a reduction of GHG. To track progress towards goals, jurisdictions monitor GHG and produce regular monitoring reports as required by law.

This project relies on document analysis to evaluate state efforts to integrate transportation and land use planning to reduce GHG from transportation. Researchers examined statutes and analyzed state-level transportation, land use and climate plans; regulations; other plans and programs; and interim progress reports to obtain an understanding of relevant climate, transportation and land use legislation and plans.

This project relies also on qualitative research methods. Between December 2014 and July 2015, the research team conducted confidential semi-structured interviews with state agency staff and other stakeholders, including MPOs, local and regional associations, and nongovernmental advocacy organizations. The research team conducted 44 interviews in person or via phone. Following the conceptual framework summarized in Figure ES-1, we asked each stakeholder about goals, efforts and results in their state.

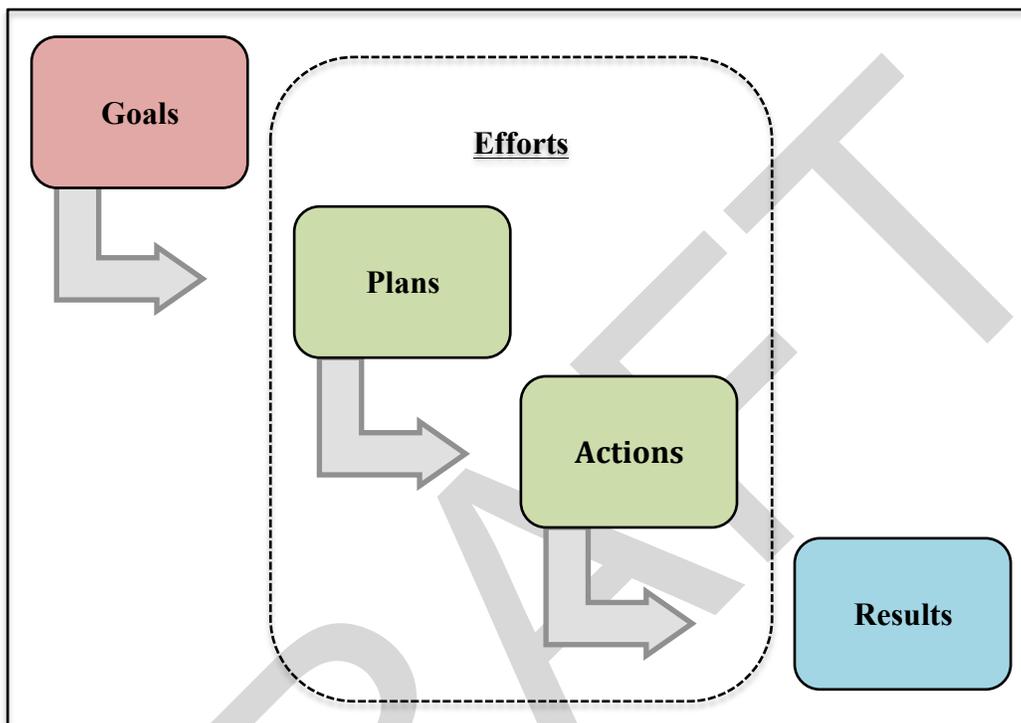


Figure ES-1: Conceptual Framework

Within the framework presented above, we organized findings by key analysis themes: leadership, policy framework, goals, planning, institutional relationships, implementation, monitoring, and regional and local support.

Overview of State Approaches

California in 2006 passed the Global Warming Act (AB32) and in 2008 adopted SB375, requiring metropolitan areas to undertake “blueprint planning” to reduce GHG from the transportation sector through a combination of transportation and land use efforts. Unlike the other three case study states, California is not considered a “growth management” state. But SB375 is an innovative approach at tying regional transportation and land use planning to achieve GHG reduction targets.

Maryland in 2009 adopted the Greenhouse Gas Emissions Reduction Act (SB278 and HB315), and in 2013 released its comprehensive *Greenhouse Gas Reduction Plan*. Until recently, Maryland had individual state plan for transportation, climate and land use. While the statewide

land use plan is no longer being implemented, Maryland is still well-known for its incentive-based Smart Growth initiatives guiding development into Priority Funding Areas.

Oregon in 2007 adopted state GHG reduction goals (HB3543), and in 2009 (HB2001) and 2010 (SB1059) adopted legislation requiring the state DOT to develop a Statewide Transportation Strategy for reducing GHG and also requiring or urging metropolitan areas to undertake “scenario planning” to reduce GHG from the transportation sector. Oregon’s over 40-year old statewide land use planning program requires cities to designate Urban Growth Boundaries and to adopt local comprehensive plans meeting 19 Statewide Planning Goals.

Washington in 2007 (SB6001) and in 2008 (HB2815) adopted GHG reduction limits and total vehicle miles traveled reduction benchmarks (*Welch 2013*). Washington in 2010 released a state climate action plan entitled *Path to a Low-Carbon Economy: An Interim Plan to Address Washington’s Greenhouse Gas Emissions*. Washington’s Growth Management Act requires local comprehensive plans and Urban Growth Areas for jurisdictions that exceed a specified population or population growth rate.

Conclusions

A summary of key findings and recommendations appears in Table ES-1.

The states examined in this report—California, Maryland, Oregon and Washington—are progressive in adopting statutory GHG reduction goals and legislation focused on the transportation sector. While national climate legislation is lacking, these states are exemplars in adopting state-level legislation to reduce GHG. In these states, the initial legislation setting goals and requiring plans to determine how goals will be met is a starting place for making progress towards reducing GHG from transportation. Key conclusions are summarized below:

- Sustained leadership and momentum on common legislation and policies is key to successful implementation. In adopting policies, environmental groups have been important players in pushing legislation and sustaining emphasis on implementation.
- States need to “connect the dots” from goals to plans to actions to results. States lack clear monitoring authority. There is a need to link goals more directly to feasible actions and have a tighter feedback loop between goals, plans, actions and results.
- In crafting a policy designed to reduce GHG from transportation, it made sense to rely on MPOs in California and Oregon, and to allow for flexibility in how to reach targets.
- In crafting state policy, there is a clear need to align authority, responsibility, and resources with those in a position take actions. Creating new commissions that lack staff and authority has not been effective.
- Communicating with the public about GHG reduction efforts was more successful when focused on “co-benefits.”

Table ES-1: Findings and Recommendations

Finding	Recommendation	Who?	Model
1 Leadership			
1.1 States leading despite absence of comprehensive national effort	a) Other states should follow the lead of those already addressing climate change b) Need comprehensive national effort	Executive; Legislature; President; Congress	California
1.2 Political polarization makes progress difficult	Insulate implementation from the political process by relying on a Climate Change Commission rather than the Legislature.	Legislature.	Maryland
1.3 States learn from other states, e.g., WCGGI, WCI, PCC	Multistate collaboration can be helpful for encouraging action	Executive; State agencies; Regional collaborations	Oregon; Washington
1.4 Tragedy of the Commons nature of climate change discourages state, regional and local governments from acting	Focus on co-benefits of reducing GHG, in particular, from transportation sector	Executive; Legislature; State agencies; MPOs	Portland MPO
1.5 Changes in <i>political</i> leadership undermines consistent implementation	Require interim reports and sunset clauses so legislature must stay engaged	Legislature	Maryland
1.6 Changes in <i>state agency</i> leadership undermines consistent implementation	Establish a commission with broad authority drawn from leaders in the public and private sectors that uses staggered appointment terms to insulate from political changes	Legislature	Maryland
1.7 Emphasis often varies across administrations; each attempts to make mark with new policies	Need consistent leadership—executive, legislative giving advice to agencies	Executive; Legislature	n/a
1.8 Advocacy groups play important role in pushing policy agenda	Advocacy groups push for incremental policy change, calling for modest steps with clear accountability to keep issue present	Advocacy groups	1000 Friends of Oregon
2 Policy Framework			
2.1 Failure to “connect the dots”	Consider a SMART approach to establishing goals, that are Specific, Measurable, Actionable, Realistic and Time-bound	Legislature	Maryland; California
2.2 MPOs can be effective instrument	If MPOs are strong, can be an effective way to reduce GHG	Legislature	California
3 Goals			
3.1 Goals often set in a vacuum by legislature without understanding of implications	a) Set SMART goals b) Set goals with understanding of impact of existing policies, new policies and new funding sources c) Use a hybrid approach of “how far can you get?” and “what would it take?”	Legislature; State agencies	Baltimore MPO
3.2 Often difficult to link results back to actions	Develop a set of performance measures more closely tied to actions	State agencies; MPOs	Oregon
3.3 MAP-21 calls for performance measures	Regardless of federal efforts, develop state and regional performance measures related to GHG reduction	State agencies; MPOs	n/a

Finding	Recommendation	Who?	Model
4 Planning			
4.1 Integrate RTPs with plans to reduce GHG	Require MPOs to show how RTPs reduce GHG and give MPOs oversight over project selection	Federal agencies: State agencies	California
4.2 MPOs vary in capacity	Provide technical and financial support for planning	State agencies	Oregon; California
5 Institutional Relationships			
5.1 Transportation agencies are not designed to deal with GHG	Use SSTI to assess transportation agency	State agencies	California
5.2 Transportation agencies often make all decisions related to transportation placement, even though decisions impact land use and GHG	Incorporate other state agencies into decision-making	State agencies	n/a
5.3 MPOs are not strong in all states	Give MPOs oversight over project selection	Legislature	California
5.4 County governments are strong	Provide locals incentives to change plans (tie funding to plans or UGB expansion)	State agencies	n/a
6 Implementation			
6.1 State authority over land use provides an opportunity to encourage compact development	Make provision of transportation funding contingent on approval of land use plans focused on compact development. In states with strong land use planning, make boundary expansion contingent on scenario planning	State agencies	n/a
6.2 Lacking flexible funding sources to implement plans	Remove constitutional limitations on gas tax	Legislature	n/a
6.3 Cap-and-trade funding provides flexible funding source to implement plans	Encourage competitive cap-and-trade programs or carbon taxes to implement plans and projects	Legislature	California
6.4 Regulations prevent compact development	Relax regulations to incentivize compact development, bicycle/pedestrian infrastructure and transit infrastructure	Legislature	California
7 Monitoring			
7.1 States lack institutional structure to provide oversight of implementation of plans	Provide monitoring and enforcement to state agency with staff, funding, authority	Legislature	n/a
7.2 Need to hold MPOs accountable	Track VMT and GHG at MPO level	State agencies	California; Oregon
7.3 Plans are not monitored for implementation	Rely on civic sector to monitor plans.	State agencies; Civic sector	California
8 Regional and Local Support			
8.1 Citizen buy-in important to sustained efforts	Build public support by emphasizing co-benefits of reducing GHG	Public agencies	All
8.2 Difficult to get buy in as state agencies	Rely on civic sector to build coalitions	Civic sector	Maryland; California