5.0 Developing a Greenhouse Gas Policy

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5.1 What Is Included?

A greenhouse gas (GHG) policy is a description of how the State department of transportation (DOT) will address GHG emissions from the transportation sector in its State. The policy can be general in nature, qualitatively describing the intended outcome, or it can be very specific, with quantified objectives. As practicable, the policy should be periodically reviewed and updated as circumstances evolve and experience is gained through the Plan/Do/Check/Act cycle discussed in Section 19.6.

The components of a GHG policy could include some or all of the following:

- Goals of the policy (e.g., reduce GHG emissions from the transportation sector).
- Objectives for the policy (e.g., how the State DOT plans to reduce GHG emissions).
- Emission reduction targets (e.g., a certain percentage reduction in GHG emissions by a certain future year from a certain base year for the entire transportation sector within the State or from the State DOT's own carbon footprint).
- Performance measures to gauge the State DOT's progress in meeting its goal and targets.

- A description of how the State DOT will communicate and update the policy and report progress (long-range plan, transportation improvement program documentation, transportation project-level reporting, a performance dashboard, task force meetings, etc.).
- Identification of which functional group within the State DOT is responsible for leading policy implementation and coordinating with other groups.

5.2 Why Develop a GHG Policy?

A State DOT typically has one of two motivations for establishing a GHG policy. In one case, the leadership of the State DOT is aware of the transportation sector's contribution to GHG emissions and the impact on climate change and thus unilaterally decides to act and become "greener." In the other case, the State DOT may be required to respond to State legislation or the Governor's direction. In this case, the State DOT can evaluate the requirements and decide if it wants to include elements related to its practices that may or may not be addressed in the legislation or Executive Order. In either case, the State DOT should be aware of GHG emissions and the benefits or impacts of its actions to implement GHG policy, including any impacts to the agency's practices and operations.

This section describes what an overarching department-wide GHG policy to reduce emissions from the transportation sector could look like and how it might be developed. Once such a policy is developed, a number of other policies will need to be developed to implement the department-wide policy. These more specific policies or directives could relate to construction practices, fleet purchases, planning priorities, maintenance practices, recycling/reuse guidance, etc. The number and specificity of these policies or directives will reflect the goals, objectives and targets (if any) of the department-wide policy.

Even in the absence of a formal policy, the actions described in this guide may still be useful to consider and implement as good environmental practice for the agency and responsible stewardship of the transportation system.

5.3 Level of Effort

The resources needed for a State DOT will typically be modest for establishment of a GHG policy and greater to implement it, depending on how it is implemented. The amount of staff time will depend on the level of detail of the policy and elements included. For example, policies that include quantified targets and require reporting will require more effort than more generalized policies. Initial establishment of the policy typically involves executive-level staff.

GHG Policies in Practice

There is no one set example of how State DOTs have established and publicized their GHG policies. They have been developed in different ways and can be quite varied. Examples include

California—California's GHG policy can be found in the *Caltrans Strategic Management Plan: 2015–2020*. It calls for reducing "environmental impacts from the transportation system with emphasis on supporting a statewide reduction of greenhouse gas emissions to achieve 80 percent below 1990 levels by 2050." The plan also establishes a performance measure of percent reduction of transportation-system-related GHG emissions.

Maryland—The Maryland DOT has committed to improving air quality and reducing GHG emissions in Maryland through innovative transportation policies and investments in clean and zero emission technologies, such as: increasing clean travel choices for Maryland residents; supporting the adoption of cleaner vehicles and fuels; enhancing travel efficiency; reducing congestion; and spurring technical innovation. The Maryland DOT works closely with the Department of the Environment to meet the State's GHG emission targets and reports on progress.

Minnesota—The Minnesota DOT (MnDOT) has a statutory goal to reduce GHG emissions from the transportation sector. It has adopted a GHG emission reduction target for the transportation sector, as well as targets for its own operations, buildings and fleets. These targets are set forth in the MnDOT Sustainability Report.

Oregon—Oregon's GHG policy is articulated in *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction.*. Required by legislative direction, this document adopts a number of transportation system, land-use, and vehicle and fuel

technologies that, when implemented, are expected to provide a substantial reduction in GHG emissions.

Texas—The Texas DOT has adopted a policy that looks at GHGs from a systematic, programmatic perspective, rather than a project-level perspective. A number of strategies have been identified and analyzed to reduce GHG emissions from transportation in Texas.

Washington—*WTP 2035: Washington Transportation Plan: Connecting Washington Communities for a Healthy and Prosperous Future* includes recommended actions to "[m]ake significant progress toward meeting statewide greenhouse gas reduction goals through vehicle and fuel technology, system management and operations, land use, transportation options, and pricing strategies. Identify both near- and long-term actions appropriate for implementation at both state and regional levels." This policy arises from the State's Climate Change Framework passed by the legislature in 2008.

As these examples illustrate, development and adoption of a GHG reduction policy is based on the circumstances found in the State. In States that have statewide GHG reduction targets or policies, the State DOT's policy reflects the statewide goal or policy and incorporates or identifies transportation strategies that the State DOT will work to implement. In States without a climate action plan or other statewide mandate, the State DOT may have adopted a GHG reduction policy based on a recognition of the impact of climate change on their infrastructure and operations and a desire to do the "right thing" and be more environmentally responsive.

Caltrans Strategic Management Plan: 2015–2020 https://dot.ca.gov/-/media/dot-media/programs/sustainability/documents/caltrans-strategic-mgmt-plan-033015-a11y.pdf

Maryland DOT (2020). MDOT Greenhouse Gas Reduction Act (GGRA) Plan: Appendix J of the Maryland 2030 GGRA Plan. https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=88

Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction. 2013. https://www.oregon.gov/odot/Planning/Documents/Oregon_Statewide_Transportation_Strategy.pdf

WTP 2035: Washington Transportation Plan: Connecting Washington Communities for a Healthy and Prosperous Future. January 2015. https://washtransplan.com/wp-content/uploads/2017/05/wtp2035_final_21-jan-2015.pdf.

The level of effort becomes more extensive as the policy is established and supporting policies are developed within the functional units throughout the DOT. Depending on the engagement level, this will likely involve most, if not all, groups within the DOT and will require an examination of current practices and how they could be modified to implement GHG reduction. New practices may also need to be considered.

5.4 Who—Roles and Responsibilities

Executive	Admin	**Planning**	Programming	**Environmental**
Design	Construction	Maintenance	Operations	Regions/Districts

The **Executive** functional area of the DOT will typically play the lead role in establishing a GHG policy with substantial input from the **Planning** and **Environmental** functional areas, and perhaps others. There is no one established institutional arrangement for establishing and implementing a GHG policy. There are several different examples among the State DOTs, such as

- Including climate change within the scope of a sustainability group.
- Establishing a separate, dedicated climate change group.
- Including climate change within the Environmental function.
- Including climate change within the Planning function.

Although there is no one model of institutional arrangement, there are several common features within a State DOT that lead to successful development and implementation of a GHG policy. These include

- State DOT leadership (e.g., commissioner/secretary) that is interested in the issue and willing to devote the time and energy needed for success.
- Placement of responsibility for the issue in a single functional unit within the State DOT that is visible and high in the agency's chain of command, with easy access to executive

leadership. The responsible unit should:

- Have staff dedicated to the issue full time.
- Have a sufficient number of staff to fully establish and then implement the GHG policy.
- Have staff that are interested, passionate, and motivated. An awareness/education campaign may be rolled out to help all staff understand the importance of the issue and the agency leadership's interest and commitment.

- Flexible communications so that staff with good GHG strategy suggestions can communicate directly with the responsible GHG unit without having to go through several layers of supervision and management.

Although the organizational placement and nomenclature can and should vary by organization, these common attributes will increase the likelihood of a successful outcome.

Once day-to-day leadership for the GHG reduction effort within the DOT is established, that leadership will need to work closely with other functional units within the DOT to establish and implement GHG reduction policies within those units' areas of expertise. This is especially important with the Planning function as this group is typically charged with oversight of the statewide long-range plan and the statewide transportation improvement program. These documents reflect overall transportation policies, goals, and priorities within the State and the DOT and should be consistent with the adopted GHG policy.

5.5 Self-Assessment: Developing a GHG Policy

A self-assessment worksheet is provided to assist State DOT agency staff, especially in the Executive functional area (but also others with responsibility for leading GHG initiatives), in determining where their agency falls on the GHG engagement spectrum with respect to developing GHG policy and what additional actions their division or unit may wish to take to measure and reduce GHG emissions.

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