Catalog of State GHG Reduction Policy Options
Brief Descriptions of Cross-Cutting Issues Options

CC-1 Greenhouse Gas Inventories and Forecasts

Greenhouse gas (GHG) emissions inventories and forecasts are essential for understanding the magnitude of all emission sources and sinks (both anthropogenic and natural), the relative contribution of various types of emission sources and sinks to total emissions, and the factors that affect trends over time. Inventories and forecasts also help to inform state leaders and the public on statewide trends, opportunities for mitigating emissions or enhancing sinks, and verifying GHG reductions associated with implementation of action plan initiatives. Responsibility for preparing GHG inventories and sinks often resides with the environmental agency, which typically has the expertise needed to systematically compile information on GHG sources and sinks using established methods and data sources. Inventory and forecast efforts should be on-going over time reflecting improvements to the accuracy and completeness of data collected.

CC-2 State Greenhouse Gas Reporting

GHG reporting reflects the measurement and reporting of GHG emissions at a statewide, sector, or sub-sector level to support tracking and management of emissions. GHG reporting can help sources identify emission reduction opportunities and reduce risks associated with possible future GHG mandates by moving "up the learning curve." Tracking and reporting of GHG emissions can also help in the construction of periodic state GHG inventories. GHG reporting is typically a precursor for sources to participate in GHG reduction programs, opportunities for recognition, and a GHG emission reduction registry, as well as to secure "baseline protection" (i.e., credit for early reductions). Further, collaboration with other states in the development of a GHG reporting program could influence the development of GHG reporting practices throughout the region and nation and build consistency and reciprocity with other state or regional GHG reporting programs. Although GHG reporting is commonly voluntary, some states now require certain sources to report their annual GHG emissions.

CC-3 State Greenhouse Gas Registry

A GHG registry enables uniform measurement and recording of GHG emissions reductions in a central repository. Typically, a registry also includes transaction ledger capability in order to support tracking, management, and ownership of emission reductions. Registries can help encourage sources to undertake GHG reduction efforts, enable potential recognition for such actions, provide baseline protection, and support the crediting of GHG mitigation actions. A registry can also provide a mechanism for regional, multi-state, and cross-border cooperation.

CC-4 Statewide Greenhouse Gas Reduction Goals or Targets

Some states have established GHG reduction goals or targets; in these cases, the comprehensive, stakeholder-based climate action planning process typically serves to identify and quantify policies and measures by which these goals can be achieved. In states that have not specified goals or targets prior to the planning process, the establishment of goals or targets is often considered in concert with the State after the initial quantification results for other policy options become available.

CC-5 The State's Own GHG Emissions (Lead-by-Example)

In terms of GHG emissions, states are not only political jurisdictions that can provide incentives to, or impose regulatory requirements on, sources and citizens in order to reduce pollution. They are also significant emitters, by virtue of state-owned buildings, fleets, and various emitting activities. States can reinforce the importance of reducing GHG, promote others to act in this direction, and often demonstrate the economic upside of doing so by putting their actions where their concerns are. For example, states can purchase low-emission vehicles for their fleets, utilize biofuels in their vehicles, construct and/or retrofit their buildings to be more energy efficient, and purchase green or renewable electricity. States can also commit to initiatives or actions focused on GHG reductions, such as the Chicago Climate Exchange.

CC-6 Comprehensive Local Government Climate Action Plans

The relationship between local government jurisdictions and the state echoes in many ways the federal relationship between states and the U.S. Government. It may therefore be appropriate to enable, assist, and otherwise encourage local governments to pursue comprehensive, multi-sector climate action plans within their jurisdictions. Analogous to the state effort, local climate planning initiatives could involve local stakeholders, identify and address local mitigation opportunities, establish local emission inventories and/or forecasts, set local GHG reduction goals or targets, consider local climate impacts and possible adaptation responses, develop long-term sustainability plans, etc. The state should encourage local governments in such efforts and contribute technical and other assistance to the extent possible.

CC-7 State Climate Public Education and Outreach

Public education and outreach can comprise and/or support GHG emissions reduction programs, policies, or goals. Public education and outreach is vital to fostering a broad awareness of climate change issues and effects among a state's citizens (e.g., co-benefits such as clean air and public health). Ultimately, public education and outreach is the foundation for the long-term success of all policy initiatives.

CC-8 Tax and Cap Polices

Tax and cap policies (typically considered as carbon taxes and cap-and-trade programs respectively) can be among the most economically effective means to reduce GHG emissions. By internalizing costs that are currently not assessed (i.e., are "externalized"), such policies create financial incentives for entities to reduce their emissions – reducing emissions reduces costs.

A carbon tax would be relatively simple and easy to implement and would apply to all sectors. Utilities would pay it based on their smokestack emissions and pass the cost to consumers in their monthly electric bill. Individuals would pay it when they fill up cars with gasoline. A carbon tax would also encourage efficiency improvement in all sectors. A carbon tax does not necessarily mean a net increase in the cost of living, because revenues could be "recycled" to lower other, currently assessed taxes.

Cap-and-trade programs typically establish an upper limit on emissions (the "cap"), usually lower than current emissions, which creates the drive for reductions. Also established are "allowances" or "rights to emit" which are allocated or auctioned to covered sources. Sources need to match their emissions to the amount of allowances that they hold, but can trade allowances freely among themselves. The result is that sources that find it least expensive to reduce emissions "overcomply" (i.e., have more allowances than they need) and can sell allowances to sources for which making reductions would be more expensive. This dynamic encourages sources to pioneer innovative ways to make reductions, so they will need fewer allowances and may even be able to profit by selling allowances. The broader the universe of sources (e.g., types of sources covered, geographical region covered, etc.), the more likely it is that cost differences will be found, thereby reducing the overall cost of the program.

CC-9 Create a Clearinghouse to Facilitate Investment in Business Opportunities Related to GHG Emissions Reductions

The intent of this policy option is to encourage and facilitate the involvement of funding and investment sources, business interests, and entrepreneurs in pursuing business opportunities associated with GHG reductions and global warming solutions as quickly and as significantly as possible. The creation of a clearinghouse-like entity may make it possible to match technology developers and other climate solution entrepreneurs with necessary financing more effectively and expeditiously. As a result, a state's ability to identify and secure early business opportunities associated with climate change may be enhanced, increasing its global competitive advantage and job creation within the state.

Potential funding sources include philanthropic organizations, high net worth individuals, or others interested in supporting innovative, environmentally effective market solutions. Recognizing that fortunes are likely to be made in the "new energy economy," for-profit investors, pension funds, mutual funds, and/or venture capitalists may be looking to fund similar business opportunities. Although technology entrepreneurs are often cited as offering potential global warming solutions, equally progressive solutions may lie in the fields of law, accounting, marketing, production, and even government relations and

lobbying. The objective of this policy option is to leverage a state's specific talents for global warming solutions into securing the business opportunities and market advantages that well-supported "early bird" efforts are likely to reap in a carbon-constrained world.

CC-10 Adaptation and Vulnerability

Because of the build-up in the atmosphere of long-lived GHGs that already has occurred, states will experience the effects of climate change for years to come, even if immediate action is taken to reduce future GHG emissions. As such, it is essential that the state develop a strategy to manage and adapt to the projected impacts of ongoing climate change, particularly where the state is most vulnerable.