Transportation GHG Reduction Incentive Program
A proposal from the CCAP VMT & Climate Policy Dialogue

July 2009

Introduction

The Center for Clean Air Policy (CCAP) has convened a unique dialogue of top thinkers and decision makers with expertise in transportation policy, climate policy, smart growth planning and air quality regulation to explore, debate and develop effective and tenable national policy packages for reducing greenhouse gas (GHG) emissions associated with travel demand or vehicle miles traveled (VMT). CCAP is carrying out this VMT and Climate Policy Dialogue using its well-tested approach of bringing diverse interests together to share lessons learned, consider diverse view points and develop a common understanding of potential policy options.[1] The premise of the dialogue is that slowing VMT growth and increasing system efficiency are needed to complement vehicle efficiency improvements, low-GHG fuel measures and a potential CO_2 cap on petroleum refiners in meeting long-term climate protection goals

This proposal for a Transportation GHG Reduction Incentive Program represents CCAP's best attempt to capture the core areas of agreement from the dialogue. The proposal is not intended to represent the specific views of any individual agency, organization or company. In the course of our discussions some stakeholders indicated they would prefer more performance accountability, while others would prefer more flexibility than presented in this proposal.

The Problem

Growth in driving is projected to offset the GHG emissions savings from vehicle and fuel measures, even assuming 55 mpg CAFE standards in 2030 and 15% lower fuel GHG emissions.[2] For example, in a scenario with VMT growth of 1.4% per year, GHGs from passenger vehicles would be 14% below 1990 levels. To be on track to GHG emissions levels 60-80% below 1990 levels by 2050, would require 2030 GHG emissions to be some 20-47% below 1990 levels.[3]
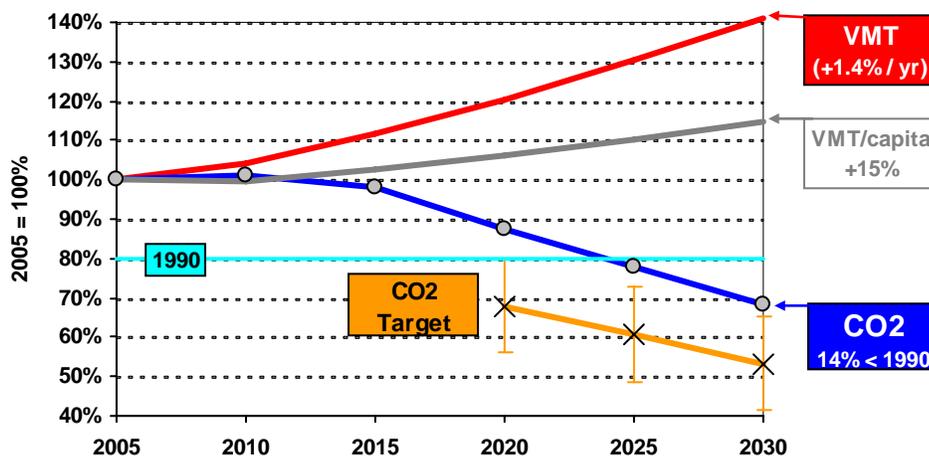
S. Winkelman, CCAP. 2030: 55 mpg CAFE & -15% fuel GHG .

---

[1] For information on CCAP's Transportation Program: http://www.ccap.org/index.php?component=programs&id=35
[2] We assume 35.5 mpg CAFE standard in 2016 consistent with the recent Administration proposal.
[3] This assumes equal reductions from all sectors. From a cost-effectiveness standpoint, it is likely that those sectors with cheaper reductions would achieve greater relative reductions. It is also likely, given the deep reductions required, that major efforts will be required from all sectors of the economy – including transportation.

The price signal from a cap-and-trade system is insufficient to slow growth in VMT due to limited alternatives to driving in most parts of the country. States, Metropolitan Planning Organizations (MPOs) and local governments need incentives to expand travel choices, reduce VMT growth, improve system efficiency, and achieve their existing GHG goals.

Proposal Goals

The goal of the proposal is to create a new **incentive-based program** for state governments, MPOs and local governments to reduce transportation GHG emissions. It would provide funding via allowance revenues from a GHG cap-and-trade system to help **states and MPOs set and implement transportation GHG reduction goals**. This proposal is intended to function within the context of a comprehensive national climate policy structure such as a cap-and-trade system or carbon tax. It would also help create a framework for reducing GHG emissions in federal transportation policy.

Key Provisions

Create a Transportation GHG Reduction Incentive Program that provides incentives to all states and MPOs to set and implement goals to reduce transportation GHG emissions by slowing growth in VMT and improving system efficiency (i.e., distinct from vehicle and fuel improvements addressed within the comprehensive climate policy framework).

I. Goal setting

All states and MPOs are eligible for funding to develop GHG goals.

- A. Goals shall apply over the following time frames:
  Short (2), medium (10) and long term (25) and the year 2050

- B. Each participating state and MPO shall undertake a public bottom-up discovery process to determine appropriate GHG reduction goals that reflect local conditions, trends and opportunities via **transportation, housing, and land use scenario analyses.**
  1. At least one scenario shall be consistent with meeting national GHG goals.
  2. MPO GHG goals shall be developed through a public process with cooperation of local and state government agencies including air, transportation, housing, and economic development.
  3. State GHG goals should be determined through a public process with the cooperation of the state DOT and state air agency. State agencies shall aggregate MPO GHG goals to determine if they add up to achieve state GHG goals.
  4. USEPA and USDOT shall provide input and guidance on GHG goal development, which could define minimum quality levels. USEPA and USDOT shall aggregate state and MPO GHG goals to determine if they add up to achieve national goals.
  5. USEPA and USDOT shall provide technical assistance, tools, and information on: best practices, scenario analysis, data improvement, model improvement, implementation and economic costs and benefits.

II. GHG Reduction Implementation Plan, or "GRIP"
All states and MPOs are eligible for funding to develop a GHG Reduction Implementation Plan, or "GRIP" to meet their GHG goals. A GRIP would include a comprehensive set of transportation and land use policies, projects and programs expected to achieve the goals over the specified time frames.

A. States and MPOs that commit to incorporate their GRIPs into their TIPs/STIPs and Long Range Transportation Plans are eligible for implementation funding under this program.

III. Funding

A. **Source**
An allocation of 10% of federal cap-and-trade allowance value (which we estimate could be worth up to $20 billion per year by 2020) to fund goal development and implementation of projects and policies to meet the goals.

B. **Activities**
Activities in four categories are eligible for funding (specific eligible activities are defined in Section V).

1. **Goal and GRIP development** .
2. **Metropolitan area projects and policies;**
3. **Non-metropolitan area projects and policies** (included in state GRIPs)
4. **Intercity freight and passenger travel efficiency improvements** (such as freight rail, logistics improvements, and passenger rail). Could be federally led and/or included in multiple state and MPO GRIPs, with private sector participation.

C. **Funding Criteria**

1. All state departments of transportation, state air agencies and MPOs are eligible for funding to develop GHG goals (category 1).
2. The majority of funding shall be applied to implementation (categories 2, 3, 4) and shall be **awarded on a competitive basis.** (Eligible recipients defined in Section VI).
   a. Funding criteria shall be designed to reward greater GHG reductions - "Do More, Get More".
   b. USEPA and USDOT shall develop funding criteria that consider factors such as cost, effectiveness at reducing GHGs, advancement of innovative approaches.
   c. Early action shall also be rewarded for measures that can reduce GHGs quickly (e.g., pricing and parking policies).

IV. Accountability

A. USEPA and USDOT shall develop techniques and guidelines to ensure state and MPO accountability for GRIP implementation and GHG performance. This will include:
   1. Assessment of progress on GRIP implementation;
   2. Measurement of GHG performance of each state and MPO GRIP;
   3. Development of funding criteria that reward implementation and GHG performance (section III. C. 2.)
B. USEPA and USDOT shall compare GHG performance within and across regions.
C. USEPA and USDOT shall calculate national aggregate GHG performance of GRIPs.

V. Eligible Activities

   A. **Goal development:** including enhanced planning capacity, scenario analyses, stakeholder engagement, data collection, and model improvements.

   B. **Implementation Plan** development (GRIP).

   C. **Implementation** of specific projects, policies and programs to meet GHG goals, including:

      1. **Improving travel choices and accessibility**: transit capital and operations, intercity passenger rail, infill development, transit-oriented development, pedestrian and cycling measures;

      2. **Travel demand management**: pricing measures, parking policies, travel demand management programs, mileage based insurance, traffic calming, complete streets policies, and telework;

      3. **Freight**: improvement and expansion of freight rail and marine infrastructure, inter-modal freight improvements;

      4. **System efficiency** projects, when shown to produce long-term GHG emission reductions, including: strategic bottleneck relief, traffic flow smoothing, idle reduction, and logistics improvements.

VI. Eligible Recipients

The following entities would be eligible to receive implementation funding (categories 2-4):

   A. State agencies: transportation, air, energy, housing, economic development

   B. Local agencies: transportation, air, housing, economic development

   C. MPOs

   D. Transit agencies and intercity rail providers

Any project proposed must be consistent with achieving the state and MPO GHG reduction goals and be included in an adopted state or MPO GRIP.

VII. Travel Data, Model Improvements and Research

   A. Substantially increase funding for travel data collection and improvement, research and analysis, travel model improvements, fuel economy measurement, and cross-agency coordination at the federal, state, MPO and local levels to support GHG tracking, policy design and policy evaluation.

   B. Implement CCAP Travel Data and Modeling Recommendations to Support Climate Policy and Performance-Based Transportation Policy (attached).

   C. Conduct research on:

      1. The costs, benefits and co-benefits of transportation GHG reduction measures (including: avoided infrastructure costs, fuel savings, transit operating costs, building energy use, water use, economic development, household costs, social equity, and public health.).

      2. Interactions, synergies and conflicts among GHG reduction measures (including: rebound effects from higher fuel economy; induced demand and development from faster travel speeds; pricing, land use and travel alternatives.

Attachment A
Participant list

Representatives from the following organizations have participated in the VMT & Climate Policy Dialogue:

AASHTO	National Governors Association
ACEEE	New York City DOT
American Honda Motor Company	NY Dept. of Environmental Conservation
AMPO	New York Metropolitan Transportation Council
APTA	North Carolina Division of Air Quality
Arlington County, VA	North Central Texas Council of Governments
Bay Area Rapid Transit	NRDC
BBG Group	Pennsylvania DOT
Bipartisan Policy Center	Rails to Trails
BP	Sacramento Air Quality Management District
Brookings Institution	Sacramento Area Council of Governments
California Air Resources Board	Serafix
Clean Air Task Force	Smart Growth America
East-West Gateway COG	Stanford University
Entergy	STPP
Environmental Defense Fund	Transportation for America
Exxon Mobil	US EPA
Federal Highway Administration	Van Ness Feldman
Ford Motor Company	Veolia Transportation North America
Kansas DOT	Virginia DOT
Maryland DOT	WRI
Metropolitan Transportation Commission	

Note: The proposal for a Transportation GHG Reduction Incentive represents our CCAP's attempt to capture the core areas of agreement from the dialogue. This proposal is not intended to represent the specific views of any individual agency, organization or company. In the course of our discussions some stakeholders indicated they would prefer more performance accountability, while others would prefer more flexibility than presented in this proposal.

For more information, please contact:
 Steve Winkelman (swinkelman@ccap.org) or Marty Spitzer (mspitzer@ccap.org).

About the Center for Clean Air Policy
Since 1985, CCAP has been a recognized world leader in climate and air quality policy and is the only independent, nonprofit think-tank working exclusively on those issues at the local, national and international levels. Headquartered in Washington, D.C., CCAP helps policymakers around the world to develop, promote and implement innovative, market-based solutions to major climate, air quality and energy problems that balance both environmental and economic interests.

For more information about CCAP, please visit www.ccap.org.

Attachment B

CCAP Travel Data and Modeling Recommendations
to Support Climate Policy and Performance-Based Transportation Policy
(January 2009)

Informed by stakeholder discussions in the CCAP VMT & Climate Policy Dialogue

In an era of shrinking budgets and transportation systems falling short of meeting community needs, there is a growing call for a performance-based approach to transportation policy. The new emphasis on addressing climate change and reducing petroleum dependence reinforces this point. However, current data, models and planning capacity are not up to the task.

Accurate, timely and geographically-specific travel data and planning capacity are critically needed to effectively plan, manage and evaluate transportation system performance across a range of issues including economic efficiency, metropolitan accessibility, greenhouse gas (GHG) emissions, safety and system preservation. Transportation researchers and policy analysts have identified deficiencies in the quality, resolution and timeliness of travel data. State and local governments recognize the need, but are concerned about their ability to pay for travel data improvements. Key travel data collection efforts have been defunded or terminated in recent years.

That is why members of the Center for Clean Air Policy's VMT & Climate Policy Dialogue, a diverse group of governments, advocacy groups and industry, have identified improvements in travel data as a high priority to support policy design, implementation and evaluation. The group discussed at length options for improving travel data to support climate policy and a performance-based approach to transportation policy. The recommendations below reflect the group's general consensus of policies that, if followed, would be of great value to climate and transportation policy design, implementation and evaluation.[4]

General Observations
1. High quality data are essential for performance-based transportation policy with implications across a broad range of national priorities including climate change, system efficiency, metropolitan accessibility, economic development, safety, system preservation and petroleum use.
2. Developing, implementing and evaluating GHG reduction policies will require improved travel data and modeling capacity.
3. The required precision, resolution and quality of data and modeling will vary by application (planning, policy evaluation, financing, regulation).

---

[4] CCAP included more detailed recommendations in testimony to the House Subcommittee on Technology and Innovation : http://www.ccap.org/docs/resources/612/Winkelman%20testimony%20(3%2031%2009).pdf.

Key Recommendations for Improving Travel Data and Modeling

1. **Substantially Increase Funding for Travel Data Improvement:**
   a. Travel, fuel use and land use data collection and improvement
   b. Research and analysis
   c. Travel modeling improvements
   d. Fuel economy measurement
   e. Cross-agency coordination at the federal, state, MPO and local levels

2. **Improve Quality and Utility of Travel Data**
   a. Conduct a study and develop recommendations on the highest priority data and modeling improvements with recommendations for, and participation from, federal, state, MPO and local governments, the private sector, academia and NGOs.
      i. Assess the costs and benefits of collecting and integrating travel and fuel use data from multiple sources to fill holes, corroborate data and assess interactions among policy variables.
      ii. Assess the appropriate level and rigor of data for different uses and users.
   b. Assess the costs and benefits for states to process, collect and analyze odometer data to track local travel behavior and determine land use influence on travel to aid policy evaluation and improve predictive capabilities of travel models.
   c. Enhance collection and analysis of freight data

3. **Enhance Travel and Emissions Modeling Capacity**
   a. Improve travel and emission modeling capability to address GHG concerns: CO_2 vs. speed and traffic flow, induced demand, land use, geographic and temporal resolution, transit, non-motorized travel, freight, fuel price sensitivity, and macro system efficiency. This will require improved travel data.
   b. Provide resources to help states, MPOs and local governments to enhance modeling capacity and shift towards advanced travel models while maintaining and improving current models.

4. **Improve Accuracy and Reliability of Fuel Economy Measurements**
   a. Provide resources to expand testing of real-world vehicle fuel economy, continue to develop better driving cycle tests, and conduct research to develop better ways to predict the fuel economy any individual will get.

5. **Coordinate and Collaborate across Government Agencies and Levels of Government** to support data corroboration, quality assurance, policy design and evaluation.
   a. Share, compare, and integrate complementary data sets (travel, fuel sales, fuel economy, GHGs, demographics, land use) and establish procedures for corroboration.
   b. Analyze data and conduct research to understand relationships among policy variables and inform policy design.
   c. Provide guidance, technical support, tools and information on: data collection, data integration, model improvement, planning, scenario analyses, best practices, policy design, implementation and evaluation.