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Testimony of Steve Winkelman, Center for Clean Air Policy
Increase Travel Choices to Reduce Gasoline Demand

U.S. Senate Committee on Energy and Natural Resources
Full Committee Hearing: to review the status of existing federal programs and discuss additional proposals for near term gasoline demand reductions (SD-366)

July 23, 2008

Mr. Chairman, Ranking Member Domenici and Members of the Committee: good morning. Thank you for the opportunity to testify before you today. My name is Steve Winkelman. I am the Director of the Transportation and Adaptation Programs at the Center for Clean Air Policy (also called CCAP), a Washington DC and Brussels-based environmental think tank.

I respectfully request that my full statement be made part of the record.

CCAP helps governments at all levels design and implement energy and climate policy solutions that balance economic and environmental concerns. CCAP conducts technical and economic analyses and facilitates dialogue among stakeholders from government, industry and environmental groups to craft practical and effective solutions.

For example, CCAP's "VMT and Climate Policy Dialogue" includes state secretaries of transportation, directors of Metropolitan Planning Organizations, local governments, federal agencies, car companies, oil companies and environmental groups who are working together to develop options for advancing smart growth in climate policy and integrating climate considerations into transportation policy.

At CCAP we encourage our partners in government and industry to "**Ask the Climate Question**." From manufacturing, to infrastructure development to daily commuting: if you build it, fund it, buy it or do it ask what the implications are for greenhouse gas emissions and your vulnerability to the impacts of climate change.

Answering the Climate Question will go a long way toward addressing the topic of today's hearing – reducing gasoline demand.

According to the American Petroleum Institute, petroleum demand actually fell three percent during the first half of 2008, compared to the first half of 2007. But, **with limited travel choices, Americans are left vulnerable to high fuel prices**; they are hit hard in the pocketbook and the national economy suffers. **Federal policies can increase travel choices for all Americans**, and increase our resilience to high fuel prices, while reducing greenhouse gas emissions.

Some 65 years ago, during World War II, Americans rose to the challenge of constrained resources. They gathered scrap metal for recycling and planted Victory Gardens that produced an estimated 40 percent of all vegetables consumed nationally. And back then, all children walked to school (even if it wasn't really uphill both ways).

Today, Americans are responding to high fuel prices with creativity and common sense. As a result, the number of miles Americans drive declined by two percent in the first quarter of 2008 compared to the first quarter of 2007.

More people are taking public transit, walking, biking, combining trips, carpooling, telecommuting, going to four day work weeks, shifting to online shopping and even planting vegetable gardens. In effect, they are asking the Climate Question: Do I need to make this trip? Can I combine trips? Could I walk a half mile? How can I use less of this high-priced fuel?

I am fortunate to be able to work from home and walk my son, Benny, to nursery school. Unfortunately, too many Americans find they have little choice but to drive long distances to meet their basic needs. Most children can no longer even walk to school. In 1969, half of all American school children walked or biked to school. In 2001? Only 15%. And high fuel prices are compounding the pain of the housing affordability crisis.

According to the American Public Transportation Association, public transit currently saves the equivalent of four billion gallons of gasoline each year. And Americans are getting on the bus and train in record numbers: 2007 saw the

highest ridership in 50 years, and we've already seen a three percent increase in 2008. **But while transit companies are enjoying record demand for their product, high fuel prices are forcing many agencies to cut service and raise fares.** It would be as if Toyota cut back production of the Prius, or Ford pulled back on the Focus because too many people want them.

Whether fuel prices remain high for an extended period, or come back down and stay there for a while, Americans need more efficient choices for getting where they need to go.

Climate Change Considerations

With the Energy Independence and Security Act of 2007, your Committee set new efficiency standards for vehicles and new greenhouse gas requirements for fuels. Together, these measures would reduce gasoline demand and transportation CO_2 emissions to 20 percent below 1990 levels by the year 2030.

However, the U.S. Department of Energy forecasts a 50 percent increase in the number of miles Americans will drive through 2030. This increase in driving would **cancel out the benefits from the Energy Bill's new CAFE standards and fuel requirements.** Gasoline use and CO_2 emissions in the year 2030 would be 20 percent above 1990 levels, instead of 30% below as required for climate protection. **(**I provide graphs and further technical details in the appendix of my written testimony.**)**

Reducing gasoline demand will therefore require a comprehensive approach that includes improving transportation choices. To do that effectively, we must focus new land use development in central locations and near transit stations to shorten vehicle trips and foster more walkable communities. As we document in the book, ***Growing Cooler***: *The Evidence on Urban Development & Climate Change*, people drive fewer miles in places where things are closer together, and when they have more travel options such as walking and transit. In other words, we need to Ask the Climate Question when we make development and infrastructure decisions.

I would like to commend the Committee for your foresight in pursuing the transportation/land use connection via your direction in the 2005 Energy bill for

the National Academies' Transportation Research Board to conduct a study on the issue. It is my understanding that that study will be completed next May.

How can Federal Policy Help?

Public transit agencies are in immediate need of emergency federal assistance to accommodate record numbers of riders, restore service cuts, expand service, maintain or reduce fares, and cope with rising fuel bills.

Increasing the dollar cap on fringe benefits for employee transit passes and expanding policies and incentives to promote telecommuting could provide immediate relief for many employees.

New federal grants could help state and local governments expand pedestrian and bicycle facilities to make walking and biking safer and more convenient. For example, expanding the Safe Routes to School program would improve the health of our children and save gas.

Smart growth policies that encourage infill and transit-oriented development will be critical to reducing future gasoline demand, because what we build now will last for a century -- and will determine whether our children will have viable alternatives to paying high oil prices. In the short-term, Location Efficient Mortgages can help people afford homes in neighborhoods where they don't need a second car.

Climate Policy

CCAP has developed a policy proposal for a **federal incentive program** that **requires state and local governments to develop goals to slow growth in driving and reduce transportation greenhouse gas emissions**. Allowance value from a federal cap-and-trade program would be used to fund goal development and implementation.

Importantly, CCAP believes that **there is no one-size-fits-all approach, and that solutions must be developed locally – not dictated by the federal government.** We anticipate a diversity of measures applicable to **urban, suburban and rural areas** ranging from infill development and transit improvements, to intermodal freight. CCAP recommends a **bottom-up 'discovery process'** in which states and

local governments conduct **scenario analyses** and engage stakeholders to determine goals appropriate to local conditions.

Transportation Policy

Next year, Congress will have a major opportunity to Ask the Climate Question.

- Will the next transportation bill reduce our dependence on petroleum or exacerbate it?
- Will federal transportation spending make Americans more secure or more vulnerable?
- **Will the next $300 billion we spend on transportation build upon the gains from the Energy Bill, or cancel them out?**

Current federal transportation funding formulas actually ***reward*** increased fuel consumption and increased driving. CCAP proposes that we reverse course.

The next federal surface transportation bill, which we have dubbed "**Green-TEA,**" should improve travel choices for all Americans, support smart growth planning, develop truly high speed rail, expand freight rail, increase freight system efficiency. For example, Green-TEA should cover the 12-year back up in funding for "New Starts" transit projects. And transit funding guidelines should ensure that the benefits of more efficient land use, such as decreased car ownership and increased walk trips, receive appropriate credit.

Green-TEA should provide state and local governments the tools and resources to plan and implement transportation and land use policies that will cut petroleum demand, reduce greenhouse gas emissions and bolster the economy.

Finally, Green-TEA should fund substantial improvements in fuel use and travel data. In recent years key federal travel surveys have been eliminated or scaled back. If we are serious about reducing petroleum demand and greenhouse gas emissions, we will need new surveys and better data to provide accurate and timely assessment of our progress, and to evaluate policy effectiveness. To get things moving, the Committee could direct the National Academies to conduct a study on what it would take and cost to improve fuel use and travel data to at least the quality levels achieved in other industrialized countries.

Closing Thoughts

Americans are driving less. They are doing the best they can to cope with high fuel prices. Some are making the best of it, like my friend Bonnie Baker, who now walks her daughter one mile to summer camp and another mile and a half to the coffee shop on the way home. She's saving money and feeling good, and some of her neighbors have expressed interest in joining her! Many others are frustrated with long waits for the bus, or the lack of shopping within walking distance.

But you don't have to take my word for it. Over the last several years, surveys by home builders, realtors and developers indicate that at least one-third of Americans in the market for a home want to live in convenient, walkable "smart growth" neighborhoods. Communities like Portland, Oregon, Charlotte, North Carolina, Newark, New Jersey, and Arlington, Virginia, and Sacramento, California are realizing that smart growth and transit-oriented development can cut fuel costs, reduce long-term infrastructure expenditures, improve quality of life and bolster the local economy.

I'm reminded of the old joke about the man who wants more than anything to win the lottery. He spends his whole life praying to win the lottery, but never actually goes out and buys a ticket. If we want to insulate ourselves from oil price shocks, if we want to protect our communities from the impacts of global warming it's time for us to buy that ticket. We must make new investments in public transportation, in bike lanes and, yes, even in sidewalks.

Americans have shown time and again that we are innovative and resilient. If we remember to **Ask the Climate Question**, together we can develop the choices we will need to thrive.

Thank you for your attention, I look forward to your questions.

For more information, please contact Steve Winkelman, Director of Adaptation and Transportation Programs: swinkelman@ccap.org, 914-481-4507.

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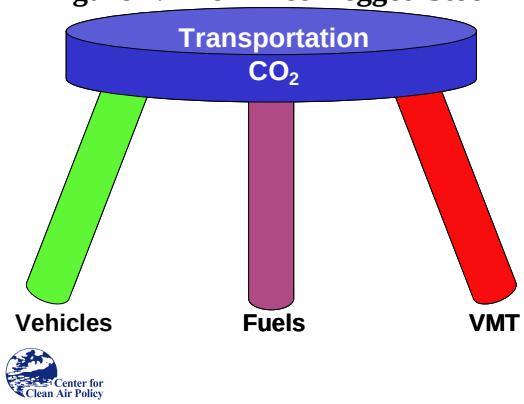
Appendix: Why How Much We Drive Matters A Lot

Transportation Greenhouse Gas Emissions

Transportation sector CO_2 emissions account for almost one third of the US total and are growing rapidly. Transportation CO_2 emissions are a function of three factors: vehicle efficiency, fuel characteristics and the amount we drive as measured in vehicle miles traveled, or "VMT". CCAP refers to this as the three-legged stool (Figure 1).

Figure 1. The Three-Legged Stool



Proposals for national climate legislation would set a cap on most GHG emitters, which in the case of transportation would be set at the level of petroleum refiners and importers. A GHG emissions cap could send a price signal to consumers of up to $0.50 per gallon of gasoline in 2030.[1] A **price signal of that magnitude will be ineffective on its own** unless there are good choices of vehicles, fuels and convenient alternatives to driving.

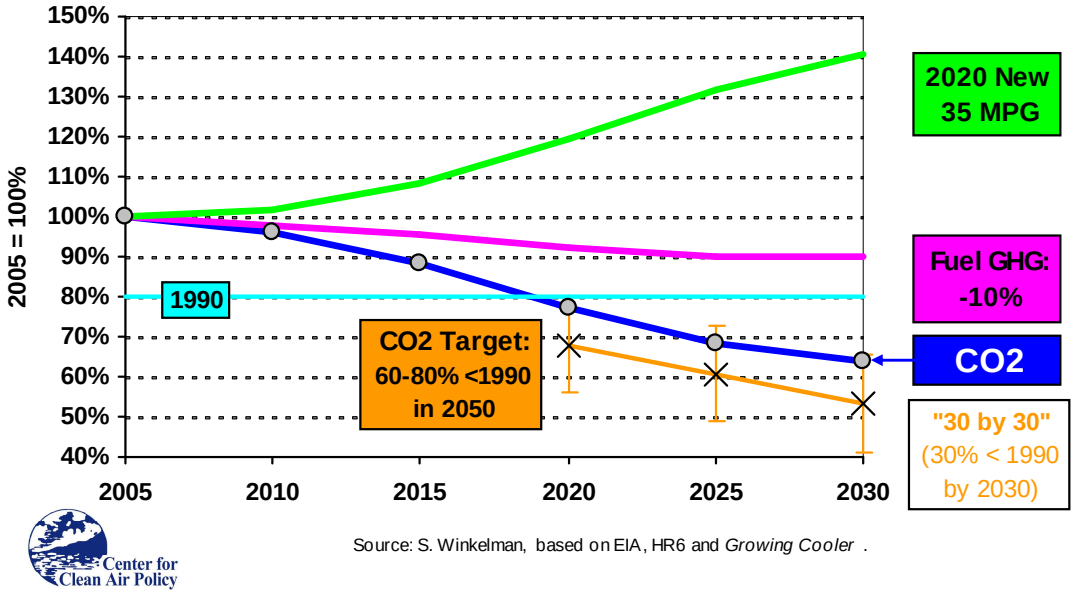
A number of **market failures** hamper provision of low-GHG travel choices. For example, consider the multitude of public and private entities involved in planning, financing and operating transportation infrastructure, and the many stakeholders engaged in land use planning, permitting and development. Therefore, **complementary policies are needed** to address market failures and encourage the development of more efficient vehicles, low-GHG fuels and to increase travel choices. To be clear, in a comprehensive **cap-and-trade** system, if the transportation sector achieves fewer reductions, other sectors will make up the difference. But placing a heavier burden on other sectors may drive up compliance costs, whereas increasing transportation choices would make it easier to meet the GHG cap, reduce consumer vulnerability to higher fuel prices and could minimize net societal costs.

CCAP analysis and experience leads us to the conclusion that **it is necessary to make progress on all three legs of the stool** to meet GHG reduction goals. In fact, projected improvements in vehicles and fuels are determined to be insufficient to achieve climate goals due to forecasted growth in driving (measured as VMT). This point is particularly pertinent to those industries that are typically in the crosshairs of regulation: electricity generation, petroleum refining and vehicle manufacturing – if growth in driving is not addressed, then power, oil and car companies may face stiffer regulation.

[1]For example, see: http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf

The Energy Independence and Security Act of 2007 requires new passenger vehicles to achieve at least 35 miles per gallon by 2020, which would lead to a 41 percent increase in fleet-wide fuel economy by 2030 (see Figure 2, green line).[2] The Energy Bill also sets a low GHG fuel requirement that CCAP calculates would reduce lifecycle GHG emissions by 10 percent by 2022 (see Figure 2, purple line). If we assume no growth in VMT, these measures would reduce CO_2 emissions from cars and light trucks to 20 percent below 1990 levels in 2030 (see Figure 2, dark blue line). That's just into the range of what's needed to be on path to 60 percent below 1990 levels by 2050. While other sectors would need to overcompensate if deeper GHG cuts were determined to be necessary, I submit that this would represent a rather respectable effort on the part of the transportation sector toward achieving the climate target.

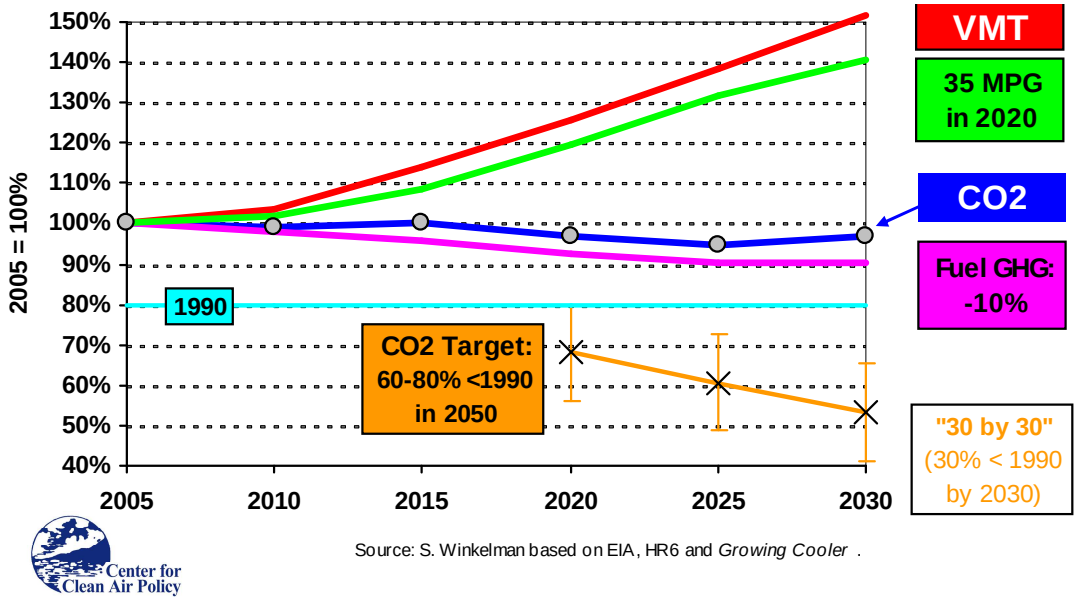
Figure 2. CO_2 Savings from the 2007 Energy Bill: CAFE Standards and Low-GHG Fuels, <u>assuming no growth in VMT</u>



The Energy Information Administration, however, forecasts a 51 percent increase in driving between 2005 and 2030 (see Figure 3, red line), which would bring light duty vehicle GHG emissions to 21 percent <u>above</u> 1990 levels in 2030 (see Figure 3, dark blue line), as opposed to the 30 percent below needed for climate protection (orange line).

[2] US DOE/EIA, *Annual Energy Outlook 2008, http://www.eia.doe.gov/oiaf/aeo/index.html*

Figure 3. VMT Growth Projected to Offset gains from CAFE and Low-GHG Fuels



Even in an aggressive case, with a 50 mpg CAFE standard in 2030, and an additional 10 percent reduction in fuel GHGs, passenger vehicle GHG emissions would be only four percent below 1990 levels in 2030, still well above the target range. There is a clear need to get reductions from all three legs of stool: vehicles, fuels, and VMT.

Success Stories

Residents of the **New York City** region drive two-thirds fewer miles each year than the national average. By accident of history, New York City had the good fortune to develop around pedestrian and transit infrastructure, but has had the economic wisdom to maintain it.

In the **Portland, Oregon** region, after three decades of growth management, transit-oriented development and improvements to pedestrian and cycling facilities, the amount of driving per capita decreased by six percent from 1990-2005, while national VMT per capita increased by 10 percent over the same time period.

In **Arlington, Virginia**, research by Dennis Leach shows that 20 years of focused development around Metro stations has resulted in no net increase in local traffic despite substantial economic and population growth. More than a third of residents take transit to work and 12 percent of households do not own cars, versus four percent for the region as a whole. Development that would have covered 14 square miles in a suburban setting, takes up only two square miles around Metro stations in Arlington. Critically, eight percent of the County land use accounts for 33 percent of real estate tax revenues – providing a crucial funding stream for enhanced transit operations and other local services.

Pre-project modeling for the Atlantic Station infill redevelopment project of an old steel mill site in downtown **Atlanta** projected a 30 percent reduction in driving vis-à-vis suburban locations. Actual measurements to date indicate a 75 percent reduction in daily driving per resident of the mixed-use development.

The **Sacramento** Area Council of Governments (SACOG) has calculated that implementation of the regional 2050 Blueprint smart growth land use plan would result in CO_2 emissions 14 percent lower than under business-as-usual trends. Importantly, SACOG calculates avoided infrastructure costs of more than $9 billion through 2050 (transportation and utility) and increased transit operating costs of $120 million per year. CCAP calculated consumer fuel cost savings of $650 million per year (at $2.50 per gallon) resulting in a net societal economic benefit. From a CO_2 perspective, CCAP calculates a negative cost (i.e., a savings) of -$200 per tonne CO_2. This net savings compares very favorably to measures such as carbon capture and storage, which costs +$30/tonne and ethanol at +$200/tonne range. With a long backlog of deferred infrastructure maintenance, and strained public resources, polices that can reduce the need to build new infrastructure are most welcome indeed.

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