

Transportation, the Environment, and Climate Change Webinar

Transcript of Questions and Responses

1. Do you really think a U.S. Cap-and-Trade can work?
 - Yes. It will be a monumental challenge to design and implement, but yes it can and will work. A cap-and-trade system will provide a least cost strategy to meet scientifically based climate targets.
2. Thanks for the information on Cap-and-Trade. Do you have any details on what a Cap and Dividend system would look like? What are the implications of the different systems on lower income folks?
 - In traditional cap and trade, the extra money we pay for carbon goes to companies who receive free permits. Under cap and dividend system, the funds flow into a not-for-profit trust that is divided into equal shares and distributed to the public. In some scenarios, a portion of the dividends would be returned "to the people, especially vulnerable families, communities and businesses to help the transition to a clean energy economy." This article from the Wall Street Journal has a bit more:
<http://online.wsj.com/article/SB123566843777484625.html>
3. Bill McKibben writes that any atmospheric concentration of carbon dioxide above 350 parts per million is unsafe. Why do you believe 450ppm is an acceptable target?
 - While there are differences of opinion regarding target levels of carbon dioxide, the Intergovernmental Panel on Climate Change (IPCC) recommendation of 450ppm represents an international, scientific consensus.
4. How do fuel-efficient vehicles reduce the carbon cap?
 - The term "carbon cap" describes the maximum GHG emissions that would be permitted across all sectors, including consumption of combustible fuels. Since this cap sets an emissions limit that is below trend projections, achieving that target means "reducing" emissions relative to trend. The cap itself would be determined by a policy, not by the prospects of any given technology.
5. What are the specific transportation efficiency strategies (TDM & TSM) you're recommending for stimulus funds and reauthorization to address Greenhouse Gas emissions reduction?
 - The greatest advocacy efforts in the stimulus bill were focused on procuring more funding for transit, including operations, because transit systems can alleviate congestion and improve transportation system efficiency overall.
6. Do you think congestion pricing is politically feasible?
 - Implementation of a congestion pricing system requires a committed political leadership that is able to explain the benefits in clear and compelling

ways to the general public. Lessons from the experience in New York City and elsewhere demonstrate that the key is to implement it in a way that gives people better system performance and expanded travel choices, with less congestion, better reliability, and expanded transit. If done widely, it should be augmented with a refundable mobility tax credit for low and moderate income households to improve equity of access. Experience from a growing number of cities shows that these principles can lead to successful implementation and public acceptance of congestion pricing.

7. How feasible are pricing strategies for a place like Montana that has small cities and many miles of highways?
 - Generally speaking, a federal transportation program focused on achieving a greater degree of sustainability in transportation will bring some measure of economic stability nationwide as more and more firms, commuters, and customers enjoy greater assurance of cost-effective access and mobility. Further, moderating overall fuel demand could be very well appreciated in places like Montana, by virtue of helping to moderate the base price of fuel.
8. Are you for replacing the gas tax with mileage-based tax? Is this politically feasible?
 - The original user fee model dedicated a portion of gas taxes to road construction, a concept that will be increasingly out-of-date in the 21st Century, as the nation's national transportation program becomes more multimodal, with a new emphasis on investments in urban rail transit and intercity high-speed rail. Over-reliance on fuel taxes also makes the national transportation program dependent on growth in petroleum consumption with the attendant economic, national security, and climate change issues. Continued reliance on increases in fuel purchases to grow revenue for transportation system investments is no longer good policy. Congress should begin the process of replacing the fuel tax with more sustainable revenue sources.
9. What are some other funding sources besides the gas tax?
 - Driving "less" relative to trend projections may still leave a fairly large pool of mileage from which substantial revenues would come. Moderating growth in vehicle miles travelled (VMT) also challenges the rationale for further highway expansion. Beyond the VMT tax, other potential revenue sources include "value-capture" (capturing a portion of the windfall private real-estate values that result from public infrastructure such as new transit stations), private-public-partnerships (as in long-term leases dictating the terms of privately-financed toll-roads), and revenues from climate-oriented legislation or even general government funds.
10. With roadway and parking lot pavement creating heat islands, is the additional cooling of buildings that is required because of the heat islands attributed to buildings or to the transportation system that is the root cause?

- Conventional rooftops and lack of other ecosystem services also contribute to the urban heat island effect. There is growing interest in “Green Infrastructure” that can make urban environments function more like natural environments mitigating some of the problem and achieving the associated energy-savings benefits.
11. How do you determine the tradeoff between replacing older, less fuel-efficient vehicles with newer vehicles that use resources in their construction process? That is, scrapping old cars could have perverse consequences.
- Modeling prior to implementation of a vehicle scrappage program can take this important consideration into account to a greater or lesser degree, according to the scope, purpose, and audience of the program. Long-range projections of an entire fleet typically assume a vehicle replacement rate of 10 years and production of a given number of cars during that time.
12. Are there any producers of auto or truck engines that could replace traditional gas-powered ones in existing vehicles, eliminating the need for an entirely new car or truck?
- Yes, diesel engine retrofits, repowers, and are a common way to extend the life of locomotives, heavy-duty trucks, and other large vehicles by installing a new engine in an older vehicle body. See the U.S. EPA Clean Diesel program at www.epa.gov/otaq/diesel/innov-prog.htm and the California Air Resources Board at www.arb.ca.gov/diesel/mobile.htm
13. Please address the implications of the Obama Administration’s promotion of on high-speed rail as transportation solution.
- The Obama Administration has indicated they will work with Amtrak and the owners of the freight railroads to make high-speed rail a reality in the US. \$8 billion has already been put aside for this project but it is expected to cost much more over the long-term. As of yet, there is not a more specific plan put in place, but the prospect of high-speed rail could be a major step in reducing carbon emissions as people opt to take carbon low rail as opposed to flying or driving.
14. Why are we talking of plug-in hybrids and electric cars when the electricity sector is the largest pollution source and electric cars still cause sprawl?
- While there is no silver bullet “solution”, plug-in hybrid vehicles can play a role in reducing emissions to the extent that the carbon-intensity of the electric grid is minimized over time, and more-polluting vehicles would be replaced within communities that are already built and will continue to be auto-dependent for some time.
15. Is the toxicity of the batteries which will be used in electric vehicles and hybrids a concern, particularly with regard to disposal of the batteries in the future?
- There are many types of batteries and some are far more toxic than others. While batteries like lead acid or nickel cadmium are incredibly bad for the

environment, the toxicity levels and environmental impact of nickel metal hydride batteries—the type currently used in hybrids—are much lower. Further, as research and development around vehicle technologies and new fuel options are pursued, these impacts may be reduced. See this discussion by Environmental Defense Fund staff Sheryl Canter on the batteries used in electric vehicles: http://blogs.edf.org/climate411/2007/07/30/plug-in_cars/

16. How do we keep high-density communities from being populated primarily by wealthy individuals as is happening in Manhattan and San Francisco?
 - One reason the price of living in a compact, walkable community is high is due to the pent-up demand for such urban spaces. Instituting policies that encourage well-designed and higher-density development is one way to increase the supply and accommodate everyone who wants the convenience that goes along with living in these places. For more information, see *The Option of Urbanism* by Christopher Leinberger and tune in to Transportation for America's upcoming webinar, [Transportation, Housing and Development](#) on April 16th. Registration is available at www.t4america.org/webinars
17. Most American households now own two cars. Neither is sized for single-occupant commuting. Shouldn't Detroit be building an ultra-narrow electric-powered commuting vehicle that takes up half the space in our freeway lanes?
 - We believe solving global climate change will require many innovations in vehicle technologies and fuels, and these innovations must be accompanied by more options for intermodal travel and changing land-use patterns so people can drive less.
18. Among the 3 areas of focus, technology, fuels and VMT, where do we need to put the most emphasis to succeed?
 - Transportation policies to reduce VMT is likely the most important piece to attend to, primarily because there are many co-benefits in terms of smart growth to accompany substantial reductions in GHG emissions. It is also an area in need of attention because there is already much popular and commercial attention being drawn to the advancement of technology and fuels. Finally, there exists both fair and exaggerated skepticism about any single “silver bullet” solution such as the prospect of a 100 mpg car. For some interesting discussion: http://switchboard.nrdc.org/blogs/kbenfield/the_jevons_paradox_and_why_mor.html
19. What policy changes are needed to address transportation sector's adaptation to impacts of climate change?
 - Many policy changes are needed to both support and compliment a culture and practice of preparedness – from climate monitoring and modeling to planning, public investment, and individual choices. The Pew Center on Global Climate Change report, *Adaptation to Climate Change: International*

Policy Options, contains additional resources and policies options. It is available at: www.pewclimate.org/docUploads/PEW_Adaptation.pdf

20. Please give more information on portion of air pollution from transportation versus the portion of greenhouse gas emissions from transportation.
- The transportation sector was responsible for 27% of total GHG emissions in 2002 (www.epa.gov/otaq/climate/420f05003.htm#perspective) though the sector's share of individual criteria air pollutants varies considerably for each. Recent estimates are available at: http://cta.ornl.gov/data/tedb27/Spreadsheets/Table12_01.xls. It is worth celebrating that tailpipe emissions of some criteria air pollutants have been reduced 90% since the 1970's due to more-complete combustion and catalytic converters in vehicles. That success story is distinguished from the technological prospects for reducing CO2 emissions in that CO2 is the primary product of combustion and cannot be so substantially reduced through "cleaner" combustion; the vehicles must be more-efficient overall.
21. What about adding VMT to the underwriting for home mortgages?
- NRDC, in cooperation with the Center for Neighborhood Development, has been engaged in research and advocacy for that kind of underwriting for about a decade or so. (There have been a couple hundred or so "Location-Efficient Mortgages" on a pilot basis, however the lending industry has yet to adopt such practice as a general rule.)
22. Are people really opting into mileage-based insurance on their own volition?
- Several companies, including Progressive Insurance Company and GMAC are already offering these services. See www.milemeter.com