PLANNING COMMUNITIES FOR A CHANGING CLIMATE—SMART GROWTH, PUBLIC DEMAND AND PRIVATE OPPORTUNITY

HEARING

BEFORE THE

SELECT COMMITTEE ON ENERGY INDEPENDENCE AND GLOBAL WARMING HOUSE OF REPRESENTATIVES

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CONTENTS

WITNESSES

HEARING ON "PLANNING COMMUNITIES FOR A CHANGING CLIMATE SMART GROWTH, PUBLIC DEMAND AND PRIVATE OPPORTUNITY"

WEDNESDAY, JUNE 18, 2008

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON ENERGY INDEPENDENCE
AND GLOBAL WARMING,
Washington, DC.

The committee met, pursuant to call, at 9:27 a.m., in room 311, Cannon House Office Building, Hon. Edward Markey (chairman of the committee) presiding.

Present: Representatives Markey, Blumenauer, Inslee, Solis, Cleaver, Hall, Sensenbrenner, and Walden.

Staff present: Danielle Baussan, Jeff Sharp.

The CHAIRMAN [presiding]. Good morning, and welcome to the Select Committee on Energy Independence and Global Warming. We look forward to this very exciting hearing.

It is of historic importance that a few years ago, the launch of Sputnik challenged America to build a better scientific community. Today, skyrocketing gas prices and the threat of global warming challenge us to build green communities. Green communities offer relief from high gasoline prices and reduce greenhouse gas emissions. They employ renewable energy, rely on energy-efficient buildings, and adopt Smart Growth principles to reduce the distances between destinations and foster a diverse local economy.

Through these actions, green communities reduce vehicle emissions, lower energy demand, and reduce the need for costly road and energy infrastructure. The result is reduced global warming emissions and lower taxes. The growing demand for green communities overwhelms supply. With gasoline priced at over $4 per gallon, and a housing crisis hurting many areas of the country, young professionals, smaller families, and aging populations seek the Smart Growth lifestyle in increasing numbers. Despite this shift, local and federal law can make it simpler to build on whatever open land is available, scattering people, workplaces, and resources far apart.

This hearing will examine whether the government can help communities return to a lifestyle that does not depend on long drives to work, and hassle-filled drives to schools, grocery stores, and shopping. Smart Growth communities were once the norm across the country. Like many of you, I have lived for years in a green community without even realizing. When I grew up in

Malden, Massachusetts, I walked to school. We took the bus around town. My parents did not buy a car until I was 9 years old.

It is hard to think that Malden was green when we would take field trips to find a park. But the truth is that close-in experience was typical of many towns and cities in the 20th century America. How communities achieve Smart Growth principles varies widely. The select committee is fortunate to have two very different examples of attempts to build successful green communities.

The rural community of Greensburg, Kansas was destroyed by a tornado last May. Now, it is rebuilding using the highest green building standards, developing a wind-power economy, and retaining the businesses and neighbors integral to a close-knit community. Rural Smart Growth may not be a phrase heard often, but it should be. The small town principles of walking to school, 10–minute driving commute, and shopping at local stores are identical to those of urban smart communities like Portland, Oregon.

Masdar City in Abu Dhabi represents the future of green communities. They are working with the private sector, engineers from MIT and American architects to build a city that will be a net exporter of energy. Masdar will incorporate basic services like schools and libraries with power streets, photovoltaic awnings, and an academic and commercial center focusing on the latest energy technology.

Despite having a century's supply of oil, Abu Dhabi has chosen to invest in a new clean energy climate-conscious economy by building a Smart Growth zero-net energy city. Make no mistake, Masdar is our new Sputnik. It should be a wake-up call to America and a challenge to each of us. The city of tomorrow creating the technology of the future is now underway in another country.

We must rise to the challenge of building Smart Growth energy efficient communities. We have the scientific ability to do so, and as the story of Greensburg will demonstrate, we also have the heart and the American spirit to make it happen.

My time has expired for an opening statement.

We now turn and recognize the ranking member of the committee, the gentleman from Wisconsin, Mr. Sensenbrenner.

[The prepared statement of Mr. Markey follows:]

THE SELECT COMMITTEE ON
ENERGY INDEPENDENCE AND GLOBAL WARMING

Opening Statement of Rep. Edward J. Markey
Planning Communities for a Changing Climate:
Smart Growth, Public Demand and Private Opportunity
June 18, 2008

Fifty years ago, the launch of Sputnik challenged America to build a better scientific community. Today, skyrocketing gas prices and the threat of global warming challenge us to build green communities. Green communities offer relief from high gasoline prices and reduce greenhouse gas emissions. They employ renewable energy, rely on energy-efficient buildings, and adopt smart growth principles to reduce the distances between destinations and foster a diverse local economy. Through these actions, green communities reduce vehicle emissions, lower energy demand, and reduce the need for costly road and energy infrastructure. The result is reduced global warming emissions and lower taxes.

The growing demand for green communities overwhelms supply. With gasoline priced over $4 per gallon, and a housing crisis hurting many areas of the country, young professionals, smaller families and aging populations seek the smart growth lifestyle in increasing numbers. Despite this shift, local and federal laws can make it simpler to build on whatever open land is available, scattering people, workplaces and resources far apart.

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How communities achieve smart growth principles varies widely. The Select Committee is fortunate to have two very different examples of attempts to build successful green communities. The rural community of Greensburg, Kansas, was destroyed by a tornado last May. Now, it is rebuilding using the highest green building standards, developing a wind power economy and retaining the businesses and neighbors integral to a close-knit community. Rural smart growth may not be a phrase heard often, but it should be. The small-town principles of walking to school, ten minute driving commute and shopping at local stores are identical to those of urban smart communities like Portland, Oregon.

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Make no mistake--Masdar is our new Sputnik. It should be a wake up call to America and a challenge to each of us. The city of tomorrow, creating the technology of the future, is now underway in another country. We must rise to the challenge of building smart growth, energy efficient communities. We have the scientific ability to do so; and as the story of Greensburg will demonstrate, we also have the heart and the American spirit to make it happen.

Mr. SENSENBRENNER. Thank you very much, Mr. Chairman.

Most communities want to grow, and I will bet if you ask governors, mayors and council members of these communities how they want to grow, I am sure nearly all would say they want to grow smartly. After all, it is only common sense for community leaders to use the most up-to-date planning methods and ideas.

Today's hearing will highlight many smart ideas that can help communities grow bigger and more prosperous without subjecting themselves to some of the problems that are often associated with large urban areas, such as traffic, air pollution and congestion. However, while some of the concepts to be presented today could simply be described as common sense, others might be described as a waste of money.

While reducing greenhouse gas emissions is a good policy, it is a policy that should be properly balanced with economic realities. The testimony of Gregory Cohen, the president and CEO of the American Highway Users Alliance shows us that many Smart Growth policies don't have to be expensive at all. For example, improved signal timing and intelligent transportation systems are among the most cost-effective ways to reduce greenhouse gases. I welcome Mr. Cohen here today.

Where feasible and practical, I would encourage communities to enact some of these Smart Growth principles based on their unique needs. One global warming principle that I consistently advocate is that policies need to produce tangible environmental benefits. Local elected leaders will be pressured to adopt many Smart Growth policies, but they should diligently research exactly how these changes might affect these communities. In many cases, there might not be very much bang for the buck, if any at all.

Also, I do not think the federal government should dictate to local government how they should grow. Managing growth is a local decision, and the local elected leaders should be free to take local conditions under consideration, without taking burdensome one-size-fits-all regulations from the federal government. I do believe in local home rule. In my state, the Wisconsin constitution gives local home rule to incorporated municipalities.

One argument that will be forwarded today is that Smart Growth will help reduce reliance on oil, presumably leading to lower gas prices in the future. I don't dispute that reducing demand for gas will help lower the price. However, people should not confuse Smart Growth planning for policy that will help lower gas prices in the foreseeable future.

The American people want solutions to today's high gas prices. They need relief now. While this hearing will help lay out a vision for the future, Americans want us working today on policies that will help reduce gas prices in the near term. By dropping restrictions on domestic oil exploration, Congress could take the first big step towards making gasoline more affordable in the U.S. and reducing our reliance on foreign oil.

This, of course, is not the only thing that Congress can do, but it should be the first thing that we do. Yet common sense principles like this don't seem to be anywhere on the Democratic majority's radar. Of course, there are many long-term steps that Congress can take to reduce our reliance on foreign oil and to reduce greenhouse

gas emissions. One of these is to encourage Smart Growth where feasible. But today's first priority should be to increase domestic supplies of oil and gas.

I would hope that the speaker and the majority start focusing the House on this important priority.

I thank the gentleman and yield back the balance of my time.

The CHAIRMAN. I thank the gentleman.

I now will recognize the gentleman from Portland, Oregon, Mr. Blumenauer.

Mr. BLUMENAUER. Thank you, Mr. Chairman.

I apologize that there isn't a witness from Oregon here today. The group from the metropolitan area actually is traveling in Europe, exchanging views, but I think we will be able to deal with some of these elements. I commend you and your staff for the excellent memorandum that I think lays these issues out.

We got into the Smart Growth movement in Oregon, first, to deal with legislation to help protect our farmland. From there, we found that there were a wide variety of other benefits by strengthening communities. The things that you talked about in the Smart Growth community that you grew up in, we got away from. Unfortunately, dumb growth is alive and well across the United States today.

Our congressional delegation just had to fight the federal government that was going to take the INS office and move it out of the heart of the central city 12 miles out into the suburbs where it wasn't even accessed by bus. Hopefully, there is an opportunity for the federal government to learn from this as well.

But it does make a difference today. Our local residents are 10 times more likely to bicycle to work than the national average. They drive 20 percent less than residents of other major metropolitan areas, saving by some estimates up to $2,500 a year in transportation costs. It hasn't resulted in our not growing. Indeed, our metropolitan area grew by 85 percent between 1986 and 2006. We just didn't expand the carbon footprint, and ironically the homes have actually maintained value, as is represented in your memo. They actually were increasing in value, rather than decreasing in this last year.

This is important business. While I agree with my good friend that we don't want a one-size-fits-all federal prescription, the fact is that the federal government through its tax policies, transportation policies, and its stupid infrastructure decisions with some of its own facilities has a profound effect on this. For us to get it right with transportation, with energy, with tax, it can help set a framework that will make a huge difference.

And last but not least, the federal government itself should lead by example as the largest manager of infrastructure in the world, the largest consumer of energy, and the largest landlord and property owner.

I appreciate having this hearing, and I do apologize that the Oregonians are off proselytizing other parts of the world, but Mr. Walden and I will try and step into the gap.

[The prepared statement of Mr. Blumenauer follows:]

Statement for the Record
Hearing on Global Warming and Climate Change
June 18, 2008

Thank you, Mr. Chairman, for calling this hearing and for the great work you and your staff have done to pull it together. This is an issue that is often ignored in the climate change debate and I appreciate the focus on it today. Having hearings like this is one of the reasons why I'm so glad the Speaker created this Committee.

This is about choice. The policies envisioned by our panelists are not about forcing anyone to do anything they don't want to – they're about providing choices to people on where they live and how they get around.

My state got into the land use planning business because we wanted to protect farmland. We were finding that sprawling development was eating up the most productive agricultural areas, and passed legislation not to stop growth, but to plan for it. We moved forward with town halls and community meetings across the state to discuss the form that growth should take, and adopted goals to create choices in housing, reduced reliance on driving, energy conservation, and the protection of open space.

What we discovered, however, was that there were other benefits to focusing development around existing centers: we were able to create more livable communities where people could walk to work and school, where private investment launched streetcars, and where we fostered a positive sense of community.

For example, about 4% of our local residents bike to work; 10 times the national average. According to some estimates, residents of Portland drive 20% less than residents of other major metropolitan areas, saving them $2500 annually.

Recently, as local and state officials started responding to threats of climate change, they realized that our smart growth policies had another benefit – they meant lower carbon emissions. In 1993, when I was on the City Council, Portland became the first city in the country to adopt a global warming action plan. Since then, we have reduced local greenhouse gas emissions to just below 1990 levels, while our population and economy has expanded. Between 1986 and 2006, Portland's metropolitan region grew by 85%.Per capita emissions have fallen 14% since 1990.

Nationally, smart growth policies and transportation choices like those we have adopted in Oregon have the potential to significantly reduce greenhouse gases, and I look forward to hearing more about this from our panelists today.

These policies not only reduce greenhouse gas emissions, but they help consumers save money on gas. At a time when families are being squeezed by transportation costs that are now their second largest expense after housing (18 percent of household income on average), compact development can reduce the need to drive between 20 and 40 percent, according to the Urban Land Institute.

Some will argue that smart growth and transportation policies are purely local issues. But whether it's through transportation funding, housing policies, or tax incentives, the Federal government has a significant role to play in supporting community efforts.

Along these lines, I am drafting legislation that I hope will make the Federal government a better partner in local efforts to reduce greenhouse gas emissions by providing consumers with transportation choices and livable communities. My legislation will provide communities with the tools they need to plan for growth in a carbon constrained economy and will reward them for transportation efficiency.

I look forward to working with the panelists and my colleagues on this committee to ensure that smart growth and transportation choices are a part of the global warming solution and I look forward to hearing from our witnesses.

The CHAIRMAN. The gentleman's time has expired.

The chair recognizes the gentleman from Oregon, Mr. Walden, for an opening statement.

Mr. WALDEN. Thank you very much, Mr. Chairman.

I think Oregon has been a real leader, both in terms of laying out a plan for best uses of its great resources and certainly in the urban areas for dealing with growth in a thoughtful way, although not altogether without controversy from time to time, as my colleague from Portland can tell us. But clearly in those areas, having mass transit that works, being on the innovative side of the transportation equation made a lot of sense.

I have in the legislature and elsewhere supported a lot of those transportation initiatives because you have to be able to move people in a congested area in an efficient way. That makes sense.

Now, I represent a district that is 70,000 square miles. I have counties where there is one person for every 9 miles of power line. We have a problem making sure that Wal-Mart moms and diesel-driving truck dads can get access to fuel they can afford. While we need to do these things that help in the urban areas and need to foster renewable energy resources—and my district is home to a lot of wind energy, enormous geothermal energy potential, great solar potential we are working on a project there—I haven't seen too many diesel trucks being powered by windmills, at least not yet.

Maybe we will get to a plug-in hybrid version that will work down the road, and I hope we do, but right now we need to access our own natural resources like every other industrialized country in the world. That is why I have supported lifting the ban on outer continental shelf drilling. I think it is a real hardship being foisted on top of Americans that we don't access our own oil and gas reserves. It is long overdue. We are paying an enormous price for it now, and that needs to change.

I just look forward to the day where at least we could have a vote on the floor on that issue. Then we could actually fund the services that we need in this country and perhaps be not a debtor nation, if you will, but rather maybe create our own sort of sovereign wealth fund. That wouldn't be a bad thing, pay down our debt a little bit.

So Mr. Chairman, I look forward to the topic today. I think it is going to be real good to hear about. We have other issues we need to attend to as well. Thank you.

The CHAIRMAN. Thank you. The gentleman's time has expired.

The chair recognizes the gentleman from Missouri, Mr. Cleaver.

Mr. CLEAVER. Thank you, Mr. Chairman.

I think this is a critically important hearing. As the former mayor of Missouri's largest city, I and other mayors have bragged over the years about the fact that Kansas City, Missouri is a city of 322 square miles. We brag that you could place the entire city of St. Louis inside our city limits three times, or San Francisco 30 times. We have more circumferential highway miles per capita than any city in the nation. We bragged about it.

The truth of the matter is that is one of the worst things that is going on in our community is continuing to expand the city. It hurts the taxpayers because when we provide tax increment financing for a project in the suburbs, and when we do some kind of tax

abatement for a major development, we are actually causing the use of utilities to rise because the further out that people move from the generators, the more costly and the more waste.

We don't have a major transportation system. We have no light rail. We have buses. The sad thing is that we have track running all through the city. We at one time had a very good rail system up until the 1950s when the bus companies came in and convinced city leaders that the bus was the vehicle of the future, almost like a Flash Gordon rocket. So we paved over all of the rail.

I think mayors around the country now realize that the people in the past had it right. There was a time when if you lived in the central city, which was also surrounded by walls, you were of course a big-time resident. If you lived in the suburbs outside the walls, you were not only in peril because if there was an attack you were going to get hurt first, but you also were not considered to be a part of the major community.

We have to go back to that. I am very, very much interested in getting your take on some of the major issues facing cities even as we sit here today. Decisions are being made in metropolitan areas all over the country that could use the benefit of your wisdom.

Thank you very much. I yield back no time. I don't have any time remaining. [Laughter.]

[The prepared statement of Mr. Cleaver follows:]

U.S. Representative Emanuel Cleaver, II
5th District, Missouri
Statement for the Record
House Select Committee on Energy Independence and Global Warming Hearing
"Planning Communities for a Changing Climate –
Smart Growth, Public Demand and Private Opportunity"
Wednesday, June 18, 2008

Chairman Markey, Ranking Member Sensenbrenner, other Members of the Select Committee, good morning. I would like to welcome our distinguished witnesses to the hearing today.

My hometown of Kansas City, Missouri composes 318 square miles – an incredibly substantial area. The urban sprawl of the city is evident to anyone who has ever arrived at Kansas City Airport and driven to downtown. Because of the wide expanse of the city limits and a shortage of public transportation, residents are forced to drive long distances out of necessity.

Even with the national average price of gas over $4 per gallon, Kansas City residents still drive nearly everywhere. Only 12% of city residents take public transit, mostly because it is not able to take them where they need to go. If metropolitan areas like Kansas City were to adopt some of the major principles of smart growth, costs of transportation for consumers would decrease, and greenhouse gas emissions would reduce. New developments like that in Greensburg, Kansas serve as an inspiration to existing US cities who seek to adjust to increased development and rising fuel costs. Large metropolitan areas in this country – like Kansas City – must find ways to adapt to these conditions by utilizing public transit, renewable energy resources, and creating walkable communities. I hope our witnesses today can help answer some of the Committee's questions about how to make use of the principles of smart growth.

I thank the panel in advance for their answers and insight, and I appreciate them taking the time to visit with our committee today.

Thank you.

The CHAIRMAN. I thank the gentleman.

The chair recognizes the gentleman from New York, Mr. Hall.

Mr. HALL. Thank you, Mr. Chairman.

Before I comment on the topic of the day, I just want to observe that our distinguished members on the other side of the aisle seem to have read the same memo that all Republicans are reading from lately, which is to blame Democrats for high gas prices. It is interesting when our President George W. Bush said back when oil was $50 a barrel that from now on no more need for an incentive for oil companies to drill, yet they have 9,700-plus leases that they have already leased in the lower 48 and adjacent offshore leases, in excess of 26 million acres of land that has been environmentally cleared, ready for metal to meet earth, and for some reason they are not drilling on land they already own the right to drill on.

Two cases in particular offshore that have been well publicized where Republican governors, Jeb Bush in Florida and Arnold Schwarzenegger in California, have been fighting offshore don't get mentioned nearly as often as the fact that somehow we or our speaker are standing in the way of the oil companies doing that which they already have leased the right to do on our national lands.

Today's hearing, however, on Smart Growth speaks to what I would believe is one of the fundamental keys in our ability to confront climate change. I know for a fact that most of the commuters that I know in the 19th district of New York would love to be doing things other than watching their life go by three car lengths at a time in good-luck traffic. They way we live takes a toll on our environment, degrades our public health and the quality of life.

The good news is that contrary to widely held perceptions, we can usher in a smarter, more sustainable future without forcing people to make radical decisions or extreme changes in their daily lives.

I yield back, Mr. Chairman.

The CHAIRMAN. Great. The gentleman's time has expired.

The chair recognizes the gentlelady from California, Ms. Solis.

Ms. SOLIS. Thank you, Mr. Chairman. I will try to be brief. I am kind of losing my voice here from congestion and pollution in the air. [Laughter.]

I want to thank the chairman for having this meeting and for inviting our panelists here today. You know, in California and the San Gabriel Valley where I live and reside, there are some innovative Smart Growth projects going on. In some cases, the federal government has been helpful. In some cases, they have not. I wish they would be more helpful, especially when it comes to transportation and when we are looking at other modes for communities that are transit-dependent, more so than in other communities.

I am talking particularly about low-income, African American and Hispanic residents. In my district, one project that we are looking to hopefully seek funding from the federal government is a metro line that would go right through my district. It would help take students to classes. It would help eventually even take people possibly from L.A., Pasadena, downtown, all the way to LAX. But we are looking at some support from the federal government and our local authorities to do that.

That is something that I think is smart and wise. We have invested in our communities. They have already developed transit centers that are ready to go to accept this project, but now it is just the federal government that has to say yes, we are going to get behind it. Lord knows, the pollution in our communities is very, very bad, and gotten worse in Los Angeles County and the San Bernardino area.

So we know that there have to be better modes for us, particularly with the cost of gasoline now in my district about $4.69 a gallon. I filled up a quarter of my tank—$25 for four gallons. I thought it doesn't hurt me, but it does hurt a lot of the residents that I represent who only make minimum wage in the eastern San Gabriel Valley.

So I would just say that we need to have new remedies, new ideas, and we have to get people to use other modes of transportation, whether it is bikes, whether it is skateboards or whatever. We have to do something to make it more user-friendly for people to use different modes of transportation.

I yield back the balance of my time.

The CHAIRMAN. Great. I thank the gentlelady.

All time for opening statements from the select committee members has been completed.

[The prepared statement of Ms. Blackburn follows:]

Mr. Chairman,

Thank you for holding this hearing and I want to thank the witnesses coming before this committee to testify on smart growth planning for cities.

Many governments across the United States are examining issues that affect the livability of their communities.

The most recent approach is "smart growth."

There are many definitions that encompass this term; but looking at it broadly, it is simply a government planning strategy to meet the residential, commercial, and environmental needs of a locality.

This strategy may at first glance appear a laudable goal; but evidence suggests it has not achieved its proponents' desired results.

Government attempts to shape the redevelopment of cities generally has failed miserably.

For example, housing becomes too expensive, traffic congestion drastically increases, and new taxes are imposed to subsidize new urban services that ultimately do not help communities.

The Urban Mobility Study of 2005 studied many aspects of transportation and smart growth planning.

The study concluded that building roads and suburbanization are necessities to reduce traffic congestion.

These are ideas that many in the "smart growth" circles abhor.

Mr. Chairman,

Smart growth does not produce the results its supporters claim.

In fact, it often tends to make worse the problems it is supposed to solve.

Cities and states have the right to pursue this approach, and Congress should not interfere in the matter.

But new federal mandates that would mandate smart growth planning would infringe on choices by local governments and their residents and should be avoided.

Even in Beijing, China, governments have realized that grand-scale central planning is a failure.

If Communists have learned this lesson, why would governments in the United States go down the same path?

I yield the balance of my time.

Now, we are going to turn to our very distinguished panel. Our first witness, David Goldberg, is the director of communications of Smart Growth America. Prior to joining Smart Growth America, Mr. Goldberg was a Loeb Fellow at Harvard University and a journalist covering issues for the Atlanta Constitution. We welcome you, sir. Whenever you are ready, please begin.

STATEMENTS OF MR. DAVID GOLDBERG, DIRECTOR OF COMMUNICATIONS, SMART GROWTH AMERICA, WASHINGTON, DC; MR. STEVE WINKELMAN, TRANSPORTATION DIRECTOR, CENTER FOR CLEAN AIR POLICY, PORT CHESTER, NEW YORK; MR. GREGORY COHEN, PRESIDENT AND CEO, AMERICAN HIGHWAY USERS ALLIANCE, WASHINGTON, DC; MR. SULTAN AL JABER, CEO, MASDAR INITIATIVE, ABU DHABI, UNITED ARAB EMIRATES; MR. STEVE HEWITT, CITY ADMINISTRATION, GREENSBURG, KANSAS

STATEMENT OF DAVID GOLDBERG

Mr. GOLDBERG. Thanks very much. Am I audible? Can you hear me? Okay, great.

Thank you, Mr. Chairman, Mr. Sensenbrenner, and members of the committee. Thank you all for holding such an important hearing on such a critical set of interrelated issues and for inviting us to testify on the opportunity to harness the profound changes we see happening in the marketplace right now to the benefit of energy independence, climate stability, and America's prosperity.

With your indulgence, I will summarize my written testimony, which I respectfully submit for the record.

The CHAIRMAN. It will be included in the record.

[The statement of Mr. Goldberg follows:]

Smart Growth America
Better Choices For Our Communities

1707 L Street, NW Suite 1050
Washington, DC 20036
Phone: 202.207.3355
Fax: 202.207.3349
Web: www.smartgrowthamerica.org

Statement of David Goldberg, Communications Director
Before the Select Committee on Energy Independence and Global Warming

June 18, 2008

Planning Communities for a Changing Climate – Smart Growth, Public Demand and Private Opportunity

Mr. Chairman and members of the Committee, thank you for holding a hearing on such an important, inter-related set of issues. I appreciate the opportunity to testify today on the opportunity to harness profound changes in market demand for the benefit of energy independence, climate stability and American prosperity.

My name is David Goldberg and I am the Communications Director for Smart Growth America. Smart Growth America is a nationwide coalition supporting communities looking for a better way to grow: one that protects farmland and open space, revitalizes neighborhoods, keeps housing affordable, and provides more transportation options. Our more than 100 coalition members include the leading national organizations focusing on affordable housing, environmental protection, social equity, transportation policy and other issues, as well as state, regional, and local organizations working on behalf of their communities.

I was asked by the committee to discuss the ways in which smart-growth principles could help reduce vehicle miles traveled, make more efficient use of resources and reduce global warming emissions, as well as how these principles can be used in rural, urban, and suburban communities. I also was asked to address the potential economic benefits of this approach to our future development.

Smart Growth America comes today with encouraging news: We can significantly reduce our nation's dependence on oil and shrink our carbon footprint, while helping Americans avoid high gas prices and time in traffic, simply by meeting the growing demand for conveniently located homes in walkable neighborhoods, served by public transportation. The even better news is that we do not have to wait for someone to invent convenient, "green" neighborhoods -- we have the know-how to build them right now, as we have for many years.

Communities and private-sector developers across the country have rediscovered this approach to building in recent years, creating neighborhoods and town plans according to ten principles that came to be known as "smart growth":

1. **Encourage Citizen and Stakeholder Participation in Development Decisions**. Plans developed without strong citizen involvement don't have staying power. When people feel left out of important decisions, they won't be there to help out when tough choices have to be made.

2. **Mix Land Uses**. New, clustered development works best if it includes a mix of stores, jobs and homes. Single-use districts make life less convenient and require more driving.

3. **Take Advantage of Existing Community Assets**. From local parks to neighborhood schools to transit systems, public investments should focus on getting the most out of what we've already built.

4. **Create a Range of Housing Opportunities and Choices**. Not everyone wants the same thing. Communities should offer a range of options: houses, condominiums, affordable homes for low-income families, and "granny flats" for empty nesters.

5. **Foster "Walkable," Close-Knit Neighborhoods**. These places offer not just the opportunity to walk -- sidewalks are a necessity -- but something to walk to, whether it's the corner store, the transit stop or a school. A compact, walkable neighborhood contributes to people's sense of community because neighbors get to know each other, not just each other's cars.

6. **Promote Distinctive, Attractive Communities with a Strong Sense of Place, Including the Rehabilitation and Use of Historic Buildings**. In every community, there are things that make each place special, from train stations to local businesses. These should be protected and celebrated.

7. **Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas**. People want to stay connected to nature and are willing to take action to protect farms, waterways, ecosystems and wildlife.

8. **Strengthen and Encourage Growth in Existing Communities**. Before we plow up more forests and farms, we should look for opportunities to grow in already built-up areas.

9. **Provide a Variety of Transportation Choices**. People can't get out of their cars unless we provide them with another way to get where they're going. More communities need safe and reliable public transportation, sidewalks and bike paths.

10. **Make Development Decisions Predictable, Fair, and Cost-Effective**. Builders wishing to implement smart growth should face no more obstacles than those contributing to sprawl. In fact, communities may choose to provide incentives for smarter development.

Changing Market Demand

These ideas and outcomes are supported by a wide variety of organizations and individuals—from the business sector to public health officials to fiscal conservatives to environmentalists to name a few. Groups such as the National Association of Realtors, International Council of Shopping Centers, AARP, local government officials all come together to agree we need to develop in a way that improves quality of life, is cost efficient, provides a safe and healthy environment for kids and older Americans, and provides access to opportunity regardless of income.

A 2007 poll done by SGA in conjunction with the National Association of Realtors shows broad public support for these principles. The 2007 Growth and Transportation Survey details what Americans think about how development affects their immediate community. Three-fourths of Americans believe that being smarter about development and improving public transportation are better long-term solutions for reducing traffic congestion than building new roads. Nearly three-quarters of Americans are concerned about the role growth and development play in climate change, and they remain concerned about traffic congestion. Half of those surveyed think improving public transit would be the best way to reduce congestion, and 26 percent believe developing communities that reduce the need to drive would be the better alternative. Only one in five said building new roads was the answer.[1]

With the rise in gas prices to over $4 a gallon it's likely that these numbers would be even higher if we did another poll today. More and more people are choosing to leave their cars at home and take public transportation and walk and bike to where they need to go in order to reduce the amount they spend on gas.[2]

In the first 4 months of 2008 ridership in the Hiawatha line in Minneapolis was up 15-19% over the previous year. In Miami, the tri-rail commuter train experienced a 28% increase in ridership in April compared to the previous year.[3]

For many years we have asked Americans to "drive till they qualify" for mortgages on less-expensive homes in the far distant suburbs. Today, however, those savings are being eaten up by high gas prices and long commutes. The exurban house in a partially completed subdivision has become an albatross to consumers in much the same way that ultra-low mileage SUVs have. The foreclosure crisis shows us the vulnerabilities of continuing to build development today that fits the US of 50 years ago. The areas hardest hit are shown to be areas with longer commutes and less of a mix of housing types. Reports grow daily of more Americans leaving these high-mileage areas for

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[1] Smart Growth America, National Association of Realtors The 2007 Growth and Transportation Survey October 2007. Online. Available: http://www.smartgrowthamerica.org/narsgareport2007.html

[2] Korkki, Phyllis. "When Gas Prices Lead to Roads Less Traveled" The New York Times June 15, 2008. Online. Available: http://www.nytimes.com/2008/06/15/business/15count.html?scp=1&sq=roads%2

[3] Krauss, Clifford "Gas Prices Send Surge of Riders to Mass Transit" The New York Times May 10, 2008. Online. Available: http://www.nytimes.com/2008/05/10/business/10transit.html?scp=1&sq=surge+of+mass+transit&st=nyt

places that are more accessible to jobs and public transportation.[4]

The surge in gas prices is merely accelerating existing, underlying trends. A 2004 Survey by Smart Growth America and the National Association of Realtors showed that 6 in 10 prospective homebuyers chose walkable neighborhoods with less time spent driving.[5] As some people say, demographics is destiny, and we're on the cusp of a huge "senior tsunami." Between 2011 and 2012 there will be a 50% increase in the number of people turning 65 annually. [6] If you rewind 65 years, you'll notice that these are people who were born in 1946 or 1947. A lot has been written about this tsunami, with plenty more to come. Real estate analysts have shown that baby boomers, many of whom are empty nesters, are showing a much higher preference for homes in compact walkable neighborhoods. But it's not just the boomers. Whether you call them Gen X or millennials, young adult homebuyers are also demanding these products, and together with the boomers, they account for a huge proportion of the home-buying public.

The two other big demographic factors affecting the housing market is the projected growth in households without kids and single-person households. At the height of the baby boom, about half of American households had kids. Today, it's a third. By 2025, it'll be barely over a quarter. And the number of one-person households is going to be the same as the number of households with kids. Again, households without kids, including singles have a much higher preference for homes in compact walkable neighborhoods.[7]

A recent CNN story reports that 40% of the market want to live in walkable, urban areas.[8] With a large section of the population getting beyond driving years and less households with children, the large single family suburban home is no longer the American dream for many of our nation's citizens. Projections show that the demand in 2025 for large lot single family homes is already more than met by the supply we have today.[9]

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[4] Karp, Jonathan "Suburbs a Mile Too Far for Some" The Wall Street Journal June 17, 2008. Available Online: http://online.wsj.com/article/SB121366811790479767.html?mod=hps_us_inside_today

[5] 2004 National Community Preference Survey, http://www.smartgrowthamerica.org/narsgareport.html

[6] Ewing, Reid, Keith Bartholomew, Steve Winkelman, Jerry Walters, Don Chen Growing Cooler: The Evidence on Urban Development and Climate Change Washington D.C.: The Urban Land Institute. 2008.

[7] Ewing, Reid, Keith Bartholomew, Steve Winkelman, Jerry Walters, Don Chen Growing Cooler: The Evidence on Urban Development and Climate Change Washington D.C.: The Urban Land Institute. 2008.

[8] Is America's suburban dream collapsing into a nightmare? By Lara Farrar. June 13, 2008. http://www.cnn.com/2008/TECH/06/16/suburb.city/index.html

[9] Ewing, Reid, Keith Bartholomew, Steve Winkelman, Jerry Walters, Don Chen Growing Cooler: The Evidence on Urban Development and Climate Change Washington D.C.: The Urban Land Institute. 2008.

Smart Growth Solutions to Climate Change

To relieve consumers from gas prices reduce emissions we need to provide transportation options and build our communities in a way that allows better access to school, work, the grocery store and dry cleaner. It is not acceptable for many Americans to have to use a gallon of gas just to get a gallon of milk, especially at a time when the gallon of gas has reached the same price as the gallon of milk and both are continuing to increase.

Complete Streets are essential in order to make it possible for Americans to drive less and use our streets to get around more easily on foot, bike, and public transit. The potential to shift trips to lower-carbon modes is undeniable: The 2001 National Household Transportation Survey finds that 50% of all trips in metropolitan areas are three miles or less and 28% of all metropolitan trips are one mile or less – distances easily traversed by foot or bicycle. Yet 65 percent of trips under one mile are now made by automobile.[10]

Many trips are made by automobile because of incomplete streets that make it dangerous or unpleasant to walk, bicycle, or take transit. In fact, a national survey found that bike lanes were available for less than five percent of bicycle trips, and more than one-quarter of pedestrian trips were taking place on roads with neither sidewalks nor shoulders.[11] Other surveys have found that a lack of sidewalks and safe places to bike are a primary reason people give when asked why they don't walk or bicycle more.[12] Complete streets would help convert many of these short automobile trips to multi-modal travel. Other studies have calculated that 5-10% of urban automobile trips can reasonably be shifted to non-motorized transport.[13]

Places that are giving people options are seeing a reduction in their emissions. Boulder, Colorado is working to create a complete street network, with over 350 miles of dedicated bike facilities, paved shoulders and a comprehensive transit network. Between 1990 and 2003, fewer people in the city drove alone, more people bicycled, and transit trips grew by a staggering 500 percent. The reduction in car trips has cut annual CO^2 emissions by half a million pounds.[14]

Smart growth should be an integral part of our national solution to climate change. By building compact walkable communities with homes closer to jobs and business and concentrating development around transit stations, residents are able to forego driving and take less carbon intensive means of transportation. When residents do

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[10] 2001 NHTS Poll.

[11] BTS survey

[12] Wilbur Smith Associates Bellevue, Washington. Public Attitude Survey of Bicycle and Pedestrian Planning May 2007.

[13] Litman, Todd TDM Encyclopedia (ADONIS, 1999; Mackett, 2000; Socialdata Australia, 2000; Cairns et al, 2004).

[14] All data from 'Modal Shift in the Boulder Valley 1990 – 2003', May 2004 for the 'City of Boulder' by the 'National Research Center Inc.'

drive, the number and length of trips is frequently reduced because of better street connectivity and the mix of uses in a community.

By reducing vehicle miles traveled, we directly reduce automobile emissions that come from cars in that community. Analysis from the recent book *Growing Cooler*, a landmark publication from the Urban Land Institute on the relationship between development patterns and climate change shows a potential reduction of 80 million metric tons of CO^2 in 2030 from meeting the demand for compact, walkable communities.[15] If you add complementary policies such as expanding public transportation, you would get even greater reductions.

Smart Growth Solutions to Other National Challenges

The threat of global warming is one of many urgent national trends that have forced us to re-evaluate the way we build the towns and cities we call home.

The US **population is growing** and the make up of the population in the future will be very different than what it is today. Just last year we hit the 300 million mark and the next 100 million people are just around the corner. By 2050, US population is projected at 420 million.[16] We will need to grow to accommodate our future neighbors and we have the choice now to grow in a way that strengthens existing communities, makes the best use of our existing infrastructure, preserves our natural heritage, and provides greater transportation and housing choices, rather than continuing to spread out and segregate. In the past our land consumption has outpaced population, which was a major factor in our increasing reliance on driving.[17] Given our energy and climate crises, most Americans now realize that pattern has become unsustainable.

The bridge collapse in Minneapolis last year put a spotlight on the **infrastructure crisis**; as we continue to grow this will only get worse unless we start to act now. Rising gas prices have meant fewer dollars coming in for federal infrastructure investments, while at the same time those dollars are not going as far as they used to, as inflation and energy prices increase construction costs. I'm sure the projected bankruptcy next fall of the highway trust fund is keeping many of you and your colleagues up at night. We must prioritize fixing our existing infrastructure, especially the many unsafe bridges and tunnels around the country, before building new highways.

This is also important for our **water and sewer infrastructure** investments as well. When we build communities out on the fringe we pay for it with higher costs to local governments and higher taxes for individuals. In Loudon County, VA property taxes

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[15] Ewing, Reid, Keith Bartholomew, Steve Winkelman, Jerry Walters, Don Chen Growing Cooler: The Evidence on Urban Development and Climate Change Washington D.C.: The Urban Land Institute. 2008.

[16] U.S. Census Bureau "U.S. Interim Projections by Age, Sex, Race and Hispanic Origin 2000-2050) Available Online: http://www.census.gov/population/www/projections/index.html

[17] American Farmland Trust "Farming on the Edge Report: What's Happening to Our Farmland" 2002. Available Online: http://www.farmland.org/resources/fote/default.asp

increased $764 per house between 2001 and 2003 because of infrastructure costs from new housing developments.[18]

Our sprawling development patterns have also made us more vulnerable to **wildfires**. The news from around the country this week has highlighted the devastation to communities and costs to the economy that come from wildfires. Researchers from the University of Wisconsin have targeted the human-urban interface as the starting point for most of the devastating fires we've seen in this country. Forestry Professor Voker Randeloff explains, "The underlying issue here is that as we add more houses to the wildland-urban interface, we will get more fires. We need actions at all levels - by individual landowners, communities and at the federal level. We need federal policies that, at the very least, do not foster sprawl in the wildland-urban interface."[19]

As I mentioned before **gas prices** are hitting us hard, especially for the many Americans with no other options rather than driving. In some areas people are quitting their jobs because it costs them more to get to work than what they take home in their paycheck. For many, access to public transportation is the difference between getting by and cutting back on their quality of life. Families in areas with good transit and walkable neighborhoods pay less than 10% of their income for transportation, while families living in areas with fewer alternative transportation options pay upwards of 25%.[20] Access to transit can reduce the need of a car in a two-car household, resulting in roughly $6,000 yearly savings and a 30% reduction in transportation-related carbon emissions.[21] Less than 5% of Americans live within one-half mile of fixed guideway transit options, yet of those that do, 33% regularly use transit and 44% regularly travel by walking, bicycle, or transit.

Energy costs are affecting public transportation providers, as well. Our public transportation systems, which are seeing record ridership levels, are being forced to cut service because of increased operating expenses.[22]

To get the most out of our transportation system and relieve our citizens from high gas prices we need to provide people with viable options to get around, we need to invest more in public transportation and build complete streets—streets that work for all users or all ages and abilities so people can walk, bike, get to the bus stop or drive safely along the street. We also need to create smart growth communities where schools and

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[18] National Association of Local Government Environmental Professionals and Smart Growth Leadership Institute Smart Growth is Smart Business 2004 p. 5

[19] "New Maps Emphasize the Human Factor in Wildfire Management" University of Wisconsin-Madison. November 16, 2006. Available Online: http://www.newswise.com/articles/view/525224

[20] "Realizing the Potential: Expanding Housing Opportunities Near Transit" Center for Transit Oriented Development. April 2007. Available Online: http://reconnectingamerica.org/public/reports

[21] Davis, Todd and Monica Hale. "Public Transportation's Contributions to U.S. Greenhouse Reductions" American Public Transportation Association 2007. Available Online: http://www.apta.com/research/info/online/climate_change.cfm

[22] Marks, Alexandra "Mass Transit Demand Rises, Costs Soar" Yahoo News June 4, 2008. Available Online: http://news.yahoo.com/s/csm/20080604/ts_csm/acrowded

stores are closer to homes and offices.

The **obesity epidemic** is straining our budgets and increasing health care costs and some studies say will make our children the first generation to have a shorter life expectancy than we do. More people are making the connection between not just what our kids eat but where they live that has an impact on their health, as reported in this week's *Time Magazine*. When our streets are unsafe for biking and walking and our schools are on the edge of town, our kids miss out on the exercise and sense of independence that comes from walking and biking to school. Congress recognized this when the Safe Routes to School program was created in the last transportation bill. While this is a great first step, more needs to be done to make sure that people of all ages have access to safe and complete streets.

Barriers to Building Smart

Private developers are fully aware of the demographic and cultural changes happening in the United States that are changing the decisions people make on where they want to live. So why do developers keep building sprawl? The answer is because we have a system of tax policy and regulation that makes it easier for them to subdivide a farm than to build downtown.

That's why areas that are losing population, cities like Cleveland, Ohio are still seeing their farmland being consumed at a high rate.[23] Developers that take on the red tape and time-consuming process of building smart growth reap great rewards. Developments like Atlantic Station in Atlanta or Stapleton in Denver, CO or the Kentlands near the Shady Grove metro station in Montgomery County, Maryland are seeing tremendous demand for their homes, as well as stable prices despite the market downturn. These communities also provide a variety of home types for families of all incomes, so that schoolteachers, firefighters, and families just starting out can afford to live there as well.

Examples from Around the Country

There are examples from around the country in rural, urban, and suburban areas where cities and small towns are looking toward the future and planning for growth in an equitable, sustainable, fiscally responsible way. These communities are providing a better quality of life to residents while reducing spending and spurring economic development.

In Minneapolis-St. Paul, regional cooperation and smart growth techniques are projected to save the area $3 billion in infrastructure costs, 94% of which would come from local communities saving money on roads and sewers.[24] The Minneapolis-St. Paul

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[23] American Farmland Trust "Farming on the Edge Report: What's Happening to Our Farmland" 2002. Available Online: http://www.farmland.org/resources/fote/default.asp

[24] "This Is Smart Growth" Smart Growth Network 2006 p. 21, p. 8, p. 10

Metropolitan Planning Council research states that savings would be even higher if additional factors were included such as lower spending on school construction and other public services like health care, fire and police, and libraries. The Metropolitan Planning Council helps member governments realize these infrastructure savings by investing in projects in established communities. A project in St. Louis Park to create a downtown sparked private development in residential construction in the area. This example shows that if state and municipal governments invest public funds in areas they want to grow or revitalize, private money will follow and public dollars will be saved in the long run.

Portland, Oregon, with a reputation as a livable, healthy, and prosperous city, saved the equivalent of $2.6 billion annually in gasoline and time because of measures it implemented to reduce the need for residents to drive, according to a CEO for Cities report.[25] Per capita VMT in Portland is 20% lower than the national average for other large metro areas.

The link between increasing VMT and economic growth is a myth, according to research by the Brookings Institution. Many older industrial cities identified as struggling economically, losing population and jobs, have had higher-than-average growth in VMT per capita rates.

As Steve Winkelman's testimony indicates, the Sacramento region projects tremendous savings on infrastructure costs from their smart growth plan, which was developed with broad public input and support. Their analysis projects a savings of $20,000 per unit of development for the smart growth scenario versus business as usual.

The state of Utah underwent a similar public visioning and planning process called Envision Utah. The Envision Utah scenario planning process resulted in the selection of a compact growth plan that will save the region about $4.5 billion in infrastructure spending, leave 171 miles of open space, and reduce water use by 10% over a continuation of sprawling development.[26]

Smart growth strategies are applicable to rural areas as well and have been shown to improve water quality, decrease infrastructure costs, and revitalize downtowns.

In Littleton, New Hampshire, a small town with a population of a little over 6,000, the loss of manufacturing jobs left a poor prognosis for the future of the community. But the town government was proactive and visionary, with investment in the town center in partnership with the National Main Street Program. Ruth Taylor, the Main Street program director for Littleton explains, "We want to give shoppers something different. Instead of wondering what mall they are in, we want them to enjoy a unique experience in downtown Littleton." This effort was incredibly successful, the revitalized downtown

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[25] Cortright, Joe. "Portland's Green Dividend." CEOs for Cities. July 2007.

[26] Ewing, Reid, Keith Bartholomew, Steve Winkelman, Jerry Walters, Don Chen Growing Cooler: The Evidence on Urban Development and Climate Change Washington D.C.: The Urban Land Institute. 2008 p. 11

brought in new jobs, businesses and consumers and provided a living laboratory for local schools. At the same time people are now walking around downtown to shop instead of driving to the regional mall.[27]

Rural communities are also proactively preserving farmland and open space and directing development to areas that can support it. In Carroll County, GA outside Atlanta, the local government bought environmentally sensitive land to preserve the drinking water quantity and quality, as well as the rural heritage of the community that residents greatly valued.[28] Coffee Creek Center of Chesterton, Indiana restored almost 170 acres of land to naturally manage stormwater. This reduced the amount of infrastructure that developers needed to build, therefore saving money.[29]

Policy Recommendations to Encourage Smart Growth

Despite the benefits of and demand for smart growth, there are outdated policies at all levels of government that are biased against this kind of development. Under most zoning codes in the country today, walkable, compact neighborhoods like Georgetown or Old Town Alexandria would be illegal. At the federal level, our current transportation, housing, and many tax policies incentivize energy inefficient development that makes Americans spend more hours in the car and increases emissions from the transportation sector every year.

We have three main categories of federal policy recommendations:

1. Address our development patterns and transportation choices in climate legislation to encourage walkable neighborhoods with better public transportation options.
2. Ensure that the next surface transportation bill, up for reauthorization in 2009, reduces our dependence on oil and our global warming emissions.
3. Reform the current tax code to better encourage the kind of development and transportation choices that result in more climate-friendly, energy efficient, lower cost options for Americans.

In terms of the first policy recommendation, Congress needs to recognize that we will be unable to meet the greenhouse gas reductions scientists recommend without fundamentally altering our country's development patterns. Driving rates have increased by three times the rate of population since 1980, in large part due to our development patterns. Even with gas price increases, if we don't give people alternatives, most Americans will have no other choice than to drive longer and longer distances in the future.

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[27] "This Is Smart Growth" Smart Growth Network 2006 p. 21, p. 8, p. 21

[28] "This Is Smart Growth" Smart Growth Network 2006 p. 21, p. 8, p. 8

[29] "This Is Smart Growth" Smart Growth Network 2006 p. 21, p. 8, p. 10

Giving people the option to live closer to work, to walk to run errands, and to take public transportation is critical not just to meet climate goals, however. In a future carbon constrained world, Americans will be even harder hit to deal with the high cost of driving. For low income and working class families, Congress needs to give people alternatives to paying that high cost. Fuel-efficient cars are not enough when many families cannot afford to buy a new car, and even if they could, the price of gas would still prevent them from driving it. Walking, biking, and public transit are the lowest cost options for people that reduce our dependence on oil and decrease global warming pollution.

We propose significant funding from a cap-and-trade climate bill (10% of the total revenues generated) be directed to state, regional, and local governments to provide their citizens with greater transportation options and incentivize smart growth development. These funds should be directed to two purposes: helping communities retool and build the technical capacity to plan for more energy efficient development, and a performance-based fund for projects in the plans to reduce Vehicle Miles Traveled—including better transit service, infrastructure to support infill development, sidewalks and bike lanes or other methods shown to reduce VMT.

These climate funds should also be used for better transportation data collection and analysis by federal agencies, which is currently significantly underfunded. Just as a greenhouse gas emissions registry for point source emissions is critical to the implementation of a national cap-and-trade program, better data, tools and methods are critical for successful implementation of VMT reduction programs. Current data and tools (such as VMT data collection methods, transportation models, and scenario analysis tools) are underfunded and vary widely in quality and method. To effectively distribute funding and evaluate its impact on GHG emissions requires trusted data and standard methods and tools for evaluating the travel demand consequences of transportation and land use policies and infrastructure investments.

Secondly, we also need a transportation bill that moves us in the right direction toward an energy independent and carbon-constrained future. We cannot continue our current system, which makes it much easier to build a new highway than a new transit system, virtually ignores biking and walking as valid modes, and rewards states through the highway formula for higher oil consumption and VMT. We must also link our transportation investments with our investments in housing and infrastructure so that we are building communities that work as a whole, not separate pieces poorly linked that do not get us the outcomes we want.

Finally, we need to examine current federal tax incentives and ensure that we're incentivizing the kind of development and transportation choices that reduce people's reliance on cars and greenhouse gas emissions, rather than increasing them. Tax incentives like the historic preservation tax credit, the Low Income Housing Tax credit, and others should encourage use in locations near transit and in compact, walkable neighborhoods to maximize their climate and energy impacts. In addition to having tax incentives for green buildings, we should have a 'Smart Location' tax credit, which

encourages people to live in places where they'll be able to drive less.

Several existing legislative vehicles help move us toward a future where we can spend less on gas, have more transportation choices, and emit less greenhouse gasses. We believe Section 327 of Chairman Markey's iCAP bill, which targets funding to smart growth, transit, and other low-carbon transportation choices, is a good model for the types of policies that should be included in a climate bill, though we'd like to see the percentages expanded. To build support for using cap-and-trade funds for smart growth and transportation choices, Congressman Earl Blumenauer and Congresswoman Ellen Tauscher are circulating a Dear Colleague letter calling on leadership to include funding for smart growth, public transportation, biking and walking in any federal climate bill.

We are also looking forward to the introduction by Congressman Blumenauer of a smart growth and climate bill that will look in a holistic fashion at the variety of ways the federal government's policies and incentives can better encourage energy efficient development patterns. This type of vision and comprehensive thinking that breaks down silos and sees the big picture should be a model for all federal legislation.

In terms of transportation-related legislation, we support legislation sponsored by Congresswoman Doris Matsui, The Safe and Complete Streets Act of 2008 (H.R. 5951) and a companion bill introduced by Senator Tom Harkin in the Senate (S. 2686) that would help get the most out of federal transportation investments by ensuring the streets we build with federal money work for all Americans—whether walking, biking, taking the bus, or driving, regardless of age or ability. This bill would give Americans better transportation options while encouraging healthier lifestyles and reducing our dependence on driving.

We encourage you to consider supporting these pieces of legislation and signing onto the Blumenauer-Tauscher Dear Colleague letter on these issues. Again, thank you for the opportunity to testify before your committee on this important and timely issue.

For more information please contact:
Kate Rube, Policy Director
Smart Growth America
krube@smartgrowthamerica.org
202-207-3355 x14

Mr. GOLDBERG. Our nation today faces a number of very difficult challenges. The committee has taken on two of the greatest challenges—over-dependence on high-priced oil and climate change. Smart Growth America comes today with encouraging news. We can significantly reduce our nation's dependence on oil and shrink our carbon footprint, while helping Americans avoid high gas prices and the time they spend in traffic, merely by meeting the growing demand for conveniently located homes in walkable neighborhoods and by serving those neighborhoods with good public transit.

Even better news: We don't have to wait for someone to invent green neighborhoods. We have the know-how right now to build them and we have since the dawn of civilization. It is a low-cost or a no-cost solution to oil dependence and climate change that comes with multiple benefits for our pocketbooks, for our environment, and for our quality of life.

Communities and private sector developers across the country have rediscovered this approach to building in recent years, creating neighborhoods and towns according to 10 principles that have come to be labeled as Smart Growth. I won't read the whole list here. You can see it in my written testimony.

The label itself, Smart Growth, is not important. The goal is what is important, and that is to help people find homes and communities where they can accomplish more, while driving less, meaning they can spend less and they can emit less greenhouse gas.

Creating walkable green neighborhoods requires building a mix of housing types, such as stand-alone houses, apartments, or townhouses within a short distance of shopping and job opportunities. It means re-using existing buildings in developed areas, whether those be former industrial sites, declining shopping centers, or blighted neighborhoods. It also means using green building techniques when we build new things.

It means providing multiple ways to get around, public transit in addition to complete streets that serve cars, walking and biking. Above all, it means involving people, the people who live and will live in these places, in planning ahead for their community's development.

The demand for homes in places that meet these principles, the neighborhoods where daily life requires significantly less gas consumption, has been growing for several years now, but it is exploding literally as we speak. Just yesterday, CNN, the Wall Street Journal and the Los Angeles Times all reported on this phenomenon. CNN reported, and you can find it on their Web site, that "while the foreclosure epidemic has left communities across the United States overrun with unoccupied houses and overgrown grass, underneath the chaos another trend is quietly emerging that over the next several decades could change the face of suburban American life as we know it."

The story notes that 40 percent of home-seekers say they want to live in walkable urban neighborhoods. A consumer survey that we at Smart Growth America did with the National Association of Realtors a couple of years ago found that six in ten prospective buyers are looking for close-knit neighborhoods close to work.

The Wall Street Journal yesterday also had an interesting story headlined "Demographic Changes, High Gasoline Prices May Hasten Demand for Urban Living." That story noted that "transportation is the second biggest household expense after housing. Distant suburbs where housing growth was predicated on cheap gas have experienced the greatest decline in home values."

The L.A. Times story quoted a Pasadena real estate agent who noted that "compared to 2 years ago, home-seekers are staying in closer proximity to their jobs. They are more focused on the neighborhood they want."

And lest one conclude that this is only a big-city phenomenon, Maine's leading newspaper a couple of days ago had a front-page story headlined "Mainers begin making life changes that could slow urban sprawl to a crawl." This is in Maine, which is not exactly a heavily urbanized state.

Families in areas with good transit and walkable neighborhoods pay less than 10 percent of their income for transportation on average, while families living in areas with fewer transportation options pay upwards of 25 percent of their income and often much more than that. Access to transit can reduce the need to have a car, which would save a family $6,000 a year just on that, and a 30 percent reduction in transportation-related carbon-emissions whether or not they own the car simply by driving less.

The measures I have talked about here and in my written testimony apply in towns large and small, in cities, in metro areas, and even rural areas. For smaller cities, this can mean reclaiming existing Main Streets and ending the tendency to hollow-out our towns, our business districts, and spread the development across the countryside. In larger cities, it can mean providing millions more Americans with more transportation and living options.

Americans who live within a half-mile of rail transportation——

The CHAIRMAN. If you could summarize, please?

Mr. GOLDBERG. Yes. Americans who live within a half-mile of rail transit drive significantly less by their own choice. On average, one-third use that transit to commute and they drive one-third less than other people do. The upshot here is that we need to build more homes within reach of existing transit and we need to expand public transportation to more areas.

I hope during the questions I will have an opportunity to expand on some of these thoughts. Thank you.

The CHAIRMAN. Thank you, Mr. Goldberg, very much.

Our second witness is Steve Winkelman, who is the transportation director of the Center for Clean Air Policy. Mr. Winkelman, along with Mr. Goldberg, is an author of the book "Growing Cooler," a recent and comprehensive report on Smart Growth and global warming. We welcome you, sir, and whenever you are ready, please begin.

STATEMENT OF STEVE WINKELMAN

Mr. WINKELMAN. Mr. Chairman, Ranking Member Sensenbrenner, members of the committee, good morning. I would like to 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, D.C. and Brussels-based environmental think tank. I respectfully request that my full statement may be part of the record.

The CHAIRMAN. Without objection, it will.

[The statement of Mr. Winkelman follows:]

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Testimony of Steve Winkelman, Center for Clean Air Policy
"Climate Change & VMT: Why How Much we Drive Matters A Lot"

Select Committee on Energy Independence and Global Warming
"Planning Communities for a Changing Climate – Smart Growth, Public Demand and Private Opportunity"

June 18, 2008

Mr. Chairman, Ranking Member Sensenbrenner and Members of the Committee: good morning. I would like to 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 (CCAP), a Washington, DC and Brussels-based environmental think tank.

Since 1985, CCAP has been a recognized world leader in climate and air quality policy and is the only independent, non-profit think-tank working exclusively on those issues at the local, national and international levels. 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.

Over the past 15 years, CCAP has helped governments at all levels develop and implement climate change plans and policies including: Brazil, California, Chile, China, Connecticut, the European Union, King County, Maine, Massachusetts, Mexico, New Jersey, New York and Wisconsin. CCAP conducts technical and economic analysis to support policy development. Our efforts engage representatives from the major emitting sectors – electricity, industry, transportation, buildings, agriculture and forestry – as well as government officials, environmental groups and trade organizations to craft effective and practical policies.

CCAP's "VMT and Climate Policy Dialogue" engages high-level decision makers and experts on transportation, smart growth and climate policy from all levels of government, car and oil companies, the NGO community and academia. Participants include the secretaries of transportation from Kansas, Maryland, Pennsylvania and Utah, the Chairman of the California Air Resources Board, and senior representatives from US DOT, US EPA, BP, Exxon, Ford, EDF, NRDC and Smart Growth America. Through the Urban Leaders Adaptation Initiative, CCAP is assisting nine partner cities and counties in making effective policy and investment decisions to increase their resiliency to the impacts of climate change. Urban Leaders partners are representatives from Chicago, King County, Los Angeles, Miami-Dade County, Milwaukee, Nassau County, Phoenix, San Francisco and Toronto. CCAP also runs a dialogue for climate negotiators from 30 nations to help them shape the post-2012 international climate change policy framework.

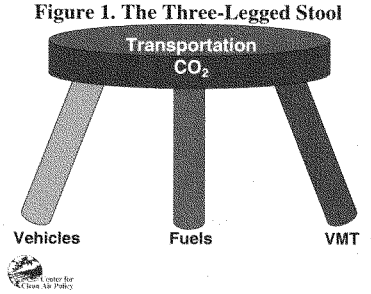
Climate Change Context

Long-term climate protection will require the US and other developed countries to cut greenhouse gas (GHG) emissions to 60-80% below 1990 levels by 2050 to limit global warming to 2 to 3 ºC above pre-industrial levels. To get on that path, GHG emissions in industrialized countries would need to be some 30% below 1990 levels in 2030 (what we call "30 by 30"). As the Bali road map indicates, we can expect differing levels of effort among countries reflecting different reduction opportunities and costs. Similarly, within the US, it is unlikely that each sector of the economy will achieve the same exact level of emissions reduction, but substantial reductions will be required from all sectors or we will miss the target.

Transportation Greenhouse Gas Emissions and the Role of Cap-and-Trade

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.

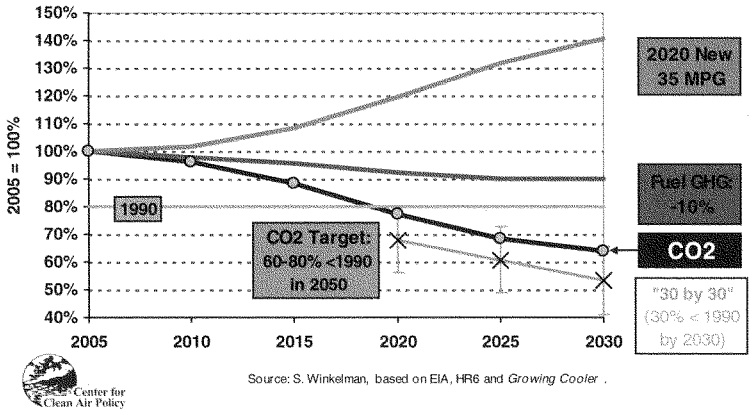
[1]For example, see: http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf

Why How Much We Drive Matters A Lot

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.

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.

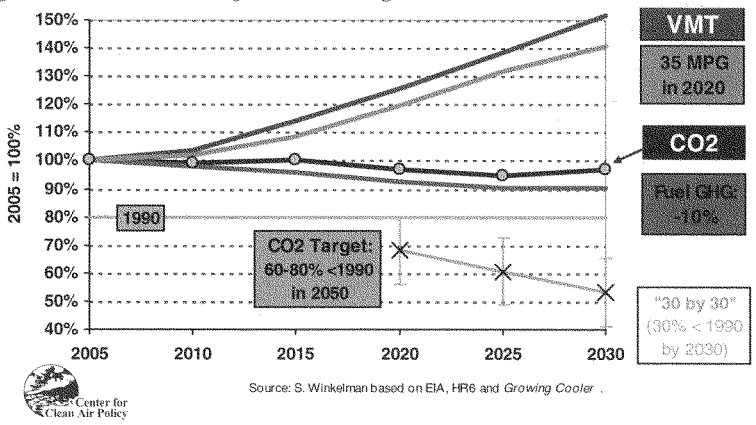
Figure 2. CO_2 Savings from the 2007 Energy Bill: CAFE Standards and Low-GHG Fuels, assuming no growth in VMT



The Energy Information Administration, however, forecasts a 48 percent increase in driving between 2005 and 2030 (see Figure 3, red line), which would bring light duty vehicle GHG emissions to 21 percent above 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.

By How Much Can Policies Slow Growth in VMT?

In a new book published by the Urban Land Institute, ***Growing Cooler***: *The Evidence on Urban Development & Climate Change* (Ewing, Bartholomew, Winkelman, Walters and Chen; ULI 2008), we review the empirical and modeling evidence on the relationships among land use development patterns and travel activity. For example, people living in the most compact regions of the United States drive 25 percent fewer miles each day than residents in the most sprawling regions of the country. Why? Because where things are closer together people tend to drive fewer miles than their counterparts in more sprawling areas (this holds true even when we control for demographic characteristics such as income and age). People also drive fewer miles in areas with a mix of development uses (residential, commercial and office) and convenient pedestrian connections, as opposed to isolated single uses and nowhere safe to walk. We conclude that living in a convenient, walkable neighborhood can yield the same GHG benefits as purchasing an efficient hybrid vehicle. Or, as I like to say, "Sidewalks are as Sexy as Hybrids!"

In *Growing Cooler* we present evidence to show that over the next few decades market demand and demographic trends (aging baby boomers, households without children, new immigrants) are aligned to support a major increase in demand for compact development (small lot and attached housing, transit-oriented development). If smart growth policies were in place to meet this growing demand, we calculate that compact development could slow VMT growth by four percent by 2030. We conclude that this level of reduction is achievable with land use changes alone, excluding complementary measures such as pricing or major expansions of transit. We calculate associated CO_2 savings of 80 $MMTCO_2$ in 2030, equal to half the cumulative savings of

35 MPG CAFE, with cumulative fuel cost savings of $260 billion (at $2.50/gallon). We calculate potential transportation VMT savings of up to 38% from a comprehensive policy set including smart growth, transit expansion, slower growth in highway expansion and pricing measures.

Bill Cowart of **Cambridge Systematics** has estimated the potential VMT savings if best practices were broadly implemented nationwide, considering measures such as smart growth, transit, parking measures, pay-as-you-drive insurance and improved pedestrian infrastructure. His initial calculations show a potential 18- 21% reduction in national VMT growth by 2030. (This analysis will be documented in a forthcoming ULI publication, "Moving Cooler.")

In a July 2007 report, the American Association of State Highway and Transportation Officials (**AASHTO**) set a goal of cutting VMT growth in half by 2055. Assuming a linear trend, CCAP calculates that in 2030 this would amount a 23% reduction in VMT growth. The AASHTO goal is driven by "the fiscal and physical constraints to expanding system capacity,"[3] as well as climate change considerations. The goal would be achieved through a combination of transportation system management improvements, shifts to more efficient modes of transportation, and more efficient land use patterns.

If we take the aggressive case assumptions mentioned above (50 mpg CAFE standards in 2030 and a 20 percent cut in fuel GHGs), then a 25 percent reduction in VMT growth would bring passenger vehicle CO_2 emissions to 20 percent below 1990 levels – back to what I refer to as a respectable contribution from the transportation sector.

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.

[3] AASHTO, "A New Vision for the 21st Century," http://www.transportation1.org/tif5report/tif5.pdf.

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 od deferred infrastructure maintenance, and strained public resources, polices that can reduce the need to build new infrastructure are most welcome indeed.

Policy Needs and Opportunities

As noted above, complementary policies are needed to increase travel choices, slow VMT growth and reduce transportation GHG emissions. A host of policies and practices at all levels of government influence land use development patterns and transportation infrastructure. At present, most policies are oriented toward enabling sprawling development patterns in which there are few transportation choices other than driving. Current gasoline fuel prices underscore the need for a diverse set of travel options – residents of auto-oriented communities face a heavier economic burden than residents of communities that offer alternatives modes of transportation (transit, walking, cycling) and more compact regions that require shorter trip lengths. Moreover, there is recent evidence that foreclosure rates have been higher in outlying suburban locations with higher transportation costs than in more central locations.

Federal climate policy presents a timely opportunity to increase transportation choices, lower consumer fuel expenditures and reduce transportation GHG emissions. CCAP has developed a 'strawman' policy proposal for incorporating VMT reduction into federal climate policy as part of our "VMT and Climate Policy Dialogue" that brings together leading decision makers and experts on land use, transportation and climate change.

In our strawman package, CCAP proposes an **incentive program** that **requires all states and Metropolitan Planning Organizations (MPOs) to set aspirational goals to slow growth in VMT and GHG emissions**. Allowance value from a federal cap-and-trade program would be used to fund: state, MPO and local capacity building; goal development; and implementation of projects and policies to meet the goals. All states and MPOs would be eligible for funding to set goals and develop implementation plans. These could be seen as analogous to the VMT Reduction Plans in H.R. 6186, Investing in Climate Action and Protection Act.[4] Implementation funding would be awarded on a competitive basis via evaluation criteria that consider factors such as cost, effectiveness at reducing GHG emissions, advancement of innovative approaches,

[4] H.R. 6186 places an important focus on local government, which is an innovative approach as local governments have authority over land use decisions. In the CCAP VMT and Climate Policy Dialogue we are delving into the issue of how to most effectively nest federal, state, regional and local responsibilities and authorities.

co-benefits, governmental capacity for implementation and evaluation, and policy conditions for replication. Enforceability at the start would focus on the delivery the promised projects and policies.

A central principle of CCAP's strawman proposal is that **there is no one-size-fits-all solution** -- different places will face different opportunities and challenges to increasing travel choices, improving transportation system efficiency and reducing VMT and GHG growth. We anticipate a diversity of measures applicable to **urban, suburban and rural areas** ranging from infill development and transit improvements, to strategic bottleneck relief and intermodal freight. CCAP recommends a **bottom-up 'discovery process'** in which states and MPOs conduct **transportation and land use scenario analyses** to assess potential VMT and GHG savings from better integration of land use development and transportation infrastructure. As in the SACOG Blueprint visioning process, we recommend that these scenario analyses be conducted in the context of public workshops to cultivate understanding of and foster support for implementation of more efficient development patterns. Importantly VMT and GHG emissions should not be the sole focus of such visioning efforts – it is essential to quantify and clearly present information that local stakeholders care most about, such as time spent in traffic, household fuel costs infrastructure expenditures, pedestrian safety and the convenience and quality of neighborhoods. Experience in regions such as Salt Lake City and Sacramento shows that visioning supported by good models, good data and robust stakeholder engagement can yield greater emissions savings at lower costs than less integrative approaches, such as the conformity process.

State and local governments will need new and better tools if they are to take on new responsibilities. CCAP therefore puts a strong emphasis on the need to **improve travel data and models** to support better VMT and GHG measurement, implementation, policy assessment and projections. Through working group discussions with leading researchers and practitioners, CCAP is inventorying data needs and developing recommendations to fill fundamental gaps. Moreover, CCAP sees federal climate policy as providing critical framing to set the stage for climate friendly federal transportation policy, an opportunity we refer to as Green-TEA.

Reauthorization of SAFETEA-LU, set to expire in September 2009, poses a number of challenges including ensuring adequate financing, repairing aging transportation infrastructure, supporting economic development, and contributing to national energy security and climate protection goals. In current form, federal transportation policy actually encourages growth in VMT, energy use and CO_2 emissions because key funding formulas are based on VMT, fuel consumption and lane miles. The challenge is how to ensure that the next $300 billion in federal transportation funding helps slow growth in VMT and GHG emissions.

In the CCAP strawman proposal we recommend that **Green-TEA** adopt GHG performance as a key evaluation criterion for funding decisions, which will help state and local governments implement their VMT/GHG reduction goals.

Summary
CCAP supports a comprehensive approach to climate policy, such as an economy-wide cap-and-trade system. We recognize the need for complementary policies and measures to address market failures and ensure that climate protection goals are achieved equitably and cost-effectively. As such, US climate policy should support implementation of polices to increase travel choices for all Americans, promote efficient land development patterns, reduce consumer fuel expenditures and slow growth in VMT.

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

Mr. WINKELMAN. I will summarize it now.

CCAP helps governments at all levels design and implement energy and climate solutions that balance economic and environmental considerations. 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 brings together four secretaries of transportation from four different states, two directors of metropolitan planning organizations, members of local government, federal agencies, industry and environmental groups to advance Smart Growth policies within climate policy and to integrate climate considerations into transportation policy.

If we could go to the next slide, please?

Transportation sector CO_2 emissions account for almost one-third of U.S. CO_2 emissions and are growing rapidly. CCAP characterizes transportation emissions as a three-legged stool, as you can see in the graphic here. The first leg is vehicle efficiency. The second is fuel characteristics. And third is vehicle miles traveled, or VMT, which is a measure of how much we drive each year and the wacky acronym of the day.

Energy and climate policy discussions to date have focused exclusively on the first two legs of the stool—vehicles and fuels. With my testimony this morning, and the full written testimony, I aim to demonstrate that it is both necessary and beneficial to address the third leg of this stool—VMT.

As indicated in this graph on the next slide, transportation CO_2 emissions depicted here in blue are 25 percent above 1990 levels, and climate protection requires reductions to 30 percent below 1990 levels by 2030. That is the orange line in the graphic. If you go to the next slide, we can see that the 2007 energy bill with its new standards for vehicle efficiency and fuel requirements would reduce transportation CO_2 emissions to 20 percent below 1990 levels in 2030. You see the blue line is now on top of the orange line, right on path to climate protection.

However, if you go to the next slide and watch the red line, the U.S. Department of Energy forecasts a 50 percent increase in driving, bringing CO_2 emissions back up to current levels and wiping out the benefits from the energy bill. Climate protection will clearly require reductions in all three legs of the stool. We cannot afford to ignore VMT.

I am the co-author of the book "Growing Cooler: The Evidence on Urban Development and Climate Change," in which we review the empirical evidence on the relationships between land-use development patterns and travel activity. We find that people drive fewer miles in places where things are closer together and where they have more travel options such as walking and transit.

In my written testimony, I provide some examples from places with successful and promising policies for slowing VMT growth. The Sacramento region is especially compelling because they have calculated that Smart Growth policies can reduce infrastructure costs by $9 billion by 2050 and reduce consumer fuel expenditures by more than $600 million per year.

With high gas prices and a robust federal climate policy debate, the timing has never been better to increase travel choices, thereby lowering consumer fuel expenditures and reducing transportation emissions. CCAP has therefore developed a policy proposal for a federal incentive program that requires state and local governments to develop goals to slow VMT growth and greenhouse gas emissions.

Allowance values from a cap-and-trade system 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 and not dictated by the federal government.

We anticipate that a diversity of measures applicable to urban, suburban and rural areas ranging from in-fill development, transit improvements, signal timing improvements, and intermodal freight will be required. 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.

Finally, CCAP sees federal climate policy as setting the stage for climate-friendly transportation policy, what we refer to as green-TEA. Federal transportation policy actually contributes to VMT growth because key funding formulas reward VMT and fuel consumption. The challenge is how to ensure that the next $300 billion we spend on transportation infrastructure actually builds upon the savings in the energy bill instead of wiping them out.

The new federal efforts that CCAP recommends to improve travel choices for all Americans can reduce greenhouse gas emissions, lower consumer fuel expenditures, and strengthen the economy.

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

The CHAIRMAN. Thank you, Mr. Winkelman, very much.

Our next witness, Gregory Cohen, is the president and CEO of the American Highway Users Alliance, which is an alliance of businesses and nonprofit corporations dedicated to highway funding and maintenance. Prior to joining the alliance, he served on the staff of the House Transportation and Infrastructure Committee.

We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF GREGORY COHEN

Mr. COHEN. Thank you, Chairman Markey and members of the committee. I appreciate being allowed the opportunity to provide an alternative view in the spirit of debate. I am honored to be here to present testimony on highway needs, land-use planning, and greenhouse gas emissions.

A recent national survey of 1,000 likely voters found the following: 88 percent feel that congestion relief is needed; 76 percent see cars, roads and bridges as a benefit to society; and 69 percent say congestion relief is a better environmental policy than policies aimed at reducing driving.

We urge this committee to promote greenhouse gas solutions that are cost effective and provide benefits to the overwhelming majority of people whose transportation mode of choice is the personal automobile. The IPCC recommends finding solutions that reduce

emissions at a cost of $50 or less per ton. By minimizing the cost of carbon removed, we believe you will find solutions that are effective and fair, rather than based on ideology, the latest planning fad, or special interest lobbying.

Among surface transportation modes, highway investments have a dominant role to play both in reducing wasted emissions and fuel. Traffic congestion results in nearly three billion gallons of wasted fuel each year. With each passing year that it is not addressed, that waste grows. Yet over 20 years, a strategic congestion relief program could reduce on-site carbon emissions by an average of 77 percent, save 40 billion gallons of fuel, and reduce carbon emissions by 390 million tons.

Although VMT would increase, carbon emissions would be reduced. This demonstrates that VMT is not a valid measure of greenhouse gas nor pollutant emissions. Instead of attempting to reduce travel, a national policy to reduce the time wasted in traffic congestion would be an effective win-win, both for people and the environment.

Some have proposed that the United States should make Smart Growth a national land-use policy. Some even believe that the federal government should try to direct people where to live and how to travel, and particularly how to commute to work. Yet emissions from commutes and cars and light trucks represent only one-sixth of transportation emissions and only about 5 percent of the total U.S. carbon emissions.

Even a tripling of commuter transit—and I don't mean to speak against transit—but even a tripling of commuter transit would only reduce those emissions by a fraction of a percent. Some have suggested that EPA should take over DOT's role in approving transportation plans to ensure that they promote Smart Growth concepts and reduce VMT. But such a plan would stop federally funded highway projects that already have been delayed in many cases by a decade or more, and create serious problems to freight mobility, deficient bridges, aging pavements, snarl and congestion, and most importantly, safety improvements.

In fact, some travel reduction ideas actually increase road congestion and waste emissions. For example, Smart Growth advocates have found that doubling an area's density would reduce per capita VMT by 20 percent, thus twice as many people would drive 80 percent as much. Clearly, the result is more traffic, more congestion, increased travel time, and even some serious unintended consequences as response times would slow, trucking logistics would be more unreliable, and road rage would increase.

But there are solutions that are more promising. Along with congestion relief, the great opportunity for mobile source emission reductions lies in fuel and vehicles technology. Even if VMT could be reduced dramatically, would it still be necessary in a future of lower zero-emission vehicles? With the new national CAFE standards and new congressionally authorized tax incentives, these technological solutions would allow for increased mobility and all of the economic and quality of life benefits that travel brings.

Recent research suggests that hybrid vehicles will soon yield lower greenhouse gas emissions per passenger than transit. These

new technologies are another win-win for people and the environment.

When the House pursues greenhouse gas legislation, we ask that highway programs are treated fairly. After all, it will be highway users paying the increased fuel costs associated with the carbon tax, the cap-and-trade program, or a fuel tax. One idea is that the carbon or fuel tax paid by highway users at the pump be deposited in the highway trust fund and used for projects regardless of mode that reduce carbon emissions cost-effectively.

Like a tax or cap-and-trade proposal, it would also increase fuel costs paid by highway users, and some have suggested that cap-and-trade credits only be used for transit, bike paths, and VMT reduction projects. We are not aware of any data analysis that justifies this massive diversion of motorists' money. It appears to be simply a give away to special interests. Reality, rather than rhetoric, should be the basis for policy.

In conclusion, we are ready to help reduce carbon emissions. We look forward to supporting congressional action to reduce traffic congestion and invest in fuel and vehicle technology, but we implore this committee to fully consider and reject the unintended negative consequences of a nationally mandated land-use or VMT reduction scheme.

Instead of trying to socially engineer behaviors, let's provide the win-win solutions that allow people the freedom to live, work and travel as they wish. Embracing this freedom rather than restricting it preserves the American dream of opportunity and prosperity.

Thank you.

[The statement of Mr. Cohen follows:]

Highway Needs, Climate Change, and Planned Growth: The Road Forward

Testimony of Gregory M. Cohen, P.E.
President and CEO
American Highway Users Alliance

Select Committee on Global Warming
U.S. House of Representatives
June 18, 2008

Chairman Markey, Ranking Member Sensenbrenner, and Members of the Committee, I am honored to have this opportunity to present testimony on the subject of highway needs, land use policies, and greenhouse gas emissions. Within the next year, we expect that the House will debate separate climate and surface transportation bills and that each bill may affect the other. As advocates for the freedom of personal mobility and a safe and efficient National Highway System, we greatly appreciate the opportunity to participate in this Committee's efforts to develop a hearing record that explores the nexus between transportation, land use policy, and climate change.

Organizational Background

Formed 75 years ago, the American Highway Users Alliance (The Highway Users) is a non-profit, non-partisan organization, which advocates for public policies that improve mobility and safety, to benefit the millions of American road users. We are an association that brings together the interests of users of all the highway modes, through a membership roster that includes AAA clubs, truckers, bus companies, motorcyclists, and recreational vehicle enthusiasts. These members and the hundreds of other member businesses and non-profit associations require safe, reliable, and efficient roads to facilitate the movement of their families, employees, customers, and products. Since 1932, The Highway Users has worked closely with Congress as a key stakeholder and grassroots advocate for improvements in highway legislation and for a strong and trustworthy Highway Trust Fund.

The Federal Government's Role in Transportation

In order to integrate climate change policy with transportation, it is important to understand the limited (but strong) federal role that should apply to transportation. At all levels of government, highway needs vastly outstrip the resources available to meet those needs. The Highway Users support strong federal involvement and we support an increase in highway user fees to address critical national highway needs. One primary transportation concern is the efficient movement of interstate commerce. The federal responsibility to regulate interstate commerce is enshrined in the Constitution. Freight traffic is expected to double over the next 20 years and highway capacity must be

1101 14th Street NW, Suite 750, Washington, DC 20005, 202.857.1200, 202.857.1220 (f), www.highways.org

available to keep our economy moving. Other critical national priorities include combating the epidemic loss of life on our roads (43,000 dead per year), attacking economy-stifling congestion, and improving the poor condition and performance of major bridges and highways.

Cost-Effective Reduction of Greenhouse Gas Emissions

We are pleased to work with this Committee as it focuses on how to combat global warming. The Intergovernmental Panel on Climate Change recommends adopting a cost-effective approach by finding solutions that reduce emissions at a cost of $50 or less per ton. The recent McKinsey study, *U.S. Greenhouse Emissions: How Much at What Cost*, notes that this can be accomplished while "maintaining comparable levels of consumer utility." This means, according to McKinsey, "no change in thermostat settings or appliance use, no downsizing of vehicles, home or commercial space and traveling the same mileage". In other words, "social engineering" is not necessary.

In this spirit and with constrained funds, we ask the Committee to require that cost-effectiveness measures be employed when choosing which carbon-reduction solutions you promote. Doing so would give taxpayers the greatest bang-for-the-buck and yield the biggest reductions in emissions. For highway users, it is absolutely critical that the Committee promote solutions based on the cost per ton of carbon removed. These policies would yield solutions that are effective and fair, rather than based upon ideology or special interest lobbying. Fixed and mobile source emission-reduction programs will have different associated costs and benefits and will likely occur at a different pace, depending upon the cost-effectiveness of each solution.

Highway Investments that Reduce Emissions: Congestion Relief

Among surface transportation modes, highway investments have a dominant role to play in reducing both wasted emissions and wasted fuel. This is because highway passenger and vehicle miles traveled outstrip rail travel by a factor of 99 to1. Even dramatic increases in passenger rail use would have little or no affect on total highway travel. According to the Texas Transportation Institute, traffic congestion annually robs Americans of $78 billion in wasted time and fuel. With each passing year that congestion isn't addressed, the costs and waste grow. Projects that reduce congestion also have the added benefit of saving fuel, reducing emissions, saving lives lost in car crashes, and improving the economy and quality-of-life. A 2004 Highway Users study, *Unclogging America's Arteries*, discusses the benefits of congestion relief projects that unclog the nation's worst bottlenecks. Over twenty years, these projects would reduce on-site carbon emissions by an average of 77%, save 40 billion gallons of fuel, reduce carbon emissions by 390 million tons, and cut carbon monoxide and volatile organic compound emissions in half. Although this study assumes that VMT would increase, carbon emissions would be dramatically reduced.

Unclogging America's Arteries demonstrates that vehicle-miles of travel (VMT) is not an accurate measure of greenhouse gas nor pollutant emissions. A better measure would be

vehicle-time traveled (VTT), because idling in traffic congestion is a tremendous waste of carbon dioxide emissions and fuel. A national policy to reduce the time Americans waste in traffic congestion would be an extremely effective "win-win" solution that would help both people and the environment. We believe it would garner broad public support.

Not every traffic congestion relief project requires a major construction investment. Improving operations through traffic signal timing and intelligent transportation systems are perhaps the single most cost-effective way to reduce carbon emissions. According to the U.S. Department of Transportation, non-recurring events account for 50% of congestion-related delays. These include traffic incidents (25%), work zones (15%), bad weather (10%), and traffic signal problems (5%). Investments in real-time operations programs to clean up non-recurring incidents are vital to reduce this type of congestion and associated emissions and wasted fuel.

"Smart Growth" and Transportation

Smart growth means different things to different people. In general, the term was coined to promote planning practices that favor re-development of already developed land and strategically directed new developments that prioritize infrastructure investments within growth areas. Many "smart growth" developments (i.e. Kentlands in Gaithersburg, MD) fully accept highway travel as the dominant form of transportation, while others attempt to develop plans that discourage automobile use and driving. In general, "densification" of urban and suburban areas is a common element of "smart growth" plans. Less dense suburban development is derided as "sprawl". At a recent Senate briefing, a leading "smart growth" advocate described the irony that public opinion is solidly opposed to both "sprawl" and "densification". To maximize public support, he advised activists to talk about combating "sprawl" but avoid discussions about increasing neighborhood densities.

Federal Government's Role in Land Use Planning

The federal government defers land-use planning and zoning decisions to local governments, yet some have proposed that the United States should make "smart growth" a national land-use policy. Recently, this national planning concept has been injected into the debate on global warming. Some activists believe that the federal government should take a greater role in directing people where to live and how to travel, and particularly how to commute to work. Yet according to research from IAC Transportation, emissions from commuters in cars and light trucks represent only 5.2% of the total U.S. carbon emissions. A massively-expensive investment in rail transit and bike paths would only be able to reduce emissions by a tiny fraction of a percent, because research by *Commuting In America* author Alan Pisarski has shown that under any modal-shift scenario with densities less than 10,000 people per square mile (i.e. Manhattan), cars remain the dominant form of transportation. It is important to note that the vast majority of trips are not commutes. With few exceptions, non-highway modes

are far less likely to gain enough market share to be cost effective for most shopping, social, and family trips.

For extreme proponents of nationalized "smart growth", denial of federal funding of State surface transportation programs is considered an appropriate lever of enforcing their will upon state and local planners. Some have gone so far as to suggest that EPA should take over DOT's role in approving State and metropolitan transportation plans, to ensure that plans promote "smart growth" concepts and reduce VMT. Such a plan could threaten federally-funded highway projects that are needed to address serious problems such as freight mobility, obsolete and structurally deficient bridges, aging pavements, snarling congestion, and most importantly, safety improvements. We ask that this Committee firmly reject these proposals.

Claims that rising travel will overwhelm air quality progress are older than the Clean Air Act of 1970. Yet year-after-year, regulated pollution has dropped even as VMT has risen. The same will be true for greenhouse gases as carbon reducing technology in fuels and vehicles improve. Attempting to force VMT reductions through onerous "smart growth" plans that actually increase road congestion is neither a cost-effective approach nor people-friendly. In many cases, it is likely to actually increase emissions by increasing total vehicle time traveled (VTT). For example, "smart growth" advocates have found that doubling an area's density would decrease per-capita VMT by 20%. If twice as many people are driving 80% of their original VMT in the same area, this equals 60% more local traffic! Some have even proposed developing land-use plans designed to reduce per-capita VMT by 50%! Creating the congested traffic conditions necessary to achieve this goal would sharply increase emergency medical service response times, make shipping logistics expensive and unreliable, and increase road rage. Amazingly, some "smart growth" advocates even claim that "congestion is our friend" because misery on the road might convince a few people to stop driving and increase demand for alternate modes. .

Recent research on "smart growth" by internationally-renown demographer Wendell Cox finds that housing becomes less affordable when restrictive land use regulations such as "smart growth" are employed. Also Welfare-to-Work research from the DLC's Progressive Policy Institute in 1999 found that "the shortest distance between a poor person and a job is along a line driven in a car." Cox's research has also found that high-density high-rise apartment buildings preferred by "smart growth" advocates generate far more greenhouse gas emissions per capita than low-rise townhomes or single family homes.

In summary, we implore this Committee to fully consider the unintended, negative consequences of a national land use planning scheme and reject it. Individual States and metropolitan planning organizations should continue to decide for themselves if they wish to incorporate these concepts into their local land use planning. On a case-by-case basis, some of the plans may have merit.

Solutions That Are More Promising

Beyond congestion relief projects, the great opportunity for mobile source reductions relies in fuels and vehicle technology. Even if VMT could be reduced dramatically, would it still be necessary in a future of low or zero-emission vehicles? Recent research suggests that hybrid vehicles will soon yield lower per-capita greenhouse gas emissions than transit buses and trains.

With the new national CAFE standards and new congressionally-authorized tax incentives, these solutions would allow for increased mobility and all of the economic and quality-of-life benefits that travel brings. Like congestion relief, new technologies can be a "win-win" for both people and the environment. Instead of trying to socially-engineer behaviors, we will create technologies that allow people the freedom to travel and live wherever and whenever they wish. Allowing that freedom, rather than restricting it, preserves the American dream of opportunity and prosperity.

Legislative Proposals

If the Committee pursues greenhouse gas legislation, we ask that you do not discriminate against highway programs and mobility, as funds become available to reduce emissions. After all, highway users will be paying the increased fuel costs inevitable under a cap-and-trade program, carbon tax, or fuel tax.

We prefer a carbon or fuel tax paid by highway users at the pump that is deposited into the Highway Trust Fund and used for any Title 23 (Highways) or Title 49 (Transportation) project that reduces carbon emissions at a cost of less than $50 per ton removed.

Some have proposed a cap-and-trade proposal that would increase fossil fuel costs paid by highway users, in which credits would be made available only to transit, bike paths, and social engineering projects (such as VMT reduction plans). We are not aware of any data analysis that grounds this proposal. It appears to simply be a diversion of highway user funds to special interests. Reality, rather than rhetoric, should be the basis for action.

Conclusion

America's highway users are ready to help reduce greenhouse emissions and prevent wasted fuel. We stand particularly ready to support congressional action to reduce traffic congestion and invest in fuel and vehicle technology. We believe this approach provides a tremendous opportunity to reduce greenhouse-gas emissions and save fuel. This approach is also one of the few direct actions that Congress can take to reduce energy use that provides enormous benefits to drivers, consumers, and the economy. We urge the Committee to stand united by choosing this "win-win" approach. Other approaches need to be considered carefully but we ask that you reject unrealistic and punitive suggestions that seek to regulate where people live and how they should travel. Highway users should not be punished for driving and their increased highway user fees and/or cap-and-

trade debits should not be diverted from desperately needed highway projects. As every Member of the Committee knows, highway needs are overwhelming and resolving them is critical to our nation's prosperity.

Below, we have attached some information that may be helpful in understanding public opinion and key facts about surface transportation.

Some Helpful Survey Information

A recent national survey (April 4-6, 2008) of 1000 likely voters indicated the following:

76% see cars, roads, and bridges as a benefit to society
69% say congestion relief is a better green policy policies aimed to reduce driving
80% feel highway and bridge safety needs to be improved
88% feel congestion relief is needed
74% say invest more in highways and bridges next year
93% say it's important the fuel taxes are dedicated to highways and bridges

Fast Facts about Ground Transportation in the U.S.

Key Facts
Transportation Trends and Regulated Emissions 1980-2006

GDP	+119%
Miles Traveled (VMT)	+97%
Vehicles	+56%
Transportation Energy	+46%
Drivers	+40%
Population	+32%
New Highway Lanes	+6%
New Roads	+4%
Particulate Matter - 10	-28%
NOx	-33%
CO	-50%
SO2	-47%
VOCs	-52%
Lead	-97%

- In 2004, highway vehicles account for 99% of vehicle miles traveled & passenger miles traveled. Despite tremendous investment in non-highway alternatives, these investments represent a very small opportunity to reduce congestion, emissions, and wasted fuel.

- From 1980 to 2004, road capacity has increased by 4%, lane capacity by 6%, but highway vehicle miles traveled has increased by about 94%, and highway passenger miles traveled has increased by about 81%! No wonder there is congestion, wasted fuel, and excessive greenhouse gas emissions!

Vehicle Miles Traveled (Millions)				
	1980	1990	2000	2004 prel.
Cars	1,111,596	1,408,266	1,600,287	1,704,982
Light Trucks/SUVs	290,935	574,571	923,059	1,014,342
Trucks	108,581	146,242	205,520	226,505
Freight Rail	29,277	26,159	34,590	37,071
Motorcycles	10,214	9,557	10,469	10,048
Buses	6,059	5,726	7,590	6,637
Rail transit	403	561	648	710
Commuter Rail	179	213	271	295
Intercity Rail	235	301	368	308
Other transit	15	324	833	986

Passenger Miles Traveled (Millions)				
	1980	1990	2000	2004 prel.
Cars	2,011,989	2,281,391	2,544,457	2,693,872
Light Trucks/SUVs	520,774	999,754	1,467,664	1,758,542
Buses		121,398	160,919	140,716
Rail transit	10,939	12,046	15,200	15,930
Motorcycles	12,257	12,424	11,516	12,761
Commuter Rail	6,516	7,082	9,402	9,719
Intercity Rail	4,503	6,057	5,498	5,511
Other transit	390	841	1,631	1,874

Roadway Extent (Miles)				
	1980	1990	2000	2004
Public Road Length	3,859,837	3,866,926	3,950,035	3,995,490
Lane-Miles	7,922,174	8,051,081	8,255,521	8,372,283

The CHAIRMAN. Thank you, Mr. Cohen, very much.

Our next witness, Dr. Al Jaber, is the CEO of the Masdar Initiative in Abu Dhabi of the United Arab Emirates. We thank you, sir. We thank you for coming that long distance to testify before the select committee today. Welcome.

STATEMENT OF SULTAN AL JABER

Mr. AL JABER. Chairman Markey, Ranking Member Sensenbrenner, and members of the committee, thank you for giving me the opportunity to testify on such an important issue. Sustainable development is essential to the United Arab Emirates and to Abu Dhabi in particular. It is integral to my company and personally important to me.

Today's hearing helps illustrate our belief that aggressively addressing these fundamental issues can help bring communities together, even those as diverse as Abu Dhabi and Greensburg, Kansas.

Let me begin with a brief overview. In April 2006, the government of Abu Dhabi established a new economic development program that is entirely dedicated to sustainable energy. Masdar is a multifaceted undertaking to address future energy-related issues. The government of Abu Dhabi has committed $15 billion to the Masdar initiative, and we are leveraging additional funds through partnerships and the private sector.

Masdar includes investments in current technologies, new solar manufacturing plants, renewable energy infrastructure, and carbon-management projects. We are creating a one-of-a-kind research institute in Abu Dhabi, and developing Masdar City, the world's first carbon-neutral, zero-waste city.

Given the subject of the hearing, I want to focus on Masdar City, which is really the centerpiece of the entire program. Imagine a city built in the desert that will house 50,000 people, technology companies, a research institute, R&D facilities, light manufacturing plants, stores, schools and libraries, all powered by renewable energy.

There will be no cars. People will move around on personal rapid transit, light rail, Segways, and bikes. A net of photovoltaic collectors will create shade along narrow streets. Green spaces will be fed with purified, recycled water. We expect that the city will be the blueprint for cities of the future.

We will do this by completely re-engineering the way modern cities are built and use energy. In planning the city, we did not look at the cost of energy per kilowatt hour. Instead, we looked at the cost per square meter. Integrated design is a core element of our planning. It will help reduce energy and water demand to unprecedented levels.

Specifically, Masdar City will require only 200 megawatts of power, instead of the 800 megawatts normally required by a conventional city of the same size. Desalinated water consumption will drop from 20,000 cubic meters per day to only 8,000. And through intensive reuse and recycling, we will eliminate the need for millions of square meters of landfill.

Masdar City will be more than just an efficient, environmentally friendly place. It will be a platform for long-term innovation. Resi-

dents of the city will be part of a community that includes global leaders in business, academia, and finance who can collaborate on a common goal.

When I travel, the most frequent question I get asked is: Why? Why would a major oil-producing country proactively seek a keyhole in the alternative energy space? The answer is simple. First, we want to reduce our own carbon footprint. The UAE ratified the Kyoto Protocol, and we must be prepared to meet future commitments to reduce emissions, while ensuring continued growth.

Second, as part of our diversification and long-term economic strategy, Abu Dhabi seeks to be a developer and exporter of technology, rather than being an importer. We will continue to be a leader in the global energy markets, but go beyond hydrocarbons. We also believe we can act as a catalyst to encourage nations with greater human, technological and institutional resources to accelerate the adoption of clean and sustainable technology.

We also see this as an opportunity to be a part of a growing business sector. According to the International Energy Agency, the world's energy requirements could grow by as much as 50 percent or more by 2030. We want to help meet those needs. That is why we are taking these proactive steps.

Finally, I want to inform the committee about the significant contribution of American innovators. MIT is working with us to establish the world's first research-driven graduate university focused on sustainable energy, which is called the Masdar Institute of Science and Technology.

Investments by the Masdar Clean Tech Fund include U.S.-based DuraTherm, Enertech, Halosource, Nanogram Corporation, Segway, HelioVolt, and Solargenics. Colorado-based CH2MHill serves as program manager for the overall development of Masdar City, and there are more American innovators very much involved with the Masdar initiative.

Things are happening fast at Masdar. We broke ground on Masdar City in February, 2008. Students are being enrolled in MIST. We invite you to come to Abu Dhabi and to see it all firsthand. I welcome our American friends and partners to join us.

Thank you again for inviting me here today. I look forward to answering your questions. Thank you.

[The statement of Mr. Al Jaber follows:]

Dr. Sultan Al-Jaber
Select Committee on Energy Independence and Global Warming
U.S. House of Representatives Congressional Hearing
June 18, 2008

Chairman Markey, Ranking Member Sensenbrenner and members of the Committee, thank you for the honor of testifying on such a critical issue. Sustainable development is essential to the United Arab Emirates, to Abu Dhabi in particular; it is integral to my company and personally important to me.

Today's hearing helps illustrate our belief that aggressively addressing these fundamental issues can help bring communities together—even those as diverse as Abu Dhabi and Greensburg, Kansas.

Let me begin with a brief overview. Masdar is a multifaceted initiative to address future energy issues. The government of Abu Dhabi has committed $15 billion to Masdar—and we are leveraging additional funds from the private sector.

Masdar includes investments in current technologies, new solar manufacturing plants, a one-of-a-kind research institute in Abu Dhabi, and the development of Masdar City, the world's first carbon neutral, zero-waste city.

Given the subject of the hearing, I want to focus on Masdar City – which is really the heart of the entire program. Imagine a city built in the desert that will house 50,000 people, technology companies, a research institute, stores, schools and libraries—all powered by renewable energy. There will be no cars—people will move around on personal rapid transit, light rail, Segways and bikes. A net of photovoltaic collectors will create shade along narrow streets. Green spaces will be fed with purified, recycled water.

If done right, we expect that the city will be the blueprint for cities of the future.

How will we do it?

By completely re-engineering the way modern cities are built and use energy. In planning the city, we did not look at the cost of energy-per-kilowatt hour. Instead, we looked at the cost per-square-meter. Integrated design is a core element of our planning. It will help reduce energy and water demand to unprecedented levels. Specifically:

- Masdar City will require only 200 megawatts of power, instead of the 800 megawatts normally required by a conventional city of the same size.
- Desalinated water consumption will drop from 20,000 cubic meters per day to only 8,000.
- And through intensive reuse and recycling, we will eliminate the need for millions of square meters of landfill.

Masdar City will be more than just an efficient, environmentally friendly space. It will be a platform for long-term innovation. Residents of the city will include global leaders in

business, academia, and finance who can collaborate on a common goal. Masdar City will promote leadership in the following 8 sectors:

- Advanced energy
- Sustainable transportation
- Water and waste management
- Energy efficiency
- Green construction and materials
- Biodiversity
- Climate change
- And sustainability finance.

Each of these sectors will have innovation hubs creating new technologies and solutions, as well as a commercialization unit for the rapid deployment of these solutions. In this way, Masdar will avoid becoming a sustainability theme park. It will be a productive an active innovator, contributing to the global marketplace.

When I travel, the most frequent question I get is "Why?" Why is a major hydrocarbon producer betting on renewables? Why is an OPEC country building solar plants?

The answer is simple. First, we need to reduce our own carbon footprint. The UAE signed the Kyoto Protocol, and we must be prepared to meet future commitments to reduce emissions, while ensuring growth. Second, as part of our diversification and long-term economic strategy, Abu Dhabi seeks to be a developer and exporter of technology, rather than an importer. We will continue to be a leader in the global energy markets, but go beyond hydrocarbons. We also believe we can act as a catalyst to encourage nations with greater human, technological and institutional resources to accelerate the adoption of clean and sustainable technology.

We also see this as a critical business opportunity. According to the International Energy Agency, the world's energy needs could grow by as much as 50% or more by 2030. We want to help meet these needs. That is why we are taking these proactive steps.

Many believe that "green" solutions are costly and unprofitable. We want to dispel this myth and demonstrate a model of sustainability that is profitable, replicable and transferable.

Innovative financing structures are crucial to make Masdar City economically viable. Among them, carbon finance is an essential driver for Masdar City. We will monetize all carbon emission reductions under the Kyoto Protocol's Clean Development Mechanism. Such innovative financing has never been applied on the scale of an entire city.

Finally, I want to inform the committee about the significant contribution of American innovators.

- The Massachusetts Institute of Technology is working with us to open the world's first graduate university focused on sustainable energy, which is called the Masdar Institute of Science and Technology, or MIST.
- Columbia University has joined our research efforts as part of the Masdar Research Network.

- Investments by the Masdar Clean Tech Fund include U.S.-based DuraTherm, Enertech, Halosource, Nanogram Corporation, Segway, HelioVolt and Solargenics.
- Colorado-based CH2MHill serves as program manager for phase one construction of Masdar City, and they have joined me here today.
- The Chicago-based architecture firm, Adrian Smith + Gordon Gill, will design Masdar headquarters in Masdar City, which will be the world's first mixed-use net positive energy building.
- We recently announced a $2 billion photovoltaic program using the latest generation of equipment from Applied Materials of California.
- And we have also had the benefit of working with US National Labs and the Department of Energy.

Things are happening fast at Masdar. We broke ground on Masdar City in February. Students are already enrolled in MIST. In January we will host the second annual World Future Energy Summit in Abu Dhabi. Last year, more than 11,000 future energy leaders from around the world gathered to share results, find partners and define action on the way forward. We invite you to come to Abu Dhabi and see it all first-hand. I welcome our American friends and partners to join us.

Thank you again for inviting me today. I look forward to answering your questions.

The CHAIRMAN. Thank you very much.

Now, we will move to our final witness, who is Steve Hewitt, who is the city administrator of Greensburg, Kansas. When this rural town in southwest Kansas was destroyed by a tornado last May, they chose to rebuild, not in the cheapest way, but the smartest way. Mr. Hewitt helped lead the charge to rebuild using energy-efficient building technology and green community principles. Greensburg intends to transform the wind that destroyed it into the power that will rebuild it.

They recently received a sustainable cities award from the Financial Times and the Urban Land Institute, edging out all of the other communities in America. So that is quite a tribute to you.

Whenever you are ready, Mr. Hewitt, please begin.

STATEMENT OF STEVE HEWITT

Mr. HEWITT. Thank you, Mr. Chairman and distinguished members of the Select Committee. I am Steve Hewitt, the city administrator of Greensburg, Kansas.

The CHAIRMAN. Move the microphone in a little bit closer, please.

Mr. HEWITT. Again, thank you for the opportunity to speak today.

I first want to start off with a small video about our community.

[Video played.]

Mr. HEWITT. Out of crisis emerges opportunity. As you saw, on May 4, 2007, an EF–5 tornado that was nearly two miles wide ripped though a community that was approximately 1,500 residents and destroyed nearly everything, from the schools to downtown to government buildings to infrastructure.

Before the storm, this community was a community trying to get by, a rural community in western Kansas basically struggling to make sure that it can live and survive every day. What has happened since May 4 of 2007 is an opportunity. Through detailed planning, we now have an opportunity to plan a new community.

Though planning, we are blessed with an opportunity to create a strong community devoted to family, fostering business and working together for future generations. Future generations and future decisions will come directly from our planning.

We are focused on goals such as community, family, prosperity, environment, affordability, growth, renewal, water, health, energy, wind and our environment. We see this as an economic development tool as well.

I cannot compete as a small town with much larger cities around our area. However, though, we see sustainability in the direction to build a community green as an opportunity to foster new businesses and green-collar jobs, something that we feel is smart. Building back a community fiscally responsibly and being smart with your tax dollars is building green. Sometimes it is a struggle, but it is the smart thing to do.

In good decisions on infrastructure, buildings, and energy plan, we want to be 100 percent renewable 100 percent of the time. We have a wind energy plan that will feed our energy in our community. And then we will buy energy from the grid when wind is not blowing that is renewable 100 percent of the time. We think that is innovative.

To prove our point, our city council passed a resolution that was devoted to making sure all our community buildings are built at the highest level of sustainability. We feel like our opportunity is to show the world that building a community smart, with walkability, connecting our community, and sustainability, is the right decision with our tax dollars. It is smart for future generations, productivity, energy, and health. It is the right thing to do.

We hope our decision to go green and to build a sustainable community will help future communities hopefully do the same thing.

In conclusion, we are trying to be a model sustainable community that creates opportunities that didn't happen before that do happen now. We accept this opportunity. We are blessed with it and we hope to build a community that is better in the future.

Thank you very much.

[The statement of Mr. Hewitt follows:]

TESTIMONY OF STEVE HEWITT
CITY ADMINSTRATOR
GREENSBURG, KANSAS

HEARING ON:

"PLANNING COMMUNITIES FOR A CHANGING CLIMATE – SMART GROWTH, PUBLIC DEMAND AND PRIVATE OPPORTUNITY"

BEFORE THE SELECT COMMITTEE ON ENERGY INDEPENDENCE AND GLOBAL WARMING
UNITED STATES HOUSE OF REPRESENTATIVES

JUNE 18, 2008

Good morning Chairman Markey and distinguished members of the Select Committee. My name is Steve Hewitt, and I am the City Administrator for Greensburg, Kansas. Thank you for the opportunity to testify at this important hearing.

Out of crisis emerges opportunity, Greensburg believes we have a chance to build a stronger town; a thriving town. On May 4th, 2007, an EF-5 tornado hit our town destroying 95% of the community. A small community less than 1500 in population in rural southwest Kansas, what would happen to this little town? Over the past four decades this small town was declining in population and struggling with new economic development. In the wake of the disaster it became apparent that big changes would occur to sustain the town and future generations. This community began to look at ways to rebuild and create a prosperous future through a new design.

Greensburg now has the opportunity it never had before. I believe, as many around the world do, that we have reached a turning point (or tipping point) on the environment. As a community we must do our part, it's simply our responsibility. I am convinced that if we take action, and become environmentally smarter, we can shape the environmental and economic futures of all of us. Green starts with rural America. As a community, we feel that investing in Green is similar to investing in technology. From a financial view, you simply (Greensburg) cannot afford to ignore it.

Greensburg has never been able to compete in Economic Development with the larger communities next to it. However, we now can….. We feel "Green" gives us that chance to compete and sustainable industry will create jobs. Greensburg is blessed with a unique opportunity to create a strong community devoted to family, fostering business, working together for future generations. Greensburg set goals and took the time to put together a comprehensive plan with input from the entire community. As a community, Greensburg realized that we should focus on items such as: Community, Family, Prosperity, Environment, Affordability, Growth, Water, Wind, Energy and Sustainability.

Rural America is expensive.... Perception is that things are less expensive yet that is absolutely false when you talk of building. Fuel costs (rural ares) and energy costs are very high. Add in the lack of knowledge or education about "Green" increases construction costs. However, as a community we must educate and talk of awareness. Building Green can be affordable with simple steps. As a local Government we committed to the highest level of Sustainability, passing a City Resolution (first city in America) to build facilities at the highest level (Green). Yes, the up front costs are higher. However, Greensburg isn't building a community for the next 20-30 years. Greensburg is making 100 year decisions and "Fiscal Responsibility" must be considered. The pay off saves tax dollars.... Every decision, every building, every issue must fall back to our goals and principals. You build a town thinking of future generations.

This community will be a place where new business grows, a place where sustainability is embraced and lessons learned bolster prosperity. This strategic direction will bring investments. Greensburg and our plan is not disaster based, instead a strategy to benefit from an opportunity to rebuild replicable systems capable of change from the ground up. It is human nature to respond in survival mode after a devastating event like a tornado. A community must focus on the "big picture". A sustainable community must focus on many factors; such as community design, walkability, services, economic development, energy, transportation, housing, infrastructure, parks, etc (Quality of Life). A community must be connected.

In conclusion, Greensburg's direction as a model sustainable community creates opportunities; opportunities this community didn't have before. I am confident that the inspiration has created hope for this community and it will grow to inspire all that care to look.

Discovery Communications is bringing the story of Greensburg to the rest of the nation on its new Planet Green network. The series will give you an even better sense of where Greensburg has been and where it is going.

Thank you. I would be happy to answer any questions you may have.

The CHAIRMAN. Thank you, Mr. Hewitt, very much.

We thank all of our witnesses.

Now, we are going to turn to questions from the select committee members. The chair will recognize himself.

Mr. Hewitt, you have brought us one of the most inspirational stories that I think Congress has ever heard. Rather than leaving, the community has decided to stay and to rebuild and create a model for the United States and for the rest of the world in using green technologies.

What is the role that the federal government is playing in your redevelopment of the community using these green principles?

Mr. HEWITT. Unfortunately, when building the community back, it is expensive. When you make smart decisions, the up-front costs are obviously a percentage higher. But the long-term savings are evident, and you can see those. We have been told by some agencies that they will not fund our rebuilding efforts at the highest level of sustainability. It doesn't make sense to them, and to be a little bit more moderate.

Unfortunately, that is not our direction, so we have gaps. We are still going to fill those gaps. We would like to partner-up with the government so that as communities rebuild or try to grow, that any tax dollars they use, it is the smart decision to build it sustainable.

The CHAIRMAN. So what you are saying is that there are some federal agencies that don't want to help you to reach the platinum level, the best level of energy efficiency in the buildings that you are constructing. Is that correct?

Mr. HEWITT. That is correct. Let me be very clear. The government has been very helpful and they will continue to be helpful in the future in our rebuilding efforts. However, our decision to build platinum, the LEED platinum, the highest level you can build in sustainability, has come with resistance from certain agencies.

The CHAIRMAN. What I would recommend to the members of the select committee is that we write a letter to those federal agencies and we urge them to help Greensburg reach the highest levels of efficiency so that it can be a model to the rest of the country. I would urge the members. I am going to circulate a letter so that we tell the federal agencies that if we have a community willing to pay this huge price in terms of their personal commitment after the community is destroyed, the least that we can do as a federal government is to help them to reach the best standards that our country can provide.

If they are willing to be the leader, I think that we should have a federal government willing to follow. So I am going to write that letter and circulate it to the members so that we send it off to the federal agencies.

What has been the most extraordinary result, Mr. Hewitt, of this decision that you have made to rebuild Greensburg as the greenest community in the United States?

Mr. HEWITT. I think the fact that a community that was struggling and was unsure, it would be very easy to pick up your insurance check and move to a community that was a community. There is no community. As you can see, it was completely destroyed. But we have all ages and all levels of different people that want to

come back. They are vested in their community. They want to see it rebuilt.

One example is a few different senior couples, and they are retired—it would be very easy for them to leave town and go to a community where their kids or grandkids were at. It is exciting to know that they have committed to come back to the community and build a home that is energy efficient and green.

There are also young students that are now talking about, with the new opportunities and economic development and green jobs, they want to go to school and come back and work in their community. It really is changing the face of rural America. Rural America has struggled because of being away from supplies, and the cost of fuel. But we still believe it is the right thing and the right direction because the long-term savings are our main goal.

The CHAIRMAN. And what lessons do you think other rural communities in America can learn from Greensburg's experience?

Mr. HEWITT. I believe the biggest thing is that as a community, you decide the direction. Through community planning, and I believe Smart Growth is evidence of that, you decide the direction and you decide how you want to see your community rebuild. By taking the decisions we have done, you can have community wind. You can have new energy to help power your community.

You can use sustainable designs in your government buildings, as well as your schools, your hospitals, so that you are not reliant on so many outside sources. You can shop local. You can spend your tax dollars locally. I think that can help revitalize rural America which is struggling so much.

The CHAIRMAN. Well, I thank you, Mr. Hewitt, for your leadership and for everyone's leadership in Greensburg. I think because of the leadership of the citizens of your community, Greensburg is going to become the most appropriately named community in the United States and an example to every other community that wants to go down a new energy path. We thank you.

I now turn and recognize the gentleman from Oregon, Mr. Walden, for his questions.

Mr. WALDEN. Thank you, Mr. Chairman.

Mr. Hewitt, I want to follow up with you on a couple of points. Obviously, I know it makes sense in many cases, having been in small business 21 years, to make an up-front investment that may be more expensive in the short term, but pay off real dividends in the long term.

Can you tell me, as you approach rebuilding Greensburg, the differential in construction costs from traditional rebuilding to the platinum level that you are trying to achieve? What is that up-front differential? And then what is the payback period?

Mr. HEWITT. What we are seeing at this point in time is that the up-front costs range from—well, typically, it runs from 3 percent to 5 percent additional for green building up front, and that payback is anywhere from 8 to 15 years depending on the level. What we are seeing in rural America is that that cost is actually running closer to 10 percent to 15 percent and higher in some cases.

Mr. WALDEN. Which higher—on the payback period or on the construction?

Mr. HEWITT. Up-front, I am sorry, on the up-front costs. The payback period then will be extended out to possibly 20 years. But I want to make something clear—that we are not building 20-year buildings. When we talk about government infrastructure, we are talking infrastructure that will last 100 years, or 100-year decisions. So we still see it as an excellent payback.

But yes, there is a long-term payback and an up-front cost that is significantly higher in some cases in rural America.

Mr. WALDEN. And then let me ask you about the energy costs. If I heard you correctly, you said that you are going to put in wind energy generation, sell that into the grid as a surplus, but then buy only green energy off the grid. Is that for everybody in the community or just the government buildings?

Mr. HEWITT. That is for everyone in the community. We own the electrical utility. We produce our wind and sell it to the grid and then through a power agreement we purchase renewable energy back for all our citizens.

Mr. WALDEN. And how have you been able to negotiate the sale into the grid of the power—at what rate? And then what is your expected costs coming off the grid for green energy only? Will that be all wind?

Mr. HEWITT. No. It would actually be wind and some hydro as well. How we are doing that is through our local power pool. Our pool has made a commitment they are willing to buy the wind from us. We are currently negotiating at what rate they will purchase that from us. We will purchase that back from them because they have the ability to sell us hydropower when the wind is not blowing. They want to increase their renewable portfolio as well as we do.

So it is a partnership that continues. We hope to wrap that up. But we feel very confident in our early negotiations that this is definitely a community wind project that can be replicated in other communities.

Mr. WALDEN. So how many megawatts of wind power do you anticipate generating?

Mr. HEWITT. Well, our community is a small community. We are currently going to start with probably four megawatts of power for a small community of 1,500 people.

Mr. WALDEN. And four megawatts will satisfy all the energy needs of your community?

Mr. HEWITT. At this point in time, yes. Obviously, we hope to grow, but at this point that will satisfy our needs.

Mr. WALDEN. And that is the plate power production, not the firm load, right?

Mr. HEWITT. That four megawatts would handle us at a peak load. Our average load before the storm was closer to three megawatts, but to handle larger loads, we will have four megawatts.

Mr. WALDEN. Okay. So the power that you would purchase would be a mix of hydro and wind energy?

Mr. HEWITT. That is correct.

Mr. WALDEN. In the Northwest, as my friend and colleague from Oregon can tell you, that is a lot of the mix we have, with the hydro system that we have, and it is upwards of I think 60 percent

of our power is hydro, and then we have been very aggressive in our wind energy development. They work well together. The hydro almost works as a battery, because you can store some of the water, and then when the wind isn't blowing, you can release a little more and rely on the hydro.

But we still have to back that up with peak generation power from natural gas and obviously a lot from coal. So your system wouldn't use either natural gas or coal, then?

Mr. HEWITT. That is our goal—not to use any fossil fuel or coal.

Mr. WALDEN. That is terrific. That is terrific. Okay.

Thank you, Mr. Chairman.

I appreciate your input and good luck in your reconstruction effort. That is a monumental task and a great set for the rest of the country to observe and learn from. Thank you.

The CHAIRMAN. Great. The gentleman's time has expired.

The chair recognizes the gentleman from Oregon, Mr. Blumenauer.

Mr. BLUMENAUER. Thank you.

Mr. Hewitt, I just wonder what your calculations are going to look like when the evidence is that oil prices are going to continue to go up. There will be costs associated with carbon no matter who is elected president. There is an effort to control or have a carbon-constrained economy. And we are looking at utility rates for gas and electricity that are going up dramatically.

I am wondering what your calculations are going to look like. I would be willing to bet you a lunch that the payback period is actually going to get shorter, not longer, as technology is enhanced, and we are looking at models like Abu Dhabi. What we are looking at in our community with the green buildings, the premium that is attached to it, the payback periods appear to be getting shorter. So I am rooting for you to continue.

I deeply appreciate the chairman's suggestion that we encourage the federal partners to get real about these opportunities, particularly because you have been sort of a show-piece. But I think that it is a profound policy adjustment that we ought to explore because natural disasters are escalating. We are seeing more of them here. The evidence from climate change is that the horror that was visited on your community is something that we are going to be seeing more, not less, even if we start turning this carbon ship around.

So, Mr. Chairman, I think this is a policy adjustment that bears serious analysis.

I appreciate your bringing it forward, Mr. Hewitt.

I must say that I am impressed with the model of Abu Dhabi. We are having a number of people from Oregon that are traipsing over and being part of the team to encourage the streetcar as part of your long-term formulation, and we look forward to having a chance to accept one of the invitations we have been receiving to look at it on the ground.

Mr. Chairman, I was somewhat perplexed by the testimony from Mr. Cohen who is suggesting something that nobody is suggesting, that the United States government be some sort of mega-zoning board, but instead start changing the incentives and the priorities, how we behave as a government.

I have legislation that I will circulate in draft form to each of the members of the committee that talks about a VMT land-use strategy on the part of the federal government, to get your feedback before it is introduced, because I think it is absolutely not anything you are talking about, Mr. Cohen. I don't know people that are making that argument that the federal government—it is not something that we have done in Portland, Oregon, as you are well aware.

We have given people choices in Oregon, but the most effective trip is the trip not taken. If we can enhance urban environments, if we can deal with the problems of small-town America, everybody is going to benefit. But I will circulate that to you and each member of the committee, and invite your feedback.

But I wondered if I could just invite comment from Mr. Goldberg or Mr. Winkelman about the federal policies that you think ought to be adjusted to be able to promote that smarter growth. I mentioned the federal government and the goofiness of GSA and INS locating something miles from the central city. Do you have other thoughts about policies and adjustments that would reinforce what you are saying?

Mr. WINKELMAN. As I mentioned, I think one of the biggest opportunities is looking at the big pot of money that we will spend on transportation infrastructure. The zeitgeist is really to look at system performance, performance metrics. There have been a couple of national commissions looking at this set of issues. So having greenhouse gas emission considerations be part of that I think is key.

Also, if we are going to ask state and local governments to do something new, they need the proper tools, resources and data and models to plan, implement and measure. So transportation spending is a key influencer of land-use and therefore VMT. So it is a critical part of the solution.

Mr. BLUMENAUER. Mr. Goldberg.

Mr. GOLDBERG. Certainly I appreciate Mr. Blumenauer's comments, noting that no one has called for a federal mandate or federal dictate to the local government. We strongly believe in local home rule and in community empowerment, and communities being able to make their own decisions about how they grow. We strongly encourage them to think ahead about that growth and not just let it happen to them.

We would back up also the post–World War II era when we came out of World War II and we adopted a whole lot of policies that basically put us on a path of car dependence. We have been going along that route now for several decades, and the headlines I was reading to you before demonstrate we have reached a point where that is not working anymore. The federal government now can back away from promoting some of those policies and begin to support the communities that are exploring ways.

In fact, the federal government already has done some of that through the EPA's Smart Growth division, supporting communities who are exploring innovative ways to accommodate their growth in ways that make a community stronger and preserve their existing assets.

Mr. BLUMENAUER. Thank you, Mr. Goldberg.

I would just note, Mr. Chairman, in closing, that after World War II, FHA would not finance developments like the livable community that you grew up in. It was single-home detached housing, not mixed-use, for instance. So in effect, our financing mechanism doomed people to a fall-in development pattern and the congestion that concerns Mr. Cohen's members.

Thank you.

The CHAIRMAN. Okay. The gentleman's time has expired.

The Chair recognizes the gentleman from Missouri, Mr. Cleaver.

Mr. CLEAVER. Thank you, Mr. Chairman.

Dr. Al Jaber, I am intrigued about Masdar City. I have seen shots of it from the air on television. It is one of the most amazing feats. Congress will need to pass something to have a ninth wonder of the world. I am going to introduce that bill on your behalf. [Laughter.]

It would appear to me that Greensburg, Kansas may be the only city in the nation that is moving toward what you are doing. I am just curious about the vision of that city. Something you said in your statement, which was I think intriguing also, and that is that this will be a platform for long-term innovation, which means what is being done now is not the end of where you are going.

Is there a vision of where you ultimately will go in terms of the development of Masdar City? Has someone already envisioned 2030?

Mr. AL JABER. We have a clear objective through the development of Masdar City. One objective is to make renewables become good parity as soon as we can. That is one clear objective we have. Our other objective is that by developing Masdar City, we want the city to become a model that can be affordable, applicable and transferable to other nations and other cities around the world.

It will be a long-term investment and it will be a platform for long-term innovation. What we are experiencing today is that the commodities that we are integrating in the Masdar City development are actually available, but with the current commodities that we have access to today in the market do not actually achieve our objectives of making it today a zero-carbon emission city. But with the integration of all the technologies together, we will be able to achieve a carbon-neutral city.

Now, our objective is by implementing these technologies, by deploying these technologies on the large scale of a city like Masdar City, is to make these technologies, once implemented, produce zero carbon emissions from day one. That is a long-term objective, but it is something that we are very much committed to developing.

Mr. CLEAVER. We have an ideological discussion any time we talk about anything here in this country. We don't want the government to get involved. And then there is the let's protect the businesses. Your country is rich in oil. I am wondering if the oil barons are fighting the concept, saying that the government is trying to tell people how to live and where to live and so forth.

Mr. AL JABER. As a matter of fact, what we are finding is a phenomenal positive response and support, as well as commitment from the senior leadership. They see a natural extension for our involvement in the global energy market. They see a logical step for us to venture into this. This is considered to be a nation-building

exercise that will continue our environmental stewardship, as well as our leadership in the global energy markets.

Mr. CLEAVER. Is it possible that you could export to our country some of your business people to conduct workshops with the big oil companies, sing kum-ba-yah, and then listen to what you are experiencing? I am being facetious, but in a way I am just so awed by what is going on, and then I look at what we are doing and the push-back we get on everything related to the real need for us to change the way we live here in this country and change our policies, and look toward the future.

So I appreciate very much your presence here today. I apologize. I am running back and forth between committees, and I will return, but I just have to have an opportunity to discuss with you what is going on and what I think is one of the most amazing projects in the world right now.

Mr. AL JABER. Thank you.

Mr. CLEAVER. I yield back, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Ms. Solis.

Ms. SOLIS. Thank you.

I want to thank the panelists for your time and your commitment, especially to the Honorable Steve Hewitt for coming out and being so brave to tell us exactly what your community is doing.

I just wanted to mention that in the area that I represent, it is very heavily low-income and struggling all the time. We almost feel like we don't have enough resources to do anything either. But I give credit to you the political will, the courage that the residents have there, and you in terms of foresight, to see something like that happen, that renewable energy would really be a part of the community.

I run up against some of our local schools who are now passing bonds, using that money to restructure and restore old school buildings, but are somehow not able to utilize the highest quality renewable technology to make their schools green. So we do have a problem with a lot of our agencies, as well as some of our state and local agencies that are not also flexible in terms of allowing for people to hit that gold standard. I know that that is going to be a challenge for us.

You have already been asked how the federal government might be able to help, and I am more than happy to help do that as well. I am very intrigued by your thought about creating green-collar jobs. You know, last year the president signed into law in December a bill that would help provide for $125 million.

It hasn't been appropriated yet, but it would be helping to single-out communities like yours that would be eligible for funding so that we could have a pathway to careers that allow people then to come back home and actually those that want to stay there can get into a job career that provides incentives in the solar energy area, renewable energy, biofuels and everything. I just wondered if you are aware of that as of now.

Mr. HEWITT. I wasn't aware of that exact bill, but I will definitely look into that. We are looking for incentives to bring in the biofuels and the renewable products that can be manufactured in our community. Thank you very much.

Ms. SOLIS. Right. Thank you.

And to Mr. Cohen, I didn't hear anything about some other models that have been used by the federal government. One as of late that is trying to be imposed upon L.A. County and parts of San Bernardino is this whole issue of congestion pricing. I just want to get your thoughts if you have any idea if that is one of the ways that we should be going to try to change behavior and convert our HOV lanes to toll lanes.

Mr. COHEN. My view is that we should not price existing lanes that have been paid for with taxpayer dollars, but that we should consider tolling and pricing for new capacity. If you have an underutilized HOV lane, then perhaps it might be a better use of space to make it a hot-lane and allow HOV riders to ride free and others to pay a toll as long as you keep the road moving.

But we strongly oppose the administration's efforts to toll the Interstates, cordon price areas of town. I think it is particularly painful on the poor, those who don't have the luxury of choosing when they go to work. Frankly, I think that the administration sometimes feels that many trips are not important, but when you ask people who are taking those trips is your trip was important, they feel it was. So I would be opposed in general, with some exceptions, to congestion pricing of our existing capacity.

Ms. SOLIS. Thank you.

Mr. Al Jaber, I wanted to just ask you, I don't know much about the area that this planned renewable community is being structured, but I would like to get an idea about what the economics are there and the wealth, and what revenue is being used to help sustain this and to provide for the growth there. I mean, where is that revenue coming from?

Mr. AL JABER. Well, as you know, the Masdar City development is being seeded by the government of Abu Dhabi, and we are leveraging those funds with international partnerships through the private sector companies that are interested in being part of the Masdar initiative.

Ms. SOLIS. When you say "the government," do you mean also that oil revenue is also being used then to help provide for this infrastructure?

Mr. AL JABER. What better investment would we ever have to invest oil revenues into securing the future energy?

Ms. SOLIS. I would hope that that is something that other partners in the Arab League would also look at and adopt.

And then one question I have is also the creation of opportunities for people to get into these kinds of technologies. I am really looking more at your labor force, because you have a very growing, diverse population, and in many cases I understand you have to import labor. Is that the case here, where you had to import labor to help structure this facility? Or did you have an ample labor force already available?

Mr. AL JABER. Well, the construction is going to happen with existing companies that already have access to their labor workforce within Abu Dhabi and the United Arab Emirates and the DCC countries. The way the city is going to be structured is going to be very sustainable from day one. We are building our own sustain-

able labor workforce housing that is going to be absolutely sustainable.

Ms. SOLIS. Okay.

I don't know if I am over. Do I still have 1 minute?

I wanted to ask Mr. Goldberg, you know, some of our smaller communities really are trying their hardest to focus on Smart Growth. In fact, the community I am thinking about right now is an older 1930s community that is actually revitalizing two-story buildings that have now been reinforced. They were brick, actually, which isn't great for California because of earthquakes, but they have been able to restructure that and really create kind of a transit and more mobile community for seniors.

Can you maybe elaborate on some of those schemes that have actually been working well? How are they able to negotiate zoning and things like that? Sometimes you get a whole lot of folks that say NIMBY, I don't want this to happen; I don't want more people coming into my community.

Mr. GOLDBERG. Well, it can be difficult many times for developers and many developers around the country are trying to help these areas revitalize and become more walkable and meet this demand that I mentioned before.

In many places, we have a set of zoning codes that were actively promulgated by the federal government back in the last century that mandate the separation of uses that says that the houses go over here, apartments go over here, or maybe they are not even allowed, and shopping goes over here, schools and businesses and all are completely separated so that we have to drive from one to the other.

Actually, it can take a series of variances and many, many meetings and many opportunities for the community to speak out in order to get these changes done.

What has worked very well in many communities is to think ahead and to say, all right, the denser development, the walkable neighborhoods, they go here. Here is how we want them to look. And over here, if it is a single-family neighborhood that we don't want to change, it stays that way.

So then developers know where to go, and you make it easier for them to do what you consider to be the right thing. The icing on the cake is if you also happen to have the transit investment there that makes it really work for people.

Ms. SOLIS. Right. Thank you.

Mr. BLUMENAUER [off mike].

Ms. SOLIS. I would also like to ask our next speaker, Steve, if you could maybe elaborate also, Mr. Winkelman, regarding Smart Growth. I mean, it is something that is very timely. In fact, the California state legislature is proposing giving out special funding for targeted communities who integrate transit villages and Smart Growth. I just want to get your reaction to that. What other states are doing that? I think Oregon is or Oregon has, and others that are innovative, but what can we do to help incentivize some of our states?

Mr. WINKELMAN. Thank you. Actually, a couple of months ago I testified to the California Resources Board on this set of issues. They come to the same set of conclusions as I lay out in my graphs

that basically you can't get there from here without dealing with vehicle miles traveled.

One of the points, going to your last question to David in terms of local zoning, local governments need tools to change zoning. They may have one person in their zoning office who needs model code, needs some help to do things that people want and to engage the community to understand this. If we really want to do this, we need to provide the right tools and resources.

So there are a host of policy measures that can help, ranging from local, state and regional. California has these blueprint planning grants starting from the Sacramento region's planning efforts, where a community does a visioning process that says how can our community grow, and what will that means for things that people care about—congestion, air quality, how much they spend on fuel.

One of the interesting things, if we look at cost and how the federal government will spend money on climate change, I calculate for the Sacramento region a negative $200 per ton CO_2 from the Smart Growth policies. "Negative cost" means that it is a net savings for society with reduced infrastructure costs, reduced costs. If you look at carbon capture and storage, $30 a ton; ethanol, $200 a ton.

So if we ask the climate question for new things that we build or plan and say what does that do to emissions, we will get very far and find common sense solutions that actually can reduce costs.

Ms. SOLIS. Do either of you have an idea of how this model would work in, say, low-income and depressed communities that are really on the edge there? If there are any models out there where you have seen this change, this metamorphosis that has actually taken place. Because that is really I think something that a lot of members of Congress are trying to grasp is how can we revitalize our low-income communities that continue to kind of be out there on the edge and not really have the tools to prepare for this.

Mr. GOLDBERG. Well, a couple of things need to happen. One is that we have had a tradition of low-income people isolated in areas of poverty. We have I think begun to address a lot of the policies that caused that to happen, but we haven't addressed them all. One of them is the habit of zoning out people from certain areas and not allowing to be built the kinds of housing that would support them.

The other aspect is giving them access to jobs and making sure that they have the transportation that actually works for them. That means that they don't have to own and maintain a car or multiple cars in a low-income household to be able to get around.

Ms. SOLIS. So there almost has to be a plan overall that integrates all that so that it is built in from the beginning.

Mr. GOLDBERG. We are seeing around the country so much demand now for closer-in housing that we are going to have to figure out some really creative ways to provide housing that is affordable, not just to low-income people, but also to teachers and firefighters and people who are making working-class wages.

Ms. SOLIS. Right. Okay. Thank you.

Did you want to comment, Mr. Cohen?

Mr. COHEN. Thank you. I appreciate it. Let me provide a different view.

You mention that a lot of people don't like to see their area densify. I was recently at a Senate briefing. Mr. Winkelman was there with me. The community experience has been that people don't like sprawl and people don't like densification. The problem is that those are the two options that are provided.

So I admire the Smart Growth community in using terms like "sprawl" for bad things, but the reality is that communities also when they understand the densification and congestion that could come from their plans, are not happy with those.

The other issues you mentioned was low-income communities. Another reality is that Smart Growth communities, many are extremely unaffordable. This is a very serious problem with Smart Growth development. It might be cool to live in a community with mixed-use housing and be able to buy your latte and bike to it, but these communities typically are priced out of range for folks who you are wanting to serve.

Ms. SOLIS. I think that is going to be our challenge, because we do want to integrate all our communities, especially communities of color. We want to create jobs. We want to create incentives so that there is a clean environment for them, and they should not be short-changed on any of this. So some of us feel very strongly about that and will work very hard to see that the models can be replicated everywhere, especially in rural communities as well where access and affordability also is a high standard.

I think it can all be done. I really do believe that we can start addressing the issue. And because of energy costs, people want to stay closer to where they work and live. So that is forcing behavior to change right now in my state of California. That is all I can tell you.

Mr. BLUMENAUER. I appreciate what you are saying in that regard. One of the things that you run into problems is that you have to link transportation and housing costs together. In California, you had people move further and further and further away. They may save a little on housing, but they end up paying more in total because they spend so much time and money in transportation.

So I think part of what the Smart Growth advocates are talking about is integrating those pieces together. If we actually have communities that are well planned and integrated, it actually can end up reducing total costs for people.

I was listening to Mr. Cohen's comment. I have had the same experience where in these big planning meetings you find people are opposed to only two things: sprawl and density. But I also find that when you, in the planning like you have in Abu Dhabi or you are talking about doing in Greensburg, when it is put together in a way that is reasonable, people love it.

Notwithstanding Mr. Cohen's concerns, in our community the most valuable real estate is those areas that have regained their historic population levels. Most communities, yours and mine, actually have far fewer people than they had a generation ago. What we have is two or three times more cars, so that people have the congestion on the roads. They have the traffic. They are concerned. It is not the people, it is the cars. The real estate market suggests that those are in fact the most valuable areas.

If you are done, I am going to go to just the last couple of questions to the panel before we adjourn, because I do think that it is important for us to think about this comprehensively in ways that will give people choices. We haven't talked about the demographic shock-wave that is about to hit our communities. We quote in our survey here Dr. Chris Nelson, who has some other fascinating research that talks about how our households—and some of us great up in the "Leave It To Beaver" era where half the families had children. We are going into an era where by 2030 when there will be more single person households than families with children, and the impact that that is going to have is one that I think is worthy of our consideration.

I would like to invite our panelists to move away from the transportation side of the equation when we are dealing with Smart Growth. I appreciated the experience in Abu Dhabi. You are talking about being a net producer of energy and reduce or recycle the water. We are finding in communities across the country just as much concern about the rise in gas prices is the utility costs—the line loss for electric power extension, the costs for water and gas transmission are all going up.

I am curious if there are observations, and we can just go down the row here or out witnesses, about the impacts we are going to have with saving land, because if we don't start having more compact development in this country, we are going to take another 68 million acres that will give us a developed footprint in this country about the size of Texas if we don't change things. I wonder if we can start with our Smart Growth advocates and go down and conclude with the Greensburg notion of what you are doing with the footprint on land utilization, if you wouldn't mind—footprint, water and energy.

Mr. GOLDBERG. I think one thing that we are going to find is that we really don't have the luxury of developing 80 percent of our commercial area as parking anymore, surface parking. Taking the land for that particular use is terrible for the watershed. It exacerbates urban heat islands, and it is a big waste. In fact, I think we are going to see that recycling parking lots, redeveloping these old shopping centers into places that are actually inhabitable villages is going to be one of the big solutions that we will find.

If we just go out on the orange line and look at Arlington, they were able with advanced planning to get the community together and support what would happen around those transit stations out there, and leave the single-family neighborhoods alone. They got the development that they wanted, where they wanted it, and they were able to keep the other places the way they wanted them, with the result that there is significantly less traffic than anybody thought there would be because they are managing the parking very well. In just 7 percent of the land area, they are receiving about one-third or more of their tax revenues. So this can be a win on several different levels.

Mr. BLUMENAUER. Thank you.

Mr. WINKELMAN. Thank you. I commend the organization of this panel because when you talk about Smart Growth, what gets built are buildings. If we look at the climate change issue, we walk

about mitigation, reducing emissions, and then adaptation, and how do you start to increase your resilience to the impacts.

When we look at green buildings, those issues really come together. You have the efficiency, savings from transportation, building energy use, building water use savings, and then when you integrate green roofs and building materials, you can start to mitigate the impacts of urban heat islands. So it is really looking at how these issues come together to make us more resilient to the impacts of climate change.

We are seeking urban leaders adaptation initiatives working with communities around the country to find where are those overlaps between energy and greenhouse gas emissions reductions and measures that strengthen a community's resilience to the impacts of climate change, whether it is the flooding we are seeing in the Midwest now or the fires in California.

Mr. BLUMENAUER. Good. Thank you.

Mr. COHEN. All these things are nice things. They all cost money. The reality is we have to look at them on a cost-per-carbon-reduced basis, if that is the goal. If the goal is to maximize the amount of carbon we can reduce with the dollars we have, then we can do a lot of these things.

So I think that is a really important thing, to focus on not the things that are cool, but the things that we are getting the most bang for our buck. Some of these ideas probably fit in within these IPCCs recommended estimate of $50 per cost or $50 per ton removed. So I think if we focus on those things, we can do a lot.

I don't agree, respectfully, that we have a land shortage in the country or that we should ration land. While I don't have my statistics with me, I would be happy to provide for the record information on land available in this country, but I think we might just disagree, and respectfully, at that.

Mr. BLUMENAUER. Well, I would welcome that. It is not a shortage of land. It is going back to your criterion about effective development in terms of the cost and consequences for the utility lines, for the pollution, for the congestion, for taking away other infrastructure investments for the movement of freight.

So I welcome your assessment of land, but it is things that have environmental and real-life consequences to continue paving. So if you put them both together, I would appreciate it.

Doctor.

Mr. AL JABER. As far as we are concerned, we are very much aligned with your thoughts. But let us go back to Abu Dhabi as an example. A couple of years ago, Abu Dhabi announced the launch of the new Abu Dhabi 2030 urban plan. It is simply an urban framework structure that will implement new criteria for the new developments in Abu Dhabi.

Now, in order for Abu Dhabi to continue its planned growth, and in order for Abu Dhabi to continue meeting its energy requirements, we have no way of doing it except by us being able to be more energy efficient and conserve energy and develop cities that are more compact.

Let's go back in time, 200 years ago when we had no access to oil, no access to the wealth we have access to today—our grand-, grand-, grand-, grandparents. How did they live? They lived very,

very efficiently. Their homes were very compact. They were very close to each other, with narrow streets, all shadowed, automated air conditioning through this bargil structure.

Now, we are not saying let's go back and revisit the way we used to build our cities before, but we have to be very energy efficient. We have to conserve energy and we have to conserve water and we can use that as a model for us moving forward.

Thank you.

Mr. BLUMENAUER. Thank you.

Mr. Hewitt.

Mr. HEWITT. When we went through our comprehensive master plan, which is very important—planning in a comprehensive way is the right thing to do. We talked about land use. Land use is very important. Our footprint as a community, it would be very easy for people to begin to add mini-lots and expand their properties. That is actually against our comprehensive plan.

We think that the density and the connectivity of a community is very important. Without that, you are fragmented, and that struggles with parks and schools. We understood that the footprint of our current community can handle much more growth than we ever had before if we plan correctly.

So your Smart Growth methods are exactly the right decisions for Greensburg because Greensburg is not just looking at long-term planning that deals with future decisions, but the future of the present decisions, and that is important to us.

Thank you.

Mr. BLUMENAUER. Okay.

Mr. INSLEE. Mr. Hewitt, we have been working for years to try to get Congress and America to move in the direction that your community has. We as a country don't have the luxury of a tornado. We don't have this sort of life-altering event. We just have this slow, long-term collapse of the climatic system of the earth to deal with. I hate to think of a tornado as a cleansing thing because you had such a disaster, but it apparently did give you a chance to change the direction of your community.

Can you just give us any thoughts that we can share with our colleagues about what insights this whole experience gave you and your community that you might not have had but for that disaster?

Mr. HEWITT. It is sometimes hard to believe that an opportunity can come from such a devastating event. However, though, in our decisions, we understand that the world is watching us. The decisions we are making as a community hopefully can be replicated.

So that is one of the biggest issues we have battled, is that what happens to communities that don't have devastation that are just surviving, but want to thrive and revitalize their community. One of the things we see is education. In green building and sustainability, you have to educate, which is a struggle in rural America, especially in rural Kansas.

It is educating contractors, suppliers, engineers, architects that you have to step outside the box of your normal routine and think about educating and connecting people and collaborating together so that the growth and sustainability rebuild of our community can be replicated in a community that says, okay, we are going to build a new city hall and we have the tax dollars saved up from all these

years. How do we do it in our budget? Where can we find the information about it? How can we do things, from all infrastructure from schools to hospitals?

We are hoping that what we are doing in rural America in Kansas right now can be one step forward in the education process so that communities can revitalize themselves without a disaster happening.

Mr. INSLEE. So I know a homebuilder in my community, it is actually my oldest son, if he wants to come and do volunteer work to learn how to do some green building in his community, can he do that?

Mr. HEWITT. Absolutely. We would love to bring anybody out to learn from our mistakes, from our successes, from our growing experience that hopefully that builders, contractors, suppliers, architects can hopefully take something back to their community and see that this is a good thing for them.

Mr. INSLEE. Are you receiving any sort of additional federal assistance because of this green commitment that you have made?

Mr. HEWITT. No. We actually have larger gaps because we are going in this direction. We have been told by some agencies that they will not fund the level of sustainability that we want to go towards.

Mr. INSLEE. So given your extraordinary commitment, wouldn't it make some sense for the U.S. to look at this as a test case and have a little federal help for you along this way?

Mr. HEWITT. We think it would be a perfect test case. We would encourage all government agencies, schools and hospitals, to take a hard look at what we are doing because we do believe it is the future that is in Smart Building.

Mr. INSLEE. You know, the fellow to your right, Dr. Al Jaber from Abu Dhabi, they have sort of made this test-case city, and we have this really impressive brochure that I have taken a look at. It just seems to me that the United States ought to be able to make a much smaller commitment in the heart of Kansas like this project in Abu Dhabi. I would like to talk to you when this is over maybe about a thought about that.

Mr. HEWITT. Thank you.

Mr. INSLEE. Yes.

Dr. Al Jaber, this is kind of interesting. Your presence here is timely. We have a debate in this country right now. Some think that our answer to our energy woes is just drill more. You just drill more holes. You just drill more oil and gas wells, and that will solve the problem. We have this debate right now in Congress about that.

Why hasn't Abu Dhabi, sitting where it is, made that decision? Why have you decided to go a different route?

Mr. AL JABER. Abu Dhabi is looking at it from a different perspective. In order for the world to be able to meet its energy requirements, we believe in a basket of solutions. Hydrocarbons will pay a role, but renewables are also going to be able to play a very important role.

We are very much supporters of the world looking at it from a different angle now. It is no longer one or the other. It is a basket of solutions and it is a portfolio of energy sources.

Mr. INSLEE. Thank you. I appreciate it. I will echo your comments in our next speech. Thank you very much.

I want to ask Mr. Cohen. I want to brag because Mr. Blumenauer is too humble about his home town of Portland. Portland became I think the first major city to reduce its vehicle miles per person driven in America's history. I think that happened in 2007. They did it through a combination of good planning, which includes some very nice density, public transportation, and just a very coordinated approach to try to reduce vehicle miles driven per person.

Did they do anything wrong?

Mr. COHEN. I think respectfully that they did for a number of reasons. One is that they created a growth boundary around the town that increased the price of land. Even though carbon per capita was reduced, as I mentioned in my testimony, congestion greatly increased because when you double-density and you reduce per capita VMT by, say, 20 percent, you are still increasing congestion. So I think that is a concern and that also increases the cost of living.

Secondly, there is sort of a theory, I think an idealistic theory, that if we just went back 80 years and we lived in smaller communities with street cars and everyone lived close together that this would be a terrific way of life. As Billy Joel said, the good days weren't always good, and tomorrow ain't as bad as it seems.

The suburban development that we have had created the prosperity in this country. The Interstate system created the prosperity in this country that has given us the wealth able to make the air quality and water quality progress that we have made in the last 30 years. So just going back to the way things were with a revisionist idea of how ideal it was I think is seriously problematic. There are a lot of unintended consequences that we are not considering when we think in terms of pictures like that.

Mr. INSLEE. I will just tell you that the view from up the I–5 corridor from Portland has had the most extraordinary success creating a livable community, attractive to all, that people are dying to get into to live in. If this congested area that you are talking about is seen as essentially an urban nirvana compared to most of the cities in the country, I don't know when you have been to Portland recently, but you won't have a nicer Saturday afternoon strolling and using public transportation in Portland, Oregon. You ought to come out, especially in July and August.

Mr. BLUMENAUER. When the rain is warmer.

Mr. INSLEE. When the rain is warmer, yes.

Mr. BLUMENAUER. I would refer Mr. Cohen to the Texas Transportation Institute, where according to them, our congestion is not getting worse; that proportionately it has actually been reduced compared to other major cities. So I would like to have your experience about how your assertion that our urban growth boundary has increased congestion, when places that don't have urban growth boundaries have had worse congestion according to my information from the Texas Transportation Institute. I would like your evidence to back up your assertion.

The second point I would make for your observation is that land prices were maintained, but housing prices have been more afford-

able than most other major cities. In this recent collapse when people are worried about not being able to sell their homes for what they are worth, for what their mortgages are, that we have maintained housing values. They haven't been as high elsewhere, but they have been maintained. They haven't been on the roller-coaster like in Las Vegas, which I would imagine you would think would be one of the best places.

So I would like your evidence to the contrary about the congestion. I would like you to look at the Texas Transportation Institute and then look at what has happened actually with home values, because my evidence is slightly different than yours. I would like your evidence to the contrary to be a part of the record.

Thank you.

The last word, Mr. Winkelman?

Mr. WINKELMAN. Thank you.

If we look at congestion, we care about people more than we care about cars. So exposure to congestion is a metric that the Sacramento region has used. If you have more transportation choices and shorter trips, you spend less time in that congestion.

I also want to make the point that the state departments of transportation across the country have an association called AASHTO, the American Association of State Highway and Transportation Officials. They conclude that we have to cut VMT growth in half to deal with growing capacity needs. We can't build our way out. There is not enough money, so they are actually supportive of Smart Growth principles, as well as system efficiency improvements to make the best use of existing infrastructure and take into account existing financial considerations.

Mr. BLUMENAUER. Great. Thank you.

Mr. GOLDBERG. I would just also like to briefly note as somebody who lives in Atlanta and has for a long time and followed the growth and development there, that there are absolutely no constraints to growth in Atlanta. The growth has gone absolutely everywhere. They have built roads like mad and it is the lowest density major metro area in the country and it continues to move up in congestion ranks nevertheless.

Mr. BLUMENAUER. And then there are issues of energy consumption and a whole host of things.

Well, I appreciate the committee's indulgence. I appreciate your kind words in defense of our beleaguered upper-left coast region.

We appreciate the panel joining with us and adding an important dimension to the land-use and VMT planning consumption element of this. I think it is very useful, and your contributions have been very helpful, particularly given the bookends that we have had with Abu Dhabi and Greensburg. It is inspirational.

Thank you very much.

[Whereupon, at 11:23 a.m., the committee was adjourned.]

THE SELECT COMMITTEE ON
ENERGY INDEPENDENCE AND GLOBAL WARMING

Dear Mr. Goldberg:
Following your appearance in front of the Select Committee on Energy Independence and Global Warming, members of the committee submitted additional questions for your attention. I have attached the document with those questions to this email. Please respond at your earliest convenience, or within 2 weeks. Responses may be submitted in electronic form, at aliya.brodsky@mail.house.gov. Please call with any questions or concerns.

Thank you,
Ali Brodsky

Ali Brodsky
Chief Clerk
Select Committee on Energy Independence and Global Warming
(202)225-4012
Aliya.Brodsky@mail.house.gov

1. *Recognizing that what works for a community like Portland will not work for a city like Phoenix, do you agree that land-use decisions should be reserved for local municipalities and not imposed by federal government regulation?*

   As I said during the hearing, we absolutely believe that local communities are best equipped to make decisions about how to regulate land use in their jurisdictions. We do not suggest for a moment that land use decisions should be imposed by federal government regulation. We do not believe it is appropriate, nor do we believe anyone would stand for that; not in Portland, not in Phoenix, not anywhere. (Local land use decisions are made at the municipal level in both Portland and Phoenix.)

   What we have pointed out, however, is that federal policies and spending have served to shape growth patterns, whether that is intended or not. When a local community finds it far easier to win federal support for building an exurban highway than for maintaining and expanding transportation systems in existing areas, or when the federal government moves offices from an in-town location to one that can only be reached by car, that affects growth patterns.

2. *With gas prices rising at the current rate, how do you think this will affect consumer's commuting and lifestyle choices? We have seen extensive reductions in gasoline demand over the past year as the cost of a tank of gas has risen. Isn't there a natural supply and demand mechanism at work that will force VMT down as gas prices rise?*

Since World War II the entire development model in the United States has been predicated on the expectation of an unending supply of cheap motor fuel. Federal policy, from transportation to housing, has been, and largely remains, geared toward supporting that model. Until very recently, each new increment of development in most parts of the country was more automobile-dependent than the last; neighborhood shopping centers evolved into "big box" centers that draw from many miles away, while relatively compact early suburban neighborhoods gave way to sprawling subdivisions on the exurban fringe, far from jobs and services.

Absolutely, the end of the era of easily affordable gasoline is rapidly reshaping the marketplace, especially since it coincides with marked demographic and cultural shifts. But the private sector will have a difficult time meeting this surging demand. The problem is that the policy and regulatory environment, from the federal level down, remains geared toward encouraging, even mandating, car-dependent development.

Individual Americans are doing what they can to reduce their exposure to high gas prices. Those who live in locations where they can combine trips easily or shift to public transportation, biking or walking are doing so. However, the vast majority of Americans don't have good options in that regard. As a result, the reduction in gasoline consumption has been relatively modest, rather than "extensive." Given the degree of our car dependence, it seems unlikely that most can cut much farther without real pain and reduction in quality of life. Already economists are seeing signs that people are cutting other parts of their budget to accommodate the higher prices, because they must travel to keep jobs and sustain daily life.

Our analysis indicates that, while we may see further reductions in VMT in the near term, the prognosis is for VMT to remain at levels that are less than optimal for household pocketbooks, energy independence and climate change. If we do not shift our policies to support a development model that allows for more efficient travel in more compact, convenient locations, we will continue to see VMT rise with population growth.

3. *In the foreseeable future, the primary growth in urban settings will be taking place in developing countries, such as the trend towards urban living in China. What can the United States do to work with developing countries to implement policies that you are suggesting?*

The best thing we can do is to lead by example. Emulating the U.S. in our longtime economic leadership, developing nations started to adopt some of our development patterns because they see them as markers of economic success. Many in China and elsewhere are noticing that the U.S. itself has begun to rethink these issues, and have invited representatives from our organization and coalition members to present our ideas for how to maintain freedom of mobility, high-quality public and private spaces and superior quality of life while minimizing oil dependence and environmental degradation.

4. *How do your ideas for transportation development accommodate freight shipments, which are expected to double over the next 20 years?*

   Simply put, we need more freight on rail, and we need more commuters off the highways. It is unlikely we will tax ourselves or give over the urban space needed to grow our highways enough to accommodate both a growing population and freight load. We will need to move large loads from port and between cities by rail, to the degree possible. Within urban areas, freight still must be distributed by truck, but that will become increasingly difficult unless we can give a growing population more alternatives to being on the highways with the trucks. We can do that both by expanding the reach and quality of our public transportation systems, but also by providing more living options within closer reach of jobs.

5. *Given the concern of environmental impacts in "smart growth" policy, do you support using all emission-free technologies, such as nuclear, hydropower or renewables?*

   We do not have a formal position on nuclear or hydropower technologies, but we are very supportive of integrating renewable solutions into development and redevelopment projects. Sufficiently greening our buildings and neighborhoods so that they require far less energy is likely to be equivalent to what we are might gain from approaches such as increased hydropower or wind-generated energy. We must do both; if we fail to give Americans better options for using less energy, any energy policy we develop will fall short.

6. *Under your proposals, what would you estimate is the cost per ton of CO2 that is reduced?*

   Our calculation is that shrinking our carbon footprint, reducing oil dependence and accommodating rising population in ways that allow both consumers and governments to save money will be a net economic benefit in the long run. Smart growth simply shifts development and transportation investments that will occur anyway.

   For example, a study by the American Council for an Energy Efficient Economy estimated that shifting just 10 percent of new development to smart growth would save 4.95 billion barrels of oil; reduce global warming pollution by 59.5 metric tons; and save $220 billion in household transportation costs over 10 years. Estimating the exact up-front cost per ton of this approach is challenging for two reasons, however: smart growth involves a combination of many different strategies and policy changes, and because there are many 'bonus' benefits of smart growth, including more active and healthier citizens, reduced air pollution and water consumption, and savings to consumer from decreased gas costs and energy bills.

   There are many other studies (some cited in my written testimony) showing how taxpayers save money when water, sewer, utilities and roads are less spread-out. Consumers save when they spend less money on gas and less time highway congestion.

7. *How does industrial development fit in your idea of mixed-land uses?*

   It depends on the industrial use. Clearly, more noxious processes such as pulp and paper manufacturing will need to be located in industrial zones away from population. But many modern industries are clean and non-polluting; depending upon their traffic and other impacts, they could potentially be located closer to, or integrated with, mixed-use districts.

8. *You mention that communities should maintain existing infrastructure. Does this include adding more high occupancy vehicle lanes to our highways?*

   HOV lanes are certainly one good way to expand the capacity of existing highways to carry more people. Whether that should be a new lane or conversion of an existing lane is a subject of considerable debate. In some places a new lane might make sense, if it takes the place of a planned general-access lane. The concern often is that a new lane will merely lure more people to highway-dependent locations and will end up congested again. Some in our coalition support the idea of high-occupancy toll lanes, where the tolls can be raised or lowered to maintain a free-flowing lane. This idea grows in popularity both with our coalition members and the general public (according to our polls) when the revenue is used to provide affordable transit alternatives in that corridor. All of these ideas are an important part of the menu that metro areas can choose from in determining the approach that makes sense for them.

9. *How does the extra cost of additional development in areas that are already built-up affect community growth?*

   Even in areas that are already 'built up,' there always are properties that can be redeveloped, including vacant buildings, underused parking lots, and brownfields or other abandoned industrial sites. This type of development often has regulatory barriers and is by its nature by more complicated than greenfield development. However, the benefits of this type of infill development are great: more walkable, transit-friendly development, revitalized cities and towns, more housing and jobs in convenient locations, and the environmental benefits of saving open space. At the federal level, this type of redevelopment can be encouraged through expanding and improving programs like the brownfields and historic preservation tax credit programs.

10. *What effect will the subprime lending crisis and high foreclosure rates have in stemming the development of new subdivisions? Do you agree that exurban development will not continue at the rate that we have seen recently? Again, isn't this supply and demand at work when supply overreached realistic demand and now the market is correcting itself?*

    The market can only correct itself so much when it is hindered by regulatory barriers at every level of government. From transportation policy at the federal level to zoning and land use laws at the local level, our country has made it harder to build smart growth development than sprawl development, despite the demand and public benefits of the former. The subprime lending crisis is demonstrating the folly of this regulatory

framework, with higher rates of foreclosure in communities on the fringe without transportation choices. However, if policies are unchanged and our country continues to heavily subsidize sprawl through our transportation and other infrastructure investments, and make it illegal to create mixed-use, walkable neighborhoods, meeting the demand for these types of communities will be impossible.

11. *Your testimony extensively details the need for growth in walkable neighborhoods, including the rise of baby boomers and childless households. If the demand for such housing arises, why does the government need to mandate it?*
Again, the problem is that we don't have a free market for development in this country. Most developers will build the kind of development that is cheapest and easiest to do, which under our country's current regulatory framework is inefficient, costly for taxpayers, and extremely energy and greenhouse gas-intensive. For example, most communities in this country have zoning and land use laws that prevent mixed-use development, mandate minimum property sizes, and outlaw combining single and multiple-family houses. Under this kind of zoning code, a developer would be unable to build smart growth.

    Our recommendation is not that the federal government 'mandate' smart growth; it is that we help communities that want to pursue such growth strategies and that we end the costly federal subsidies that are supporting inefficient development—including transportation policy that heavily subsidizes new roads and shortchanges existing communities and other forms of transportation.

12. *How much do municipalities have to pay to maintain trees as part of greening urban landscapes?*
The costs of greening programs depend, of course, on their scope: the size of the city, its park space, and the density of its trees. The city of Chicago has one of the country's most successful urban greening programs. Initiated in 1989, the city planted more than 400,000 new trees by 2003, landscaped 63 miles of medians and 39 miles of boulevards, and instituted the city's famous green roofs on several buildings. The program cost an average of $1.5 million for the city, and has resulted in enormous public benefits: a more attractive city for residents, reduced storm water runoff, and the environmental equivalent of removing the pollution of 14,000 cars.

13. *You state "we have a tax policy and regulation that makes it easier for them to subdivide a farm than to build downtown." What sort of changes in the tax code do you believe would change development trends? Do you support higher taxes on new subdivisions?*
We should make it easier for families to live in communities that are walkable, transit-accessible and more convenient to jobs and services. Due to the under-supply of these neighborhoods, houses in these types of communities are often more expensive than housing on the fringe without transportation choices. We support providing tax incentives to buy or rent houses in such energy-efficient locations. Additionally, there are already some tax incentives that are designed to help spur development in smart growth locations, including brownfields and historic preservation tax credit programs. We support making it easier to combine such tax incentives, as well as applying a 'Smart Location' standard

as a bonus for these incentives and others, such as the Low Income Housing Tax Credit, which does not have any incentive for location-efficiency. We also support factoring in transportation costs for mortgages, so that people saving on gas costs by living in smart growth areas can use the savings for a more generous mortgage.

Finally, our tax code has an array of incentives currently that encourage an energy-consumptive lifestyle, including using taxpayer dollars to subsidize the purchase of second homes. In a time when too many families are struggling to afford just one home, we should be helping people save on gas and their basic living expenses instead of diverting resources to help families obtain luxury items.

14. *What would be a sufficient amount for 'Smart Location' tax credit? How much would this cost the US Treasury annually? How would this be paid for?*
We recommend that a 'Smart Location' tax credit be established at a rate of $5,000 for every qualified homeowner, similar to the successful Washington, DC First Homeowners program. If 200,000 individuals took advantage of this incentive to purchase homes in energy-efficient neighborhoods, the program would cost $1 billion. Such a program could be capped overall, or limited to middle and lower-income families.

Questions and Answers for the Record – American Highway Users Alliance

Q1. Recognizing that what works for a community like Portland will not work for a city like Phoenix, do you agree that land-use decisions should be reserved for local municipalities and not imposed by federal government regulation?

A1: I do agree that land-use decisions should be reserved for local municipalities and should not be imposed by federal government regulation. Local land use planning is typically tailored to direct economic and quality-of-life progress appropriate for a particular area. It would be a tremendous overreach for the federal government to force local land use decisions or strong-arm local jurisdictions to adopt ideologically-based land use decisions developed in Washington.

Q2. With gas prices rising at the current rate, how do you think this will affect consumer's commuting and lifestyle choices? We have seen extensive reductions in gasoline demand over the past year as the cost of a tank of gas has risen. Isn't there a natural supply and demand mechanism at work that will force VMT down as gas prices rise?

A2: Although vehicle-miles-traveled has dropped with this year's sudden spike in fuel prices, recent evidence has shown that the vast majority of Americans view most driving trips as essential and important. When faced with high fuel prices, they continue to drive, forced to save money by reducing other personal expenditures. This has serious economic consequences – because it keeps people from shopping or otherwise contributing to the American economy. Although sharp increases in gasoline prices experienced in 2008 have reduced vehicle-miles of travel, it appears that this effect has been most pronounced with regard to rural trips. This has had a particularly large economic impact on farm-to-market trips and rural tourism. At current prices, motorists appear to be continuing normal commute patterns with slight reductions in trip length – perhaps through trip chaining. Our conclusion is that the market forces created by high fuel prices have had a slight impact on vehicle-miles traveled but not as much as some may have hoped. For example, in Europe fuel costs as much as $10 per gallon, but Europeans still use private automobiles for 78% of their trips (Americans use private automobiles for 88% of their trips). Clearly, extremely high fuel prices will lead to some reduction in vehicle-miles traveled. But these reductions may be temporary as Americans become used to the high prices and reduce other spending. If the federal government attempted to pursue policies that intentionally raise the price of driving to achieve a social objective like reducing VMT, the economic consequences could be disastrous for the United States.

Q3. In the foreseeable future, the primary growth in urban settings will be taking place in developing countries, such as the trend towards urban living in China. What can the United States do to work with developing countries to implement policies that you are suggesting?

A3: Fast growing countries, such as China and India, have aggressively invested in highway and other transportation modes. By 2020, China will have a more extensive motorway system than the United States' Interstate Highway System. People in fast developing countries are enjoying dramatic improvements in their personal mobility and

local industries are making tremendous gains in getting raw materials from the interiors to manufacturing plans in cities and, finally, to ports. In fact, the speed and intensity of construction in developing countries has greatly increased the global market price of many transportation-construction commodities, increasing the cost of steel and asphalt construction in the United States. Our own history has shown that increased personal and freight mobility directly results in GDP growth, opportunity, and prosperity. Instead of taking steps to reduce our own VMT and contract our growth, we should continue to provide the increased mobility options that help Americans prosper and gain new economic and social opportunities. Safe and efficient mobility helps the United States compete in the global economy.

Q4. How do your ideas for transportation development accommodate freight shipments, which are expect to double over the next 20 years?

A4: The Highway Users supports the creation of a dedicated freight account within the Highway Trust Fund, supported by freight-related user fees, including increases to the diesel tax. User fees that originate from highway freight vehicles and shipments should be invested on roads of the National Highway System (including the Interstates) and other routes that carry substantial freight vehicles. Of particular concern to us are extreme "Smart Growth" plans that fail to accommodate freight vehicles. Efficient highways and reliable urban accessibility to trucks is essential in a strong economy. Extreme smart growth plans that fail to accommodate trucks will lead to higher prices for goods in many areas. The federal government should be particularly concerned with this problem because of its constitutional obligation to regulate the efficient movement of interstate commerce.

Q5. Given the concern of environmental impacts in "smart growth" policy, do you support using all emission-free technologies, such as nuclear, hydropower or renewables?

A5: We support the use of technology to reduce emissions provided that the cost of the technology is reasonable and attracts consumer demand. We support federally-funded research and tax incentives for private research that holds promise in these areas. We also recognize that widespread deployment of emission-free vehicles will take time. In the meantime, there are "win-win" options to reduce transportation emissions, such as improvements to unclog congested highway bottlenecks.

Q6. What are the American Highway Users Alliance's thoughts on the need for energy security? What policies should Congress adopt first to address this issue?

A6: The Highway Users encourages the federal government to aggressively increase the cost-effective production of all domestic energy supplies, including both fossil and renewable fuels. Such action combined with conservation is a good first step to achieving eventual energy security. Instability in energy supplying nations from the Middle East, Venezuela, and Russia should serve as a wake-up call to Congress to take

action as soon as possible. We also appreciate the availability of affordable and reliable energy supplies from friendly countries, such as our neighbors in Canada and Mexico.

Q7. Considering the current push towards a cap-and-tax scheme to deal with greenhouse gas emissions, what negative impacts would result from such a policy? Did your organization have an opinion on the Lieberman-Warner bill?

A7: The American Highway Users Alliance opposed the Lieberman-Warner bill, as most recently amended. The Energy Information Administration analysis of the bill projected dramatic increases in the price of highway fuels as a result of the legislation. Unlike a gasoline tax, the cap-and-trade revenues would not be invested in the Highway Trust Fund, a condition for our group's support. As in the European cap-and-trade system, we support an exemption of the cap-and-trade program for transportation fuels. Instead, we support raising the federal gasoline and diesel tax, provided that Congress continue to depositing those revenues into the Highway Trust Fund.

Q8. You note the necessity of a strong interstate system to support interstate commerce. Can you discuss how "smart growth" policies harm our freight industry?

A8: Not all "smart growth" would harm the freight industry. Smart growth plans that include intense investments in highway infrastructure within the growth area could, in theory, provide the necessary highway freight infrastructure to support efficient commerce. Unfortunately, as discussed above (question 4) some extreme "smart growth" advocates are openly hostile to including highway transportation in their plans. By promoting increased densities without the highway infrastructure needed to move goods, commerce becomes more expensive and less reliable. Since trucks are the only freight mode with the capability to make door-to-door deliveries, a transportation system that cannot easily accommodate trucks is destined to raise prices for delivered goods. Promoting extreme "smart growth" plans as a national policy would replicate these problems from coast-to-coast, slowing the economy, creating inflation, and hurting consumers.

Q9. Can you discuss how significant a difference exists between vehicle miles traveled and rail miles traveled and how that shapes our existing infrastructure?

A9: For passenger transportation (excluding air travel), rail represents only about 1% of the vehicle miles traveled and passenger miles traveled. The overwhelming majority (99%) of both private and public transportation occurs over roads. For freight movements, about 70% of the weight and 80% of the value of goods are transported by truck. The use of highway modes has not occurred as a result of any government or private conspiracy to reduce rail use. In fact, at the federal level, non-highway passenger modes are heavily subsidized by highway users paying federal fuel and truck taxes. Freight railroad owners have opposed federal funding and regulation. The preference for highway travel comes from a natural market force for the flexibility, privacy, and speed that only highway travel can effectively provide. These natural preferences and market forces have shaped the infrastructure investment decisions that have historically accommodated personal mobility.

Q10. In your testimony you extensively detail the benefits of using technology to produce tangible environmental benefits rather than social engineering. What sorts of technology incentives can Congress enact which will help further low emission vehicles and fuels?

A10: In my testimony I noted the impressive air quality gains made since 1970 and how they occurred despite dramatic growth in vehicle-miles-traveled. The reason for the gains has been technological improvements made possible through research. Our environmental progress occurred as our country grew in prosperity. The increased economic activity and growing GDP made pollution-reducing technologies more affordable for the average consumer and business. Promising technologies to reduce emissions include hybrid engines, hydrogen fuel cells, idle-reduction equipment for trucks and buses, older vehicle scrappage programs, intelligent vehicle and highway systems, etc. A growing economy will make many of these technologies more affordable. Tax incentives for deployment of new technologies can help jumpstart initial deployments and federal-aid for promising new research ideas can help move promising concepts off the drawing board. All of these incentives are worthy of serious consideration. Of course, it is important that Congress promote the most cost-effective technologies and that funding and tax incentives not be used to support infeasible programs and projects.

Q11. Considering the bridge collapse in Minneapolis-St Paul last summer and other documented cases of failing highway infrastructure, do you believe limited federal resources should be directed to building new light-rail systems or shoring up existing unsafe roads?

A11: Our view is that the limited resources provided by highway user fees should support highway and bridge projects and that safety improvements should be the highest priority. Of the 42,000 deaths that occur each year on our nation's roads, the Department of Transportation estimates that one-third could have been prevented through investments in safer roads, bridges, and roadsides. Yet funding for safety improvements is constrained by the limited revenue available in the Highway Trust Fund. Adding insult to injury, there are a number of programs funded with highway user fees that are diversionary or wasteful in nature. In general, the American Highway Users Alliance supports the notion that highway use taxes should be spent to benefit those paying the bill – through investment in highway and bridges. These projects typically serve the most people at the lowest cost per capita. In addition, highway safety projects generally provide far superior benefits/cost ratios than light-rail projects.