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## **Cooler, Smarter, Greener Cities: A New Vision for National Urban Policy** **By Stockton Williams**

### **Introduction**

A new urban policy for America must take on the challenge and seize the opportunity to address climate change as a central priority at the local level.<sup>1</sup> Our cities are a major source of global warming pollution and are at greatest risk of its fallout in the future. At the same time, urban areas are well positioned to lead the way on solutions to climate change that *also* increase economic growth for our country and expand opportunities for more of our citizens. A federal urban policy commitment to help cities grow and operate cooler, smarter and greener would unlock that potential.

Carbon dioxide emissions, by far the largest source of total U.S. green house gas emissions, are expected to rise in coming years largely due to energy demand in commercial and residential buildings, road transportation and land use – all of which are heavily concentrated in cities and all of which are core concerns of urban policy.

In fact, some of the most effective urban policies for fighting global warming are also some of the best opportunities for creating jobs, becoming more energy independent and improving our quality of life. In other words, the leading city-focused strategies for solving climate change would make sense to pursue even if the health of the planet for future generations didn't depend on it. But we should make no mistake that it does.

Smart federal policies that enable cities to play a leading role in an American global warming campaign should enhance the policymaking authority and tools already at cities' disposal. At the same time, climate change progress should become a new standard of performance and accountability for cities when it comes to receiving federal resources. America's greatest cities should be our greenest.

There are many actions that the federal government could take to fight climate change that would have significant ramifications for cities. In that sense, to coin a somewhat tired phrase, climate change policy *is* urban policy – and vice versa.

But local resources and authority only extend so far, even with a more active federal partnership. For example, while policies to improve car and truck fuel efficiency and make cleaner fuels more widely available would cut pollution in cities, vehicle and fuel regulation is typically beyond city government control. So we would not consider it to be an explicitly *urban policy solution* to global warming (important as it is).

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<sup>1</sup> A school of thought holds that city-focused federal policies may be less relevant and effective in an era when urban development, as well as economic growth and competitiveness, has become defined more by metropolitan area or even “megaregion.” This essay largely reflects a city-focused point of view because that remains largely how federal urban policy is made and resources allocated, for better or worse. The recommendations made here could be applied with modifications at the metropolitan level as well. As this essay notes, there are examples of success in measuring and reducing greenhouse gas emissions through metropolitan strategies that mirror and reflect actions and opportunities at the local level.

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Cities should be empowered and expected by the federal government to lead on climate change solutions in the areas where they are most responsible for emissions that they have a material ability to control.

Those areas are largely in the “built environment.” In other words, commercial and residential buildings, as well as schools and governmental facilities, and the infrastructure and transportation systems that connect people and places and define the physical “geography of opportunity” for city residents. Cities currently receive federal funding and use an array of local tools to address these core issues of infrastructure, transportation, housing and community development.

Local leaders around America are using these resources and taking aggressive actions to reduce emissions by creating new ways to grow and operate cooler, smarter and greener. Many more could follow their lead in partnership of a federal government with a reinvigorated commitment to cities.

To effectively address climate change in cities, the federal government needs to work in new ways and commit new resources. On the one hand, we can and must do more to make current federal programs more responsive to the urgent challenge of climate change at the local level. On the other hand, we cannot pretend that current funding for key programs is adequate for meeting such a daunting challenge.

This essay does not purport to provide a comprehensive list of specific policy solutions or address all aspects of an urban policy agenda to address climate change. Instead, it attempts to frame the urgency and the opportunity. And it suggests five top priorities in areas where the intersection of national urban policy and the authorities of local governments are most aligned to make the biggest difference on emissions most quickly.

Perhaps the most important idea is that no single program or agency can drive major urban progress on climate change. Success will ultimately hinge on multiple federal agencies working collaboratively across their areas of jurisdiction to address a common goal in partnership with local leaders. This will demand a new intergovernmental approach and outreach to the private sector, at both the national as well as local level. Protected turf must become common ground.

It all starts with presidential leadership that articulates an ambitious vision and that puts climate change progress at the heart of a new urban policy for America.

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## **The Climate Change Challenge for Cities**

Carbon dioxide accounts for more than 80 percent of all greenhouse gas emissions in the U.S. The “carbon footprint” for the 100 largest metropolitan areas grew faster than their population and that of the country overall between 2000 and 2005 (The Brookings Institution).

Carbon emissions are projected to grow in the U.S. by 16 percent between 2006 and 2030. (The Brookings Institution). Emissions are significant and rising in many American cities and surrounding regions. Energy use in buildings, road construction and development will drive greater energy demand and carbon emissions in the coming years. The “built environment” is heavily concentrated in our cities and the authority to regulate buildings, transportation and land use rests largely at the local level. So cities can and must be at the forefront of the U.S. response to climate change.

Climate change poses major, complex challenges for cities and government at all levels, much of which is only beginning to be fully understood. One recent report found that “the effects of climate change will place immense strains on public budgets, particularly as the cost of infrastructure maintenance and replacement increases. At the same time, economic losses may translate into lost revenues” (Center for Integrative Research at the University of Maryland).

Global warming may also increase city and metropolitan energy demand, with potential economic as well as national security implications. An analysis of scenarios for one U.S. city projected that climate change could account for 25 percent to 40 percent of increased energy demand in the city and surrounding region by 2030. Another study in another city found potential increases in water demand during the same time period (Organization for Economic Cooperation and Development).

In addition, climate change is associated with specific health issues at the city level, especially due to heat waves and ‘urban heat island’ effects.” Several health studies of cities project increased average annual morbidity and mortality impacts from climate change (Organization for Economic Cooperation and Development).

Higher urban temperatures may have disproportionate effects on minorities, who are more likely to live in cities. According to the Commission to Engage African Americans on Climate Change, “The correlation between lower air conditioning prevalence in African American households and higher heat-related mortality was noted in a study of heat-related deaths in four major U.S. cities. African Americans in the cities had half the rate of air conditioning penetration as whites and almost three times the percent increase in deaths.”

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Finally, global warming poses likely potential threats to cities in the effects of rising sea levels (for coastal cities), damage from extreme storms, increased air pollution, and impacts to ecosystems, urban biodiversity, tourism and cultural heritage. More broadly, economic activity in cities may be affected by climate change, such as the costs of materials, goods and services, employment patterns and economic competitiveness.

It's important to note that urban policy – in decisions made at the national as well as local level – has contributed to and exacerbates climate change in cities in a host of ways, which have had other negative effects as well.

These include *federal* transportation programs that encourage excessive road building and sprawl, housing policies that drive demand for larger homes on larger lots away from the urban core and energy policies that underinvest in incentives for energy efficiency and renewable energy in the built environment. They also include *local* building codes, zoning policies, storm water management procedures and land use requirements that undermine and sometimes prevent cooler, smarter and greener growth and development.

Still, a growing number of cities are already acting to address climate change. More than 850 mayors have signed a commitment to cut their cities' emissions by 7 percent below 1990 levels before 2012 (the requirement of the Kyoto Protocol). Some cities have pledged to achieve deeper reductions.

Cities are adopting a myriad of innovative policies to achieve emission reductions targets. One survey found that local climate protection initiatives by cities and counties “had reduced greenhouse gas emissions by more than 23 million tons annually (equivalent to the emissions produced by 1.8 million households or 2.1 billion gallons of gasoline)” (ICLEI).

These encouraging results underscore the potential for much greater progress in partnership with an imaginative and innovative federal policy. In fact, such a national commitment is necessary. As the Pew Center on Global Climate Change noted, “Despite successes at the local level, many limitations exist on both the scope and effectiveness of local climate initiatives that make them poor substitutes for federal policy...For many cities and counties, there are few if any resources available to devote to effective climate action.”

A recent study by the U.S. Conference of Mayors found that while 5 percent of mayors surveyed found the federal government had been “very helpful” on their global warming efforts, more than half reported that Washington has been only “somewhat helpful” and 41 percent said the federal government is “not at all helpful.” The mayors reported that the biggest obstacle to cities' progress on climate protection is inadequate financial resources.

Now is the time for a new federal-local partnership to fight climate change.

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## **Urban Policy Priorities for Cooler, Smarter, Greener Cities**

We suggest the following five priorities:

- Establish reduced greenhouse gas emissions as a benchmark for cities in the receipt and utilization of federal funds for urban development.
- Empower cities to remove barriers to progress and innovate new, local solutions with greater program flexibility and modest incentives.
- Make a national commitment to increasing energy efficiency in buildings, especially affordable housing.
- Deepen substantially federal support for transit, affordable development around transit sites and incentives for location efficiency.
- Invest substantially in infrastructure, with an emphasis on environmental performance.

An overarching value that must be reflected in each of these priorities is a commitment to expanding equity and opportunity in a green urban policy agenda, with tangible community participation and job opportunity for low-income and other disadvantaged communities.

Advancing this agenda will require additional federal funds in a very difficult budget environment. Significant progress is possible in the near term, however, with a relatively modest investment of new dollars. In the longer term, resources for deeper investment could be funded from a small share of auctioned emissions allowances under a national greenhouse gas cap and trade program.

### ***Establish Reduced Greenhouse Gas Emissions as a Benchmark for Cities***

The federal government should establish cutting greenhouse gas emissions as a primary criterion for cities in utilizing federal funds for transportation, infrastructure, housing, community development and energy<sup>2</sup>. Cities should be required to develop plans and annually report progress towards achieving emissions reductions as a condition of receiving these funds.

Washington should not set absolute greenhouse gas reduction targets for cities to start, but should require cities to show how they will cut emissions to a meaningful level over time, employing whatever strategies and tactics the city deems most effective and responsive to local conditions. Federal direction should ensure that local climate change planning involves significant community participation and reflects community impacts.

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<sup>2</sup> This essay recommends a new block grant for energy efficiency, as has been passed but not yet funded by Congress, discussed more later.

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The federal government would need to work with cities to develop universal and user friendly metrics and tools to benchmark emissions and their reductions. A number of promising efforts are underway that could inform a federal effort; Washington should support this work with R and D funding.

Since cities would need assistance establishing their environmental footprint and measuring the progress to shrink it, the new requirement should be phased in gradually, starting with a group of 100 competitively selected cities, and come with technical assistance.

While this policy would impose new demands on cities – a cost worth paying, but necessary to limit – it would come with benefits beyond federal funding. A broad-based federal directive to reduce emissions would drive cities to engage in more thoughtful and holistic planning of how they are operating, developing and growing.

These efforts would demand partnerships with the private sector and greater degrees of interagency collaboration. The planning process itself could generate substantial returns on investment. A regional effort in Utah generated a plan that is projected to save the region \$4.5 billion in infrastructure costs, preserve 171 square miles of open space and reduce per capita water use by more than 10 percent (The Urban Land Institute).

In addition, the planning process as implemented locally should create opportunities for cities to work with building owners, project developers and other entities such as utilities to ensure even deeper emissions reductions in a wide range of planned projects, creating local incentives as necessary.

### ***Empower Cities with Greater Program Flexibility and Incentives to Innovate***

Requirements should come with appropriate flexibility and incentives for going beyond them. As reduced greenhouse emissions are established as a benchmark for city performance and criterion for federal funding, cities should be able to earn advantages for succeeding.

Specifically, Washington should allow leading cities to better coordinate and combine their federal funds for infrastructure, transportation, housing, energy and community development to support comprehensive growth and reinvestment initiatives that substantially reduce emissions and generate other benefits such as cleaner air and water.

Cities should have broad flexibility to use funds for a wide range of purposes, such as mixed-income transit-oriented development projects; comprehensive energy efficiency retrofits of local schools; installation of more energy efficient traffic and street lighting; optimization and creation of bus rapid transit systems and bicycle paths; and large scale renewable and distributed energy projects to serve entire neighborhoods to name a few.

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Current “maintenance of effort” levels; civil rights and anti-discrimination laws; health, safety and labor standards; and environmental protections in existing programs should be maintained. And priority should go to initiatives that demonstrate substantial benefits for lower-income people and economically and environmentally disadvantaged communities. Under no circumstances should this proposal be twisted to lead to cuts in critical programs.

As a first step, the administration should direct all relevant federal agencies to determine the options for increasing program flexibility for this purpose with existing regulatory waiver authority. An interagency process could solicit proposals for limited demonstrations of expanded local flexibility from a group of pilot cities. A limited amount of additional funding under each program for particularly promising approaches could be provided initially, with larger investments later based on results.

The Brookings Institution has recommended a challenge grant to further encourage local innovation, noting: “These and other empowerment proposals flip traditional federal practice on its head and embrace solutions that are bottom-up (reflecting local variation), joined up (rewarding problem solving across stove piped bureaucracies) and suited up for global competition (insisting that cities and suburbs work together on issues that obviously cross jurisdictional lines).”

### ***Increase Energy Efficiency in Buildings, Especially Affordable Housing***

Buildings are responsible for more than half of greenhouse gas emissions in many cities. Energy efficiency in the buildings sector also accounts for more than 1 million jobs, according to the American Council for an Energy Efficient Economy. A recent report by McKinsey and Company found that energy efficiency improvements in buildings, especially homes, have the largest untapped potential for cost-effective improvements in energy productivity and reduced emissions in the near term.

Energy efficiency – as well as water efficiency – has been shown to generate significant financial savings and short-term paybacks with currently available technology across a wide range of building types. Despite these advantages, energy efficiency in buildings – and all sectors – remains dramatically underinvested. The federal government should play several roles in scaling up energy efficiency in buildings as part of its new urban policy.

First, Washington should actively encourage stronger building codes and provide incentives for cities to adopt them. This (along with stronger appliance standards) would drive improvement in new buildings.

The large majority of emissions come from buildings that already exist and will be in existence for decades, however. This is especially true in cities, which by definition are more “built out.” The federal government should support energy retrofits of existing buildings through a new energy block grant, as has been passed but not yet funded by Congress, by expanding loan guarantee authority for efficiency projects and by seeding innovation and private sector commitments to scale up market-moving solutions.

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On this last point, Dan Reicher of google.org recently noted: “Aggressive federal policy can make a major difference in the deployment of energy efficiency by increasing the attractiveness of investment, from early stage venture capital investment in the development of high risk technology to the finance of large scale projects.”

Increasing energy efficiency in affordable housing should receive special attention. There are more than 25 million owners and renters who earn \$25,000 or less across the country. They pay a far higher share of their incomes for home energy, typically live in less efficient homes and feel the consequences of climate change more acutely than higher-income households. They are more likely to live in cities as well.

Rising home energy costs have far outpaced income gains for very low-income people in recent years. Utility bills often impose a financial hardship on these households, forcing many to make desperate tradeoffs between heat, electricity and other basic necessities. Recent analysis suggests that policies to cap emissions would impose significantly higher costs on very low-income families. Nearly half of the increased costs could come from more expensive home energy.

This is an energy challenge that is in our grasp to solve with relatively modest investments in what we know works today. Basic improvements in efficiency – insulation, caulking and sealing; window replacements; installation of energy-efficient equipment and systems – can cost just a few thousand dollars per home. These improvements cut energy use by as much as 40 percent, saving low-income families hundreds of dollars a year.

Investing in energy efficiency in low-income homes could also jump start the construction industry and create good paying "green job" opportunities in career track professions for low-skilled workers. In Germany, a program to perform energy retrofits on 200,000 homes saved or created 140,000 construction jobs during an industry downturn.

Low-income home energy efficiency helps the environment too. The 34 million households eligible for federal home energy assistance generate 276 million tons of carbon dioxide emissions annually, 27.5 percent of total emissions from residential units overall, according to the Energy Programs Consortium. Cost effective energy efficiency improvements could cut these emissions by 50 percent.

A federal commitment of \$5 billion a year over 10 years could deliver huge benefits across the board: 25 percent to 40 percent energy savings in up to 25 million residential units, up to 50 million tons of CO<sub>2</sub> emissions avoided and hundreds of thousands of green jobs created annually when fully implemented.

Such a commitment is relatively modest when one considers that the U.S. Department of Housing and Urban Development (HUD) currently spends more than \$4 billion annually to pay utilities in often inefficient government-assisted properties that constitute a fraction of the homes and apartments that could benefit.

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No one program can get the job done. The Federal Weatherization Program, for example, is an effective program, but generally does not address multifamily rental properties, where most low-income people live. An investment in HOME block grants specifically for energy efficiency improvements in rental housing would help address that part of the housing stock.

In addition, the administration should seize the opportunity to ensure that foreclosed homes acquired and rehabilitated by cities with recently authorized neighborhood stabilization block grants funds incorporate energy efficiency improvements to the greatest extent feasible.

Increasing the energy efficiency for the millions of low-income homes and apartments that need it would require a long-term commitment. Families facing higher home energy costs need immediate help paying their bills starting this coming winter. But those costs – for families and the government – will only rise, affect more families and add to pollution unless we also start to improve the underlying energy performance of their homes.

### ***Invest in Transit, Affordable Development Around Transit Sites and Incentives for Location Efficiency***

Transportation accounts for one-third of U.S. greenhouse gas emissions. Along with efforts to make cars and fuels more efficient (generally outside the realm of urban policy) the worsening effects of excessive driving, which is especially pervasive and damaging to the urban fabric, must be reduced.

In fact, urban development, encouraged to a significant extent by federal policies, currently encourages more driving. According to the Urban Land Institute: “The growth in driving is due in large part to urban development...As a larger and larger share of our built environment has become automobile dependent, car trips and distances have increased and public transit use has declined.”

The answer is not to penalize people for driving, but to provide more alternatives by targeting development to areas that require people to drive less. One recent study found that more compact development leads people to drive 20 percent to 40 percent less, “at minimal or reduced costs, while reaping other fiscal and health benefits” (The Urban Land Institute).

Local regulations are often a major barrier to smarter growth. It is not the purview of federal policy to dictate local land use rules. But the federal government can make a much more vigorous effort to incentivize localities to develop policies that lead to more compact development and lower vehicle miles traveled within their jurisdictional borders. The funding flexibility and incentive grants recommended earlier could help.

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Ultimately, a major increase in federal funding for transit must be a central pillar in a climate-focused federal urban policy; the current annual shortfall in transit funding is estimated to exceed \$30 billion. Funds should be provided to support investments in all aspects of a robust urban public transit system, including technology and service improvements, fare subsidies, technical support and clean fuel purchases. Additional funds are needed to support transportation alternatives: carpooling, telecommuting, bicycle and pedestrian uses and programs to reduce traffic congestion

Washington also must level the playing field between highways and transit in federal transportation programs by requiring highway projects to undergo the same kinds of rigorous reviews of their efficiency, effectiveness and environmental benefits as transit projects.

In addition, federal policy should provide incentives that ensure affordable housing can be preserved or created around transit sites, such as through loan guarantees to help cities secure and hold sites for more balanced development.

Finally, the federal government should encourage the private sector to innovate in creating products that encourage greater “location efficiency.” The “location efficient mortgage” (LEM) as developed by the Center for Neighborhood Technology (CNT), is a mortgage in which a borrower’s ability to pay is determined in part by the inclusion of a “location efficient value.”

According to CNT, “The credit stretch enabled by the LEM has been shown to be roughly \$50,000, and therefore, the increased ability to amortize the mortgage due to the effect of the more accurate valuation could play a significant role in increasing homeownership and/or in otherwise affecting location decisions.” The federal government should encourage banks and other financial institutions to pilot LEM products in cities.

### ***Invest in Infrastructure, with an Emphasis of Environmental Performance***

Infrastructure, like transit, transcends city boundaries and local governments have only partial control over infrastructure planning and execution. Yet infrastructure is so central to the health and vitality of cities and holistic strategies to reduce greenhouse gas emissions it must be included as a priority in a new climate-focused agenda for urban policy.

The U.S. invests 2.4 percent of GDP in infrastructure, compared with 5 percent in Europe and 9 percent in China, according to *The Economist*. In addition, federal dollars often fund the development of new infrastructure, allowing older facilities to slide into further decline, while increasing the future public costs of maintaining an ever-expanding array of infrastructure.

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Federal programs should be reoriented toward what the Brookings Institutions calls a “fix-it-first” spending policy that invests in our existing infrastructure before supporting new development.

“Green infrastructure” is also an especially important element of urban policy to reduce emissions and address other environmental challenges. The term generally refers to an interconnected network of open spaces and natural areas that cleans storm water runoff, reduces flooding risks and improves water quality.

The Environmental Protection Agency (EPA) forecasts an \$11 billion annual gap in meeting water costs over the next 20 years. Storm water and sanitary sewage woes plague localities throughout the nation – particularly in the older cities. The problems exist because too many parts of the sanitary system are combined with street drains, roof drains and other outlets. As a result, treatment plants discharge more polluted water more frequently. Localities are often left with the prohibitively expensive – but required – repairs, placing the ultimate burden on homeowners’ property taxes.

According to recent congressional testimony by the EPA “EPA believes that green infrastructure approaches and practices can be a significant component of states’ and cities’ programs to reduce and control stormwater, combined sewer overflows, and nonpoint source pollution.” Green infrastructure solutions can also be integrated into conventional infrastructure and transportation and development projects in ways that reduce increase energy efficiency and reduce emissions.

In addition, a recent study by the U.S. Conference of Mayors found that protecting 2.5 acres of wetlands for source water protection yields \$4,177 annually in avoided water treatment costs, and another \$10,000 in other costs such as water supply, climate regulation and other local costs

Parks are also a vital part of green urban infrastructure. According to the Trust for Public Land, as many as two in three city residents do not have access to a nearby park, playground or open space. Children without access to places to play suffer higher levels of obesity, diabetes, asthma, anxiety and depression.

There’s no way around the fact that the U.S. needs a much more robust commitment to infrastructure as part of its new urban policy. In addition to funding for core infrastructure investments through existing programs, additional resources are needed for “mega-projects” as well as urban parks and forestry. In addition, a new program to provide low-interest, long-term loans for green infrastructure projects would help address water issues.

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## **Conclusion**

This essay's intent has been to establish the rationale for making progress on climate change a priority for the nation's cities and to suggest five top priorities for focusing on climate change as part of a new urban policy. The essay made some specific recommendations within each priority area as well.

Neither the five overarching priorities themselves nor the recommendations under each is intended to be an exhaustive list at this stage. Other aspects of municipal governance that could clearly impact the nation's efforts to fight global warming include disaster preparedness and response, homeland security and economic development. There are opportunities as well for creative partnerships between the federal government and cities to leverage the purchasing power of public dollars to purchase energy efficient products at discounted costs and to incorporate environmental sustainability into education reforms. And federal demonstration grants could help cities expand "smart grid" and distributed energy and clean power projects in partnership with other local entities.

This essay is just a start.

It is also important to underscore again the importance of ensuring that the coming green economy includes greater opportunities for low-income and minority communities that have been left out and disadvantaged by the carbon-based economy, especially in cities.

Efforts to create – and define – "green collar" jobs for underemployed people are a critical part of urban and broader economic policies for the country. The priorities identified in this essay all would create economic growth. Ensuring that it is equitable growth as well demands additional federal leadership, focus and resources and a willingness to act in new ways to engage the business community as a partner.

Finally, any discussion of national urban policy must include special mention of New Orleans and the other Gulf Coast communities that will observe a grim third anniversary in the days ahead. Even before the storms of 2005, the region was in some respects "ground zero" for the excesses and injustices of the carbon economy in the U.S., epitomizing the climate-related challenges America's urban policy must address in addition to its historic concerns for housing, education, safety and economic development.

The rebuilding of the coast has been slow and full of challenges. Yet tangible progress is being made every day and the spirit of many residents remains resilient, hopeful and visionary for the future for the region. A new framework for federal policy that establishes fighting climate change with innovation and equity at the local level as a priority should commit special attention to helping the communities of the Gulf Coast create models for cooler, smarter and greener cities for all Americans.