



The United States Conference of Mayors

Metropolitan Infrastructure Sustainability Study

A research project prepared by GlobeScan and sponsored by Siemens





The United States Conference of Mayors

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The U.S. Conference of Mayors is the official nonpartisan organization of cities with populations of 30,000 or more. There are 1,139 such cities in the country today, each represented in the Conference by its chief elected official, the Mayor.



This report was prepared for The U.S. Conference of Mayors and sponsored by Siemens based on survey research conducted by GlobeScan in cooperation with USCM and Siemens. We would like to thank all those who participated in the survey for their valuable insights and time.

Special thanks to our sponsor, Siemens

Siemens is working to provide solutions to today's urbanization challenges, all with an eye to minimizing impact to the environment. To this end, Siemens has been involved in the development and publishing of several key studies on urbanization and sustainable infrastructure. Our report, **Megacities Challenges—A Stakeholder Perspective**, for example, is referenced within and provides a global context to similar questions posed in this survey. For more information about Siemens and its efforts to document urban sustainability challenges, please visit www.siemens.com/sustainablecities

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Foreword

The nation's infrastructure, including our transit, streets and highways, aviation, energy, and water systems, is the backbone of our economy. The U.S. will not be economically competitive in the future global marketplace if we fail to invest in our infrastructure, especially systems in our cities and metropolitan areas which underpin so much of the nation's current economic output.

We must rebuild and modernize our nation's infrastructure to make our systems more energy efficient, less reliant on foreign oil, and more environmentally sensitive and protective. In short, we must invest available resources in ways that make our infrastructure more sustainable. To accomplish this, we know that our investment priorities and practices must change, beginning with increased empowerment of mayors and other local elected officials, especially in our metropolitan areas, so they decide how public infrastructure resources are invested.

To support The U.S. Conference of Mayors and the nation's mayors in furthering an agenda for a more sustainable metropolitan infrastructure, cities throughout the U.S. were surveyed from late April to mid-May (4/27/09–5/19/09). During this period, 140 cities in 40 states responded to the survey. Cities with populations up to 100,000 people comprised the largest group (80 cities, or 57% of the sample) in the survey; cities of 100,000 or more made up the balance (60 cities), including 20 cities with populations of 400,000 or more. For each of the report's findings, calculations are based on the number of cities responding to that survey question.

Specifically, the survey sought information on: (1) the most serious infrastructure challenge facing cities; (2) how infrastructure budgets are being affected by the global economic crisis; (3) stimulus infrastructure priorities; (4) obstacles to implementing climate change mitigation measures; (5) promising technologies for reducing the impact of infrastructure on climate change; (6) measures to help adapt to the impacts of climate change; and (7) improving sustainable infrastructure investments through metropolitan planning and decision-making.

Tom Cochran
CEO and Executive Director



Key Findings

- A majority of cities (77%) report their infrastructure budget for 2009 has been adversely affected by the global economic crisis.
- Three in five cities (59%) identify the lack of funding to meet infrastructure needs as a serious challenge.
- Most cities expect benefits from the government stimulus package over the long term.
- Half (51%) believe their infrastructure budget will increase by less than five percent over the next five years from stimulus funding. One-quarter (26%) expect stimulus package-related increases of between 5%–15% over the next five years.

- A solid majority (79%) agree that current federal and state practices must be reformed to give their city greater decision-making power over infrastructure investments.
- Most cities (62%) agree that climate-friendly technologies represent “an enormous economic opportunity” for their city.
- Cities identified public transportation (63%) as the most promising transportation policy for reducing climate emissions.



"Aging infrastructure with years of deferred maintenance and inadequate funding. In some cases, infrastructure needs to be replaced now, not just maintained."

Funding issues dominate top-of-mind infrastructure challenges.

Funding emerged as the number one issue facing cities today. When asked to name their most serious infrastructure challenge, without prompting, three in five cities (59%*) said obtaining infrastructure funding was a key challenge. Some 42 percent* said funding gaps were creating challenges for maintaining or improving aging infrastructure. Cities are more likely to name funding for maintenance or retro-fitting of existing infrastructure, rather than funding for new infrastructure, as a critical challenge.

The impact of financial constraints as a challenge for infrastructure is not surprising in light of the current economic downturn. A strong majority of cities expect cuts rather than increases to their infrastructure budgets in 2009 as a result of the economic crisis. Three-quarters of cities (77%) expect to be working with a reduced infrastructure budget in 2009, including one in five (22%) who expected a reduction of 15 percent or more this year.

Beyond funding, specific types of infrastructure where needs were the greatest include "basics" such as storm and wastewater facilities, as well as streets and highways. These areas may be particularly top-of-mind for cities since many municipalities have direct responsibility for these infrastructures. Recent mandates from other levels of government are mentioned by a number of respondents as posing challenges currently, particularly in storm water infrastructure.

Impacts of economic recovery package.

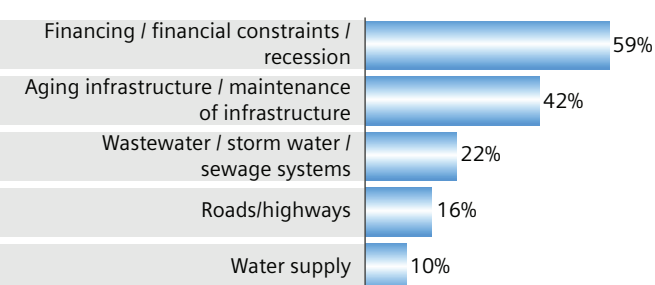
Even though cities expect to be working with reduced infrastructure budgets in 2009, in the longer term, most expect at least a minor benefit to their infrastructure from the stimulus packages being used to address the economic crisis. More than 80 percent of cities expect an increase in infrastructure budgets as a result of government stimulus packages. It is worth noting, however, that in most cases these increases are expected to be small—most often, less than five percent over five years.*

To effectively address the global economic crisis, a majority of cities (75%) agree that they would benefit from close collaboration with other cities in their region. This closer cooperation could have multiple benefits in difficult economic times as well as a lasting effect facilitating further regional collaboration on other issues for years to come.

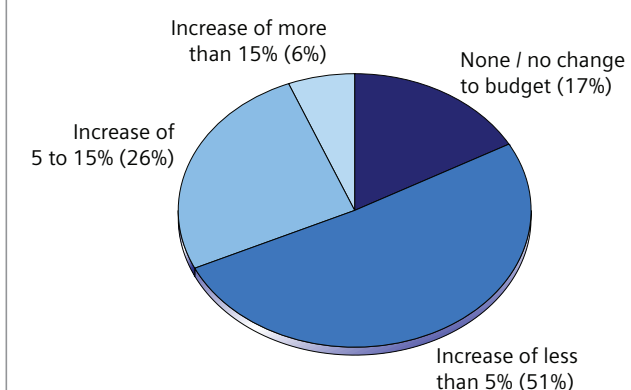
"Unquestionably, funding. It's easy to let infrastructure go 'another year' when dealing with more pressing—and emotional—budget competitors."

Five Most Serious Challenges Facing City's Infrastructure

Unprompted, Combined Mentions, 2009



Expected Impact of Stimulus Packages on City Infrastructure Budget Over Next Five Years 2009



*Question allowed up to three challenges, per respondent, to be mentioned.

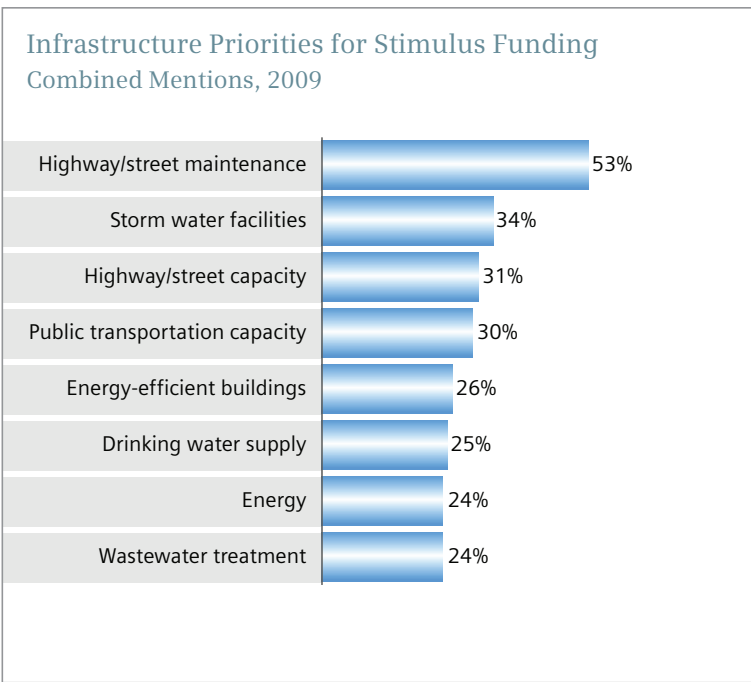
*Note that survey questionnaires were completed at a time when all infrastructure resources have yet to be allocated by state and federal agencies; as such, the effects of the economic recovery package on local infrastructure are not yet fully understood.



Transportation infrastructure high on “wish list” for stimulus spending.

Respondents were asked to select the types of infrastructure in their city they would most like to see targeted by the federal economic recovery package (ARRA). Transportation infrastructure was most often chosen overall, including: maintenance of streets and highways (53%), increasing the capacity of streets and highways (31%), and increasing the capacity of public transportation (30%). Larger cities (100,000 or more residents) were particularly interested in growing their public transit capacity. Transportation infrastructure, including streets highways and public transit, was more likely to be selected first by respondents as their city’s highest priority for stimulus funding of those listed. Compared with streets and highways, where the emphasis appeared to be on maintenance of existing infrastructure rather than building new, the reverse is true for public transportation, where respondents recognized the need to grow capacity rather than simply maintain what is already in place.

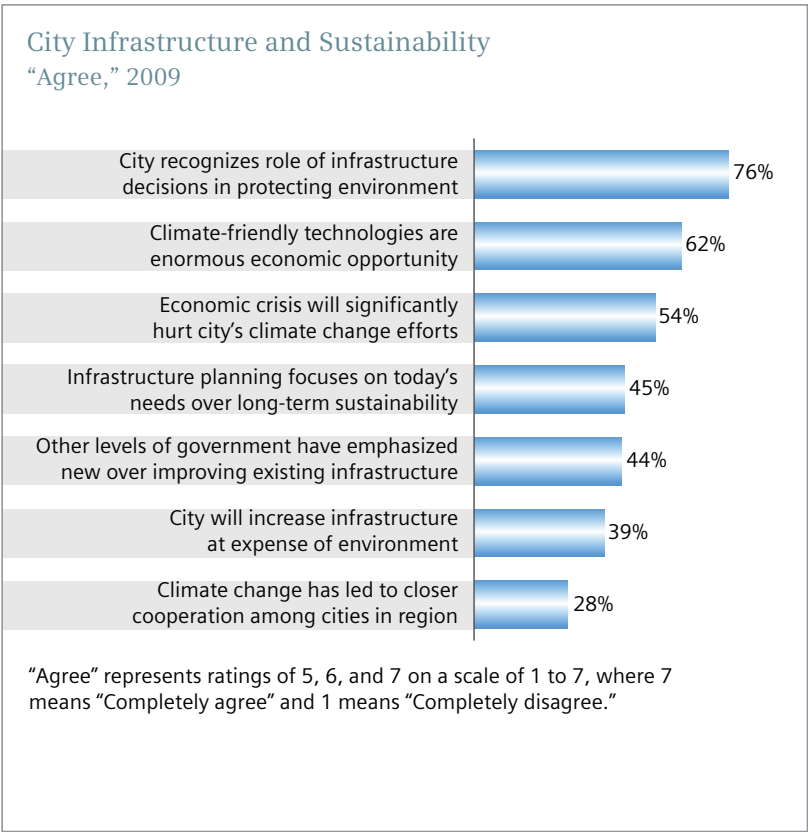
Water infrastructure is another major area respondents would particularly like to see stimulus funding address. Here, cities especially cities with fewer than 100,000 residents mentioned a need for enhanced storm water facilities (34%). As well, one-quarter would like to see drinking water infrastructure (25%) and wastewater facilities (24%) targeted by spending.



Desire to help combat climate change hindered by economic crisis.

Cities already recognize the importance of infrastructure decisions in helping to combat climate change (76% agree with this statement). Climate-friendly technologies are seen as a significant economic opportunity for their city (62% agree), but the economic crisis is anticipated to have a negative effect on efforts to reduce their impact and to prepare for climate change (54% agree). Just as adequate funding is raised as the key challenge for city infrastructure in general, additional funding resources (62%) or financial incentives (56%) are considered to be the most critical factors for further climate change reduction measures. This was especially true for larger cities with more than 100,000 residents.

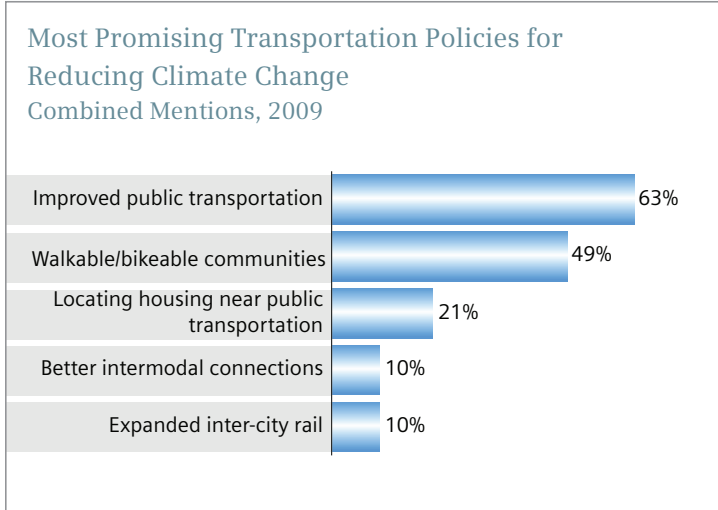
In working with other cities in their region on key issues, more than one quarter (28%) indicated closer cooperation on climate change, slightly less than the share of cities (33%) cooperating on the current economic crisis.





“Education explaining the causes, consequences of inaction, and opportunities for action”

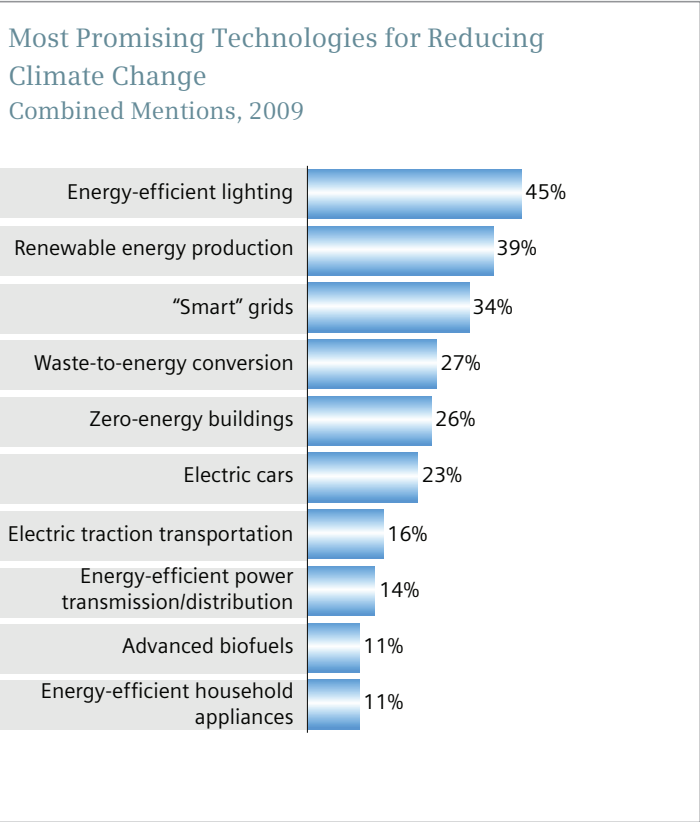
Cities support sustainable mobility to help in the fight against climate change.
 Respondents were asked to consider a variety of **policy measures** aimed at reducing cities’ impact on climate change. Well over half of cities (63%) selected policies to improve public transportation as the most promising transportation-related policy. Considering only larger cities (100,000 or more residents), 75 percent indicated improved public transit as a preferred policy approach. Also high on the list of preferred policies were initiatives to create walkable/bikeable communities (49%) and to build housing accessible to public transit (21%)—further evidence of the cities’ support for sustainable mobility initiatives.
 Of the non-transportation policies listed, cities are most likely to indicate that financial incentives for “green” construction or renovation would go furthest towards minimizing their city’s climate change impact. Fifty-seven percent selected this type of financial incentive as a promising policy to help cities lower their carbon footprint.



“Revolving fund for homes/businesses to update their physical use of energy”

From a list of **technologies** that could be adopted by cities to help minimize climate change, respondents selected energy-efficient lighting as the single most promising measure (45%). Given reduced infrastructure budgets, lighting may seem a relatively accessible measure accompanied by an immediate return on investment stemming from energy costs saved. Efficient lighting appealed to larger and smaller cities alike.
 Beyond lighting, renewable energy and “smart” grids for electrical power were also considered to have strong potential and selected as promising by more than one-third of cities each (39% and 34% respectively). To generate power for cities, waste-to-energy conversion (27%) was thought to offer more potential than technologies related to either distributed power generation (6%) or combined heat and power generation (4%).

“Smart growth initiatives that locate housing near job centers”





Attitudes towards Climate Change among the U.S. General Public

Previous GlobeScan research with representative samples of the U.S. general public showed high and growing levels of concern for climate change issues. Individual citizens may look to their city governments for leadership and assistance to minimize their own climate change impact and that of their households.

- **79 percent** of Americans said that it is necessary for individuals in the U.S. to make changes in their lifestyle and behavior in order to reduce the amount of climate changing gases they produce (GlobeScan Climate Change Monitor, 2007).
- **76 percent** of the U.S. general public agreed that they are ready to make significant changes to their lifestyle to help prevent climate change (GlobeScan Climate Change Monitor, 2007).
- **65 percent** of the general public in the U.S. agreed that climate change will pose a direct threat to them or their family in the next decade (GlobeScan Climate Change Monitor, 2007).

Further information needed to help cities prepare for the effects of climate change.

Given that the effects of climate change are already being observed globally, experts would argue that beyond combating climate change, resources must be devoted to helping residents prepare for its inevitable effects. The U.S. cities surveyed indicated that further information and technical guidance are needed to help them prepare for or adapt to climate change. In particular, they seek to learn which actions will be most cost effective to adapt to climate change (45%), more precisely what the impacts of climate change will be and the magnitude of these impacts (31%), as well as which technologies or measures are currently available to cope with climate change (31%).

Metropolitan planning and decision-making.

The survey generally confirmed what Mayors have said in previous reports and policies: A strong majority of cities (79%) agree that current federal state practices must be reformed to give their city greater decision-making power over infrastructure investments.

Cities recognized the importance of coming together with other stakeholders to work cooperatively on infrastructure challenges. Respondents also recognized the need for cities in the same region to work together in addressing major issues such as climate change or the economic crisis. More than sixty percent (63%) of cities currently feel that they take the broader region or metropolitan area into account when making infrastructure decisions for their own municipality.

About the survey.

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GlobeScan Incorporated is a global public opinion and stakeholder research consultancy with offices in London, San Francisco, Toronto, and Washington. GlobeScan conducts custom research and annual tracking studies on global issues. With a research network spanning 75+ countries, GlobeScan works with global companies, multilateral agencies, national governments, and non-government organizations to deliver research-based insights for successful strategies. The firm specializes in CSR, sustainability, and global policy issues.

Contrasting the Views of Global Urban Experts

In 2006, Siemens, together with GlobeScan, conducted a study entitled "Megacity Challenges" based on a survey of over 500 private and public sector urban experts in 25 global megacities. At that time, experts held the following views, which may be readily contrasted to the responses shared by the U.S. cities in the survey at hand.

- Transportation was considered to be the most serious challenge to megacity infrastructure, named far more often than any other issue, and was raised by 35 percent of megacity respondents. Funding the most frequently cited challenge by U.S. cities (59%) at the same question in the current survey was mentioned by only 6 percent of megacity respondents.
- Challenges associated with aging infrastructure were less of an issue according to megacity experts compared to in the current U.S. study. While 42 percent of U.S. cities name aging infrastructure and the maintenance of infrastructure among their most serious challenges, only 14 percent of megacity respondents mentioned this issue.
- U.S. cities tend to be less positive about the benefits of privatization of city infrastructure compared to reactions by the global urban experts in 2006. While only 16 percent of U.S. cities in the current survey agree that the privatization of city infrastructure could increase its efficiency, over half of the megacity experts (57%) agreed.



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A stylized, handwritten signature of Tom Cochran in black ink.

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