America's Climate Choices

Statement of
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Congressmen, colleagues: Thank you for inviting me to talk to you today. My name is William (Bill) Chameides and I am the Dean of the Nicholas School of the Environment at Duke University. I am by training an atmospheric scientist, having spent much of my research career studying the chemistry of the lower atmosphere and thinking about the impacts of regional air pollution. In my research, I try to understand the causes of environmental change and identify pathways toward a more sustainable future.

I'm speaking to you today in my role as a member of the National Academy of Sciences, and as vice-chair of the report "America's Climate Choices," issued by the National Research Council of the National Academy of Sciences in May of this year. Our report was the capstone in a 5-report series done over 2010-2011 that brought together more than 90 experts from around the country to think collaboratively about the causes and consequences of climate change and the choices that could be made to respond.

We believe the ACC reports hold special credibility: they were prepared by volunteer experts, including top level physical climate scientists, social scientists, leaders from the private sector, and former office holders at the federal and state level. As a result of this breadth, we were able to address a broad range of issues in the policy realm, as well as the scientific realm, in ways that have not been attempted in previous Academy reports on this subject. In a nutshell, the ACC report series tries to summarize concisely what we know about climate change and what kinds of response choices we face as a nation.

The key take home points from the "America's Climate Choices" report include:

- Climate change is occurring, is very likely caused primarily by human activities, and poses significant risks to humans and the environment.
- These risks indicate a pressing need for substantial action to limit the magnitude of climate change and to prepare for adapting to its impacts.
- We can expect always to be facing uncertainties about future climate risks, but uncertainty is not a reason for inaction. It argues for using iterative risk management, which emphasizes taking action to reduce risks while continuously incorporating new information and adjusting efforts accordingly.
- Current non-federal response efforts are significant, but not likely to yield progress comparable to what could be achieved with strong national policies and leadership.

An effective, comprehensive national response would encompass the following actions:

- Substantially reduce greenhouse gas emissions (ideally, through a national carbon pricing system and strategic complementary policies)
- Begin mobilizing for adaptation at all levels
- Invest in research and development, both to advance basic understanding and to improve/expand practical response options
- Develop effective systems to inform and evaluate America's climate choices
- Link scientific analysis with public deliberation
- Actively engage in international response efforts
- Coordinate the many inter-related components of our nation's response efforts.

In my opinion, perhaps the most important feature of our report is the recommendation that America's climate choices be driven by an iterative risk management approach. America's climate choices are about the decisions we as a nation need to make in the face of risks that are growing with every new ton of greenhouse gases emitted into the atmosphere. The risks of climate change are great, but we will never be able to predict the future with absolute certainty. Because of the inertia in the climate system, we believe it is imperative to act now to limit and adapt to climate change – it would not be prudent to wait for greater certainty about future climate change. But because of the lack of certainty, it is not advisable to set a long-term inflexible course either. Instead we recommend a flexible approach that continuously assesses new information and knowledge and adjusts our response accordingly.