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BEFORE THE COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
UNITED STATES SENATE

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Mr. Chairman and members of the Committee, thank you for this opportunity to testify regarding the draft American Investments for Reduction of Emissions Act of 2003. My name is Eileen Claussen, and I am the President of the Pew Center on Global Climate Change.

The Pew Center on Global Climate Change is a non-profit, non-partisan, and independent organization dedicated to providing credible information, straight answers, and innovative solutions in the effort to address global climate change. Since 1998 the Pew Center has published 43 peer-reviewed reports – aimed primarily at policy-makers and opinion-leaders – on the science and environmental impacts of climate change, the economic costs and benefits of climate change policies, domestic and international policy alternatives for addressing climate change, and technology options for reducing greenhouse gas emissions. Thirty-eight major companies in the Pew Center's Business Environmental Leadership Council (BELC), most included in the Fortune 500, work with the Center to educate the public on the risks, challenges, and solutions to climate change. The BELC companies do not contribute financially to the Center.

The Pew Center accepts the view of the great majority of scientists that enough is known about the science and environmental impacts of climate change for us to take action now. As noted in 2001 by the National Research Council of the National Academy of Sciences, "[g]reenhouse gases are accumulating in Earth's atmosphere as a result of human activities, causing surface air temperature and subsurface ocean temperature to rise."[1] The potential consequences of this warming include sea-level rise and increases in the severity or frequency (or both) of extreme weather events, including heat waves, floods, and droughts, with potentially major impacts to U.S. water resources, coastal development, infrastructure, agriculture, and ecological systems.[2] We consider the risk of these and other consequences sufficient to justify action to reduce greenhouse

[1] "Climate Change Science: An Analysis of Some Key Questions," Committee on the Science of Climate Change, National Research Council, 2001.

[2] Wigley, T.M.L., 1999, *The Science of Climate Change: Global and U.S. Perspectives,* Pew Center on Global Climate Change; Neumann, J.E., G. Yohe, R. Nicholls, and M. Manion, 2000, *Sea-Level Rise & Global Climate Change: A Review of Impacts to U.S. Coasts*, Pew Center on Global Climate Change; Frederick, K.D. and P.H. Gleick, 1999, *Water and Global Climate Change: Potential Impacts on U.S. Water Resources*, Pew Center on Global Climate Change.

gas emissions significantly. Moreover, much of this action must occur in the United States, which produces 24% of global emissions, making it the world's largest greenhouse gas emitter. U.S. greenhouse gas emissions are expected to grow by 12% by 2012 under current Administration policy.[3]

The Pew Center also believes that the cost to the United States of meeting a given emissions target can vary substantially depending on the policy approach taken. In general, the most cost-effective approaches allow emitters flexibility in deciding how to meet a target; provide early direction so targets can be anticipated and factored into major capital and investment decisions; and employ market-based mechanisms, such as emissions trading, to achieve reductions where they cost the least.

The Pew Center welcomes this opportunity to share its views on the draft American Investments for Reduction of Emissions Act of 2003, which, when introduced, will be the most significant piece of climate change legislation ever put before Congress. To provide some context for the Committee's review of this draft legislation, I would like to begin with an overview of climate change efforts already being undertaken by other countries, as well as by states and industry here in the United States.

Because climate change is a global challenge that requires a global solution, I think it is important that a discussion of U.S. policy start with a full understanding of how the issue is being addressed elsewhere in the world. I would like to emphasize two points: virtually all industrialized nations have now committed themselves to reducing their greenhouse gas emissions; and most view emissions trading as an essential component of their climate change strategies.

More than ten years ago, at the Earth Summit in Rio de Janeiro, the United States joined other nations in approving the United Nations Framework Convention on Climate Change. Recognizing that additional efforts were necessary to effectively address climate change, the parties subsequently negotiated the Kyoto Protocol, which sets binding emission targets for industrialized countries. While far from perfect, the Protocol represents a significant diplomatic achievement. Largely at the insistence of the United States, the Protocol includes several innovative mechanisms to ensure that emissions are reduced as cost-effectively as possible, chief among them an international system of emissions trading.

The present U.S. Administration has made clear it will not submit the Kyoto Protocol to the Senate for ratification. Nevertheless, other countries, including the United States' closest allies, continue to support the Protocol and have moved forward with ratification. Last month, Canada became the 100th country to ratify the agreement. Apart from the United States, Australia is the only country to state explicitly that it is not prepared to ratify the Kyoto Protocol. However, the Australian government remains committed to meeting its Kyoto emissions target and has not ruled out ratifying the treaty at a future date. The Protocol still must be ratified by Russia in order for it to enter into

[3] "Pew Center Analysis of President Bush's February 14th Climate Change Plan," Pew Center on Global Climate Change, 2002, available at http://www.pewclimate.org/policy/response_bushpolicy.cfm.

force. Russia has announced its intention to ratify the treaty, and is expected to do so later this year.

On a parallel track, governments are deeply engaged in developing and implementing domestic policies to meet their Kyoto targets. Japan, for instance, has set national targets for carbon dioxide and for other greenhouse gases, and is developing more than 100 measures to improve energy efficiency, promote renewable energy, enhance carbon sequestration and advance other efforts to reduce emissions. In addition, the Canadian government recently adopted a comprehensive plan that calls for binding emission reduction agreements with industry, increased government support for technology research, and targeted measures such as energy efficiency standards.

Some countries are contemplating emission reductions well beyond those required under the Kyoto Protocol. The German government has said it is prepared to reduce emissions 40 percent below 1990 levels by 2020, provided other countries agree to steeper cuts as well. In the United Kingdom, the Royal Commission on Environmental Pollution is recommending a 60 percent reduction in U.K. emissions by 2050, and Prime Minister Blair has called for a similar reduction worldwide.

Each of these countries is pursuing a strategy tailored to its national circumstances, such as its energy mix, regulatory culture, and economic profile. And each, it is worth noting, is looking to emissions trading to help meet its target. Some may rely primarily on the international trading system established under the Kyoto Protocol, while others are developing domestic systems of their own. The European community, which at first viewed U.S. arguments for emissions trading with deep skepticism, is now leading the way in establishing greenhouse gas markets. In Denmark, a cap-and-trade system regulating carbon emissions from the power sector was enacted in 1999. Last year, the U.K. became the first country to introduce a broad-based greenhouse gas trading system. While voluntary in nature, the U.K. system provides strong incentives for companies to take on binding emission targets. These and other systems are still in their early stages, but the volume of trading is rapidly increasing. A recent World Bank study projected that the number of greenhouse gas credits traded worldwide would increase four-fold from 2001 to 2002. In the first trade under the Kyoto system, a Japanese firm last month purchased 200,000 credits from Slovakia, which intends to invest the proceeds in domestic emission reduction projects.

One of the most significant steps in the development of the greenhouse gas market came last month when the European Council reached agreement on the establishment of a European trading system for carbon dioxide. This system, which is subject to final approval by the European Parliament, will encompass all the member states of the European Union (including the ten approved for new membership in 2004), which have a combined economy larger than that of the United States. In its initial phase, the system will cover six sectors – including electric utilities, steel producers, and oil refiners – which together account for nearly half of Europe's carbon dioxide emissions. Individual member states will set targets and allocate allowances among their emitters, and facilities that fail to meet their targets will face significant penalties. The system is

designed to be compatible with the Kyoto system and with other national systems, but trading will be permitted only with countries that have ratified the Kyoto Protocol. Member states overcame strong political differences to reach agreement on this system, and its operation will provide valuable lessons for the future of greenhouse gas emissions trading.

I would like to offer one final note on what is happening internationally. As you know, one of the chief criticisms of the Kyoto Protocol is that it does not establish greenhouse gas emission limits for developing countries. Whether or not one believes the Kyoto Protocol is fair in this respect – and I happen to believe it is – I think the more important question is whether or not developing countries are in fact taking steps to limit their emissions. The Pew Center recently undertook an analysis of climate change mitigation in six developing countries, including China, India, Mexico, and Brazil.[4] We identified many measures underway in those countries that, while not necessarily motivated by climate concerns, are significantly reducing the growth of their greenhouse gas emissions. We calculated that these measures – which include market and energy reforms, fuel switching, and pollution controls – have reduced the growth of these countries' combined greenhouse gas emissions by nearly 300 million tons a year. These findings suggest significant opportunities to further reduce emissions growth in developing countries while helping them to achieve stronger economic growth and other development priorities.

Clearly, significant greenhouse gas reduction activities are occurring abroad, but U.S. states are undertaking important activities as well. In fact, the recent state leadership in addressing climate change has been striking. At least two-thirds of the states have programs that, while not necessarily directed at climate change, are achieving real greenhouse gas emission reductions. Measures that have proven controversial at the federal level, such as renewable portfolio standards and mandatory reporting of greenhouse gas emissions, have been implemented at the state level, often with bipartisan support and little controversy.

The Pew Center recently published a report on state initiatives to reduce greenhouse gas emissions.[5] This report found that Texas and eleven other states have enacted legislation that requires utilities to provide a certain amount of renewable power as part of their total offering of electricity. Texas has also established a Renewable Energy Credits (RECs) Trading Program that gives utilities considerable flexibility in meeting the requirement. Under this market-based program, every certified renewable energy project in Texas produces one credit for every kilowatt-hour of electricity that it generates. These credits can be purchased by electricity providers to meet any shortfall in their own generation of renewable energy. A carbon cap-and-trade program would work on the same principle.

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[4] Chandler, W., R. Schaeffer, Z. Dadi, P.R. Shukla, F. Tudela, O. Davidson, and S. Alpan-Atamer, 2002, *Climate Change Mitigation in Developing Countries,* Pew Center on Global Climate Change.

[5] Rabe, B., 2002, *Greenhouse & Statehouse: The Evolving State Government Role in Climate Change,* Pew Center on Global Climate Change.

Important work is being done in other states, as well. New Hampshire and Massachusetts have recently started directly regulating carbon dioxide emissions from power plants. Nebraska, Illinois, North Dakota, Oklahoma, and Wyoming are linking agricultural policy with greenhouse gas reduction, and are taking steps to allow agricultural interests to sell stored, or "sequestered," carbon as a commodity. California has enacted a law to require reduction of greenhouse gases emitted from cars, sport utility vehicles (SUVs), and light-duty trucks. And the New England governors have joined with the premiers of the five eastern provinces of Canada in committing to reduce regional greenhouse gas emissions to 1990 levels by 2010 and to ten percent below 1990 levels by 2020.

There are similar examples of leadership in industry. A growing number of companies are voluntarily committing themselves to greenhouse gas reduction targets. At last count, the Pew Center had identified more than 40, most either based in the United States or with significant U.S. operations. BP, for example, has reduced greenhouse gas emissions to 10 percent below 1990 levels – eight years ahead of target – and now has pledged to keep them there at least until 2010. Alcoa is working to reduce its greenhouse gas emissions by 25 percent below 1990 levels by 2010. DuPont is aiming for a 65 percent reduction below 1990 levels, also by 2010.

The Pew Center recently studied several companies that have taken on targets and found they are motivated by several things.[6] They believe the science of climate change is compelling. They know in time the public will demand strong climate protections, and they can get ahead of the curve by reducing their emissions now. They want to encourage government policies that will work well for business. They also cite one other important motivation: To improve their competitive position in the marketplace. That, in fact, has been the result. The companies are finding that reducing emissions also helps to improve operational efficiencies, reduce energy and production costs, and increase market share – all things that contribute to a healthier bottom line. While addressing climate change is not necessarily profitable, the evidence so far suggests it is certainly affordable.

To summarize: Other countries are moving forward to address climate change, and, in the United States, states and companies are exercising leadership to fill the void left by inaction at the federal level. In this context, I believe the draft American Investments for Reduction of Emissions Act of 2003 represents an important milestone in the effort to ensure that the United States does its part to address global climate change. Its enactment would establish a comprehensive national framework that would put the United States on a path toward significant long-term emissions reduction.

The draft Act incorporates several features that would be critical to the success of a national climate change strategy. First, it would establish ambitious environmental goals through binding caps on greenhouse gas emissions. Recognizing the need for reductions from all the major sectors, the Act would apply this cap economy-wide,

[6] Margolick, M. and D. Russell, 2001, *Corporate Greenhouse Gas Reduction Targets,* Pew Center on Global Climate Change.

providing an important signal to key players throughout the economy to increase energy efficiency and develop alternative fuels and technologies to reduce greenhouse gas emissions.

Second, the Act would provide companies with the flexibility they need to reduce emissions as cost-effectively as possible. It would establish a rigorous nationwide system allowing emissions trading across sectors, gases, and national borders, and would provide reasonable credit for carbon storage through sequestration.

Third, the Act would take a phased approach that respects economic realities. As mentioned, our work has demonstrated that there are many cost-effective – in fact, cost-saving – opportunities to reduce emissions in the short- and perhaps medium-term. However, achieving the emission cuts ultimately needed to avert the most adverse consequences of climate change is not a cost-free proposition. The Act's phased approach would take advantage of the relatively easy steps now readily available, while allowing time for the capital and technology investments needed to achieve deeper emissions cuts over the long term.

Finally, the Act would seek to treat all affected parties fairly. It would recognize the real and verifiable reductions of those who have taken the lead in reducing their emissions, and would provide assistance to consumers, workers, and communities affected by climate change policy.

As with any legislation this far-reaching and complex, there is significant room for debate on the specifics, even among those who share the Act's objectives and would support its broad approach. Nonetheless, we believe the draft Act offers a solid foundation for crafting an effective national climate policy that draws on America's strengths and begins to fulfill its responsibility to protect our global climate. We appreciate the vision and leadership shown by Senators McCain and Lieberman in drafting the American Investments for Reduction of Emissions Act of 2003 and look forward to providing any assistance that might be useful to the Committee as it acts on the bill.