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Hearing on
"UN Climate Talks and Power Politics – It's Not About the Temperature"
Subcommittee on Oversight and Investigations
Committee on Foreign Affairs
United States House of Representatives
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Mr. Chairman, Ranking Member Carnahan, and members of the Committee, thank you for the opportunity to testify on the critical issues confronting the United States and other nations in the effort to address global climate change. My name is Elliot Diringer, and I am Vice President for International Strategies at the Pew Center on Global Climate Change.

The Pew Center is an independent non-profit, non-partisan organization dedicated to advancing practical and effective policies and actions to address global climate change. Our work is informed by our Business Environmental Leadership Council (BELC), a group of 46 major companies, most in the Fortune 500, that work with the Center on climate change risks, challenges, and solutions.[1]

Mr. Chairman, climate change poses a serious long-term threat to our nation's resources, our economic well-being, and our national security. While action to address climate change must begin at home, this is a quintessentially global challenge, which therefore requires a global solution. I would like to focus my testimony today on three topics: 1) the status of the international climate negotiations, and the objectives that should guide U.S. climate diplomacy; 2) the policies being implemented in other countries – including our major trading partners – to reduce greenhouse gas emissions; and 3) the environmental, economic and security rationales for stronger climate action.

My principal points are as follows:

- The past two years have seen the emergence of a more realistic and balanced approach in the international climate negotiations, thanks in large measure to the efforts of U.S. negotiators. The United States must remain fully engaged in the talks with the aim of strengthening multilateral support and transparency, thereby promoting action while laying the groundwork for a future binding agreement.

- A growing number of countries are pursuing policies that help reduce greenhouse gas emissions. Many see the challenge as an important opportunity as well. Some of our major trading partners are moving aggressively to grow their clean energy technology industries, which create domestic jobs and high-value exports. Without stronger

[1] For more on the Pew Center on Global Climate Change and the Business Environmental Leadership Council, see www.pewclimate.org.

policies creating similar incentives here, the United States risks falling further behind in the rapidly expanding clean energy market.

- U.S. inaction on climate change exposes our nation to real and rising risks. The longer we delay action, the harder it will be to avert the worst consequences of warming, the higher the cost of coping with those that can not be avoided, and the further we fall behind in the clean energy race. Taking steps now to expand clean energy and reduce greenhouse gas emissions is squarely in our strong national interest.

Moving the Negotiations Forward

Multilateral regimes do not generally spring forth fully formed – rather, they evolve over time.[2] The international climate effort is no different. It began with the 1992 United Nations Framework Convention on Climate Change (UNFCCC), which was signed by the President George H. W. Bush and unanimously ratified by the U.S. Senate. The UNFCCC, now ratified by 195 parties, established a long-term objective of preventing "dangerous anthropogenic intereference with the climate system" and a framework within which countries can work together to achieve it. To be certain, countries' positions in the climate negotiations are heavily conditioned by their respective national interests. But underlying the Framework Convention is a clear recognition that countries share a common interest in averting dangerous climate change. And a fundamental principle of the Convention is that while our respective responsibilities are differentiated, depending on nations' circumstances, we all share a common responsibility for meeting this common challenge.

Since the signing of the Framework Convention, the climate regime has evolved in fits and starts. While the Convention is largely voluntary in nature, countries resolved shortly after its entry into force that stronger action was needed, and initiaited a new round of negotiations aimed at establishing binding emission targets for developed countries. This led in 1997 to the Kyoto Protocol. Although the United States chose not to participate, Kyoto entered into force in 2005, and most other industrialized countries are on track to meeting their obligations. For many countries, the principal aim since 2005 has been to extend this legally-binding regime through a second round of targets. But many of the countries with targets have made clear that they will not assume new binding obligations without commensurate commitments by the United States and the major developing economies. Through this prolonged stalemate, the negotiations were stuck in a mode of binding-or-nothing, and consequently produced virtually nothing.

Over the past two years, however, we have seen the emergence of a more realistic, more balanced and more constructive approach, in large measure through the efforts of the United States. Many viewed the Copenhagen summit in 2009 as a major failure because they had hoped – unrealistically – that it would produce a binding agreement. In our view, the Copenhagen

[2]Bodansky, Daniel and Elliot Diringer. "The Evolution of Multilateral Regimes: Implications for Climate Change." Pew Center on Global Climate Change. December 2010. Available at http://www.pewclimate.org/publications/report/evolution-multilateral-regimes-implications-climate-change.

Accord, negotiated personally by President Obama and other world leaders, represented genuine progress. Among other things, the Accord set an aspirational goal of limiting global temperature increase to 2 degrees Celsius; set goals for mobilizing financial support to help developing countries reduce emissions, preserve forests, and adapt to climate change; and established the broad parameters of a system to ensure transparency and accountability. What's more, it provided for mitigation pledges from both developed and developing countries. As a result, for the first time ever, all of the world's major economies – including China and India – have now made explicit pledges to reduce or limit their greenhouse gas emissions.

In the chaotic final hours in Copenhagen, the Accord was not formally adopted by the UNFCCC Conference of the Parties. However, at the 16th Conference of the Parties last year in Cancún, parties adopted a package of decisions incorporating the essential elements of the Copenhagen Accord into the UNFCCC framework, and taking initial steps to implement them. The Cancún Agreements represent the most tangible progress within the UNFCCC negotiations in nearly a decade. First, they memorialize the pledges taken under the Copenhagen Accord by more than 80 countries accouting for more than 80 percent of global emissions. Second, the Agreements establish the fundamentals of a stronger support system for developing countries, and a stronger transparency system enabling countries to verify whether others are fulfilling their pledges.

The Agreements also reflect a more flexible and realistic framework for enshrining countries' actions. Unlike the Kyoto Protocol, which allows only one type of commitment (a binding emissions target with a prescribed, common base year), the Agreements allow for a diversity of approaches. In the case of developed countries, pledges take the form of economy-wide emission targets, but with flexibility on base year and accounting. Developing countries have even broader discretion in defining their "nationally appropriate mitigation actions." China and India, for instance, have pledged reductions in emissions intensity (emissions per unit of GDP), while Brazil, South Africa, Mexico and the Republic of Korea have pledged to reduce emissions below "business as usual." This more realistic and balanced approach reflected in the Cancún Agreements, as well as the movement toward greater transparency for all major economies, are direct consequences of U.S. engagement and leadership in the climate negotiations.

It is important to emphasize that the pledges countries have made at this stage are voluntary in nature. We continue to believe that the global response to climate change should ultimately be enshrined in fair, effective and binding commitments among all of the world's major economies. Countries will deliver their strongest possible efforts only if they are confident that others are also contributing their fair share, and this confidence is best maintained through mutual and binding commitments. We also recognize, however, that it will be a number of years before the United States, China and other key countries are prepared to assume binding commitments. Under these circumstances, we believe the United States must remain fully engaged in the climate negotiations with the aim of strengthening the UNFCCC as a means of delivering support and transparency, thereby promoting near-term action while laying the groundwork for a future legal agreement.

At the 17th Conference of the Parties later this year in Durban, we believe the aim should be further progress on the operational issues addressed in the Cancún Agreements, including the launch of a new Green Climate Fund to support developing country efforts and significant progress in strengthening transparency through new "measurement, reporting and verification" practices; and a clear declaration by parties of their intent to work toward legally binding outcomes. This outcome would build on the achievements of the past two years and continue the incremental progress needed to strengthen confidence in the regime and among parties.

Efforts in Other Countries

While international agreements and commitments are critical to our success in addressing global climate change, a more important measure of efforts to date are the policies and actions countries are undertaking domestically. A growing number of countries are developing or implementing policies contributing in one way or another to reducing greenhouse gas emissions. Many see the challenge as an important opportunity as well. A number of our major trading partners are moving aggressively to grow their clean energy technology industries, which create domestic jobs and high-value exports. Without stronger policies creating similar incentives here, the United States risks falling further behind our competitors in the rapidly expanding clean energy market.

The European Union is a clear leader in the development, manufacture, and deployment of clean technologies. The EU has set mandatory targets to reduce greenhouse gas emissions 20 percent below 1990 levels, and to increase renewables to 20 percent of its energy mix, by 2020. The centerpiece of EU climate policy is the Emissions Trading System (ETS) lauched in 2005, which regulates carbon dioxide emissions (CO_2) in the power and major industrial sectors generating about half of the EU's CO_2 emissions. Having overcome the early complications typical of a new compliance market, the system is set to expand in 2012 to cover other gases and the aviation sector. Europe's clean energy investments, the world's largest, doubled from 2009 to 2010, reaching nearly $81 billion.[3] From 2004, the year before the ETS began, through 2008, the year before the global financial crisis, the European Union reduced its emissions 4.1 percent, while its GDP grew 9.8 percent.

China also has taken major steps towards increasing its manufacture and use of clean energy technologies. Under the Cancún Agreements, China pledged that by 2020 it will reduce the CO_2 intensity of its economy 40 to 45 percent below 2005 levels; increase the share of non-fossil fuels in primary energy consumption to 15 percent by 2020; and increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic meters. These targets are reflected in domestic policy as well. Additional policies include: a national target for renewables to provide 15 percent of primary energy by 2020, with specific targets for wind, solar, biomass, and hydropower; feed-in tariffs for onshore wind power; and proposed fuel efficiency standards requiring urban cars and light trucks to achieve an average of 36.9 miles per gallon by 2015. The 12th Five-Year Plan adopted by the Chinese leadership in March devotes considerable attention

[3] "Who's Winning the Clean Energy Race?" Pew Environment Group. 2010. Available at http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/G-20Report-LOWRes-FINAL.pdf.

to energy and climate, establishing a series of targets and policies for 2011-2015.[4] These include a suite of policies to promote innovation in new strategic and emerging technologies, including nuclear, solar, wind, biomass, and hybrid and electric vehicles. The plan also includes a goal to "gradually establish a carbon trade market."

To be certain, China continues to build coal-fired power plants as well, and its emissions continue to rise. A recent analysis by the Lawrence Berkeley National Laboratory projects that on the present path China's emissions will peak between 2030 and 2035.[5] But the climate and energy provisions of the new Five-Year Plan show how China is moving forward with domestic policies in line with the pledge it offered in Copenhagen and formalized in the Cancún Agreements. Many of the policies also are clearly calculated to help ensure that China – which recently surpassed the United States and other countries to become the leading manufacturer of wind turbines and solar panels – retains a strong competitive edge going forward.

Other major developing countries are also stepping up their efforts to limit emissions growth and transition to cleaner energy. India, which pledged to reduce its emissions intensity (excluding the agricultural sector) 20 to 25 percent below 2005 levels by 2020, is pursuing a range of policies under its 2008 National Action Plan on Climate Change, including: a renewable energy target; a feed-in tariff for renewable energy; a market-based system of tradable energy savings certificates in industrial sectors; and a coal levy generating finance for clean energy research and innovation. Brazil and Indonesia have set goals to reduce deforestation. South Africa has set national renewable energy and energy efficiency targets and established a renewable energy feed-in tariff. Meanwhile, the governments of Mexico and South Korea have proposed establishing emissions trading systems.

While the global picture is uneven, these examples demonstrate a growing will among countries to undertake a wide variety of measures to promote clean energy and to reduce greenhouse gas emissions.

Addressing Climate Change is in Our National Interest

Earlier I emphasized that all nations share a common interest in averting dangerous climate change. It is important to understand why stronger efforts to address climate change and pursue clean energy are in our direct national interest as well. There are many reasons, whether from an environmental, national security or economic perspective.

Environmental Risks

The scientific and environmental rationale for lowering our greenhouse gas emissions is clear and compelling. As again underscored two weeks ago in *America's Climate Choices*, a

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[4] Lewis, Joanna. "Energy and Climate Goals of China's 12th Five-Year Plan." Pew Center on Global Climate Change. March 2011. Available at http://www.pewclimate.org/international/factsheet/energy-climate-goals-china-twelfth-five-year-plan.

[5] Zhou, Nan et al. "China's Energy and Carbon Emissions Outlook to 2050." Lawrence Berkeley National Laboratory. April 2011. Available at http://china.lbl.gov/publications/2050-outlook.

report produced by the U.S. National Academy of Sciences at the request of Congress, "Climate change is occurring, is very likely caused by human activities, and poses significant risks for a broad range of human and natural systems."[6] On these fundamental points, there is very strong consensus within the scientific community.

Due largely to the combustion of fossil fuels, atmospheric concentrations of carbon dioxide are at their highest level in at least 800,000 years. Over the last century, average global temperatures rose more than 1 degree Fahrenheit and in some places, including parts of the United States, temperatures rose more than 4 degrees.[7] If greenhouse gas emissions continue to grow, average global temperatures are projected to reach 2.0°F to 11.5°F (1.1°C to 6.4°C) above pre-industrial levels by 2100, with warming in the U.S. expected to be even higher.

We are already witnessing the impacts of climate change here in the United States; the widespread flooding now inflicting communities along the Mississippi River vividly illustrates how vulnerable we are to the rising risks associated with climate change. Most of North America is experiencing increasing numbers of unusually warm days and nights and a decreasing number of unusually cool ones. At the same time, droughts are occurring more frequently while snowpacks are melting earlier in the year. Sea-level rise of 8 inches or more has been recorded in some coastal areas of the country.[8] Continued warming will mean further sea-level rise, elevating storm surges and gradually inundating low-lying coastal areas along all U.S. coastlines; increased frequency and severity of extreme weather events; increased risk of droughts and floods; significant threats to ecosystems and biodiversity; and increased public health risks. Beyond such readily foreseeable impacts, the longer warming persists and the greater its magnitude, the greater the risk of abrupt or catastrophic changes in the global climate.[9]

Actions to reduce the risks of climate change by lowering greenhouse gas emissions have other environmental co-benefits as well. Lower-carbon technologies such as natural gas and renewable energy also emit less of other pollutants including nitrogen dioxide, particulates, sulfur dioxide, lead, carbon monoxide, mercury, and other hazardous pollutants that have a wide range of harmful health effects, from asthma to cancer and premature death. Past regulatory efforts to reduce these pollutants have proven highly successful and cost-effective. The Office of Management and Budget (OMB) found that from 1992 to 2002 "major rules" enacted under the Clean Air Act produced benefits of between $145 billion and $218 billion a year, far exceeding the annual costs $22 billion to $25 billion.[10] A study by researchers at MIT found total annual

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[6] Committee on America's Climate Choices; National Research Council. *America's Climate Choices*. 2011. Available at http://www.nap.edu/catalog.php?record_id=12781

[7] "Climate Change 101: Science and Impacts." Pew Center on Global Climate Change. January 2011. Available at http://www.pewclimate.org/docUploads/climate101-science.pdf

[8] *Global Climate Change Impacts in the United States*. Global Change Research Program. 2009. Available at http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/full-report

[9] Committee on America's Climate Choices; National Research Council. *America's Climate Choices*. 2011. Available at http://www.nap.edu/catalog.php?record_id=12781

[10] Office of Management and Budget. "Informing Regulatory Decisions: 2003 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. 2003. Available at http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/2003_cost-ben_final_rpt.pdf

benefits rising from $50 billion in 1975 to $400 billion in 2000.[11] We can expand these benefits by moving towards cleaner energy sources.

Security Risks

America's military leaders recognize that climate change also poses increasing risks to our national security and new demands on our military resources. According to the Pentagon's latest Quadrennial Defense Review, climate change may act as "an accelerant of instability or conflict, placing a burden to respond on civilian institutions and militaries around the world."[12]

Indeed, climate change will be a threat multiplier, further destabilizing regions of the world already burdened with countless other problems. Chronic drought, rising seas, extreme weather and other climate impacts could undermine weak governments, induce mass migrations, and trigger or heighten resource competition, contributing to social instability and, potentially, armed conflict. Rising seas could displace as many as 30 million people in Bangladesh, creating additional tensions on the Indian subcontinent. Receding glaciers could leave millions across Asia facing chronic water shortages. A distinguished group of retired three- and four-star U.S. military officers warns that drought, thirst, and hunger are already exacerbating the conflicts and humanitarian disasters in Darfur and Somalia, and climate change portends more situations like these.[13]

Within the past year, devastating floods in Pakistan have strained the resources and stability of a key U.S. ally in the battle against international terrorism, and an intense drought and heat wave has diminished food production in Eastern Europe and Central Asia, causing a spike in global wheat prices. Yemen, where the CIA says Al Qaeda is of greatest concern today, is running out of groundwater for its under-employed population.[14] While these events cannot be directly attributed to climate change, scientists are very clear that these types of events will occur more frequently in a warming world.

Other security issues are arising closer to home. The Arctic has long been a place where defense issues were minimized because the waterways were largely frozen over year-round. With warming now occurring there at twice the average global rate, the Arctic Ocean is opening to military and civilian transportation, and the potential security implications are already apparent. Receding sea ice is creating increased competition over territory and resources in a region where the United States is currently unprepared to address potential military situations.[15]

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[11] Yang, T., K. Matus, S. Paltsev and J. Reilly, "Economic Benefits of Air Pollution Regulation in the USA: An Integrated Approach." The MIT Joint Program on the Science and Policy of Global Change. July 2004. Available at http://globalchange.mit.edu/pubs/abstract.php?publication_id=685

[12] *Quadrennial Defense Review*. United States Department of Defense. February 2010. Available at http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf

[13] Military Advisory Board. "National Security and the Threat of Climate Change." CNA. April 2007. Available at http://SecurityAndClimate.cna.org

[14] Rogers, W. and J. Gulledge, "Lost in Translation: Closing the Gap Between Climate Science and National Security Policy." Center for a New American Security. April 2010. Available at http://cnas.org/node/4391

[15] Burke, Sharon; Jay Gulledge, Michael Horowitz, Christine Parthemore, and Nirav Patel. "Uncharted Waters: The U.S. Navy and Navigating Climate Change." Center for a New American Security. December 2008. Available at http://www.cnas.org/files/documents/publications/CNAS_Working%20Paper_CNO_ClimateChange_BurkePatel_Dec2008.pdf

Protecting our nation's security necessarily involves being prepared to deal with an uncertain future. Indeed, planning under uncertainty is business as usual for the defense community. The fact that military and security experts are increasingly concerned about the risks associated with climate change should serve as an important wake-up call to us all.

Economic Risks

Finally, addressing climate change is very much in our economic interest. The United States is the world's leading manufacturer, producing 21 percent of global output while supporting 18.6 million domestic jobs.[16] Yet in the growing clean energy sector, we risk falling further behind our competitors because the demand for these goods is not as strong at home as it is overseas.

China and other countries are investing heavily in clean energy technologies, positioning themselves to compete in a growing global market projected to reach $106 billion to $230 billion a year in 2020, and as much as $424 billion a year in 2030. In order for the United States to develop a successful, profitable, and competitive clean energy sector, companies need clear regulatory frameworks ensuring a strong domestic market for these goods.

The recent experience of the U.S. auto industry provides an instructive case study. While the technology in our cars has advanced significantly in the last two decades, the typical new vehicle today consumes gasoline at about the same rate as one produced in the late 1980s.[17] But with gas prices again rising, consumers are increasingly turning to more fuel-efficient vehicles. Spurred by fuel economy standards enacted in 2007, American automakers have been ready to meet their customers' needs. U.S. automakers reported strong sales and combined profits of nearly $5.9 billion in the first quarter of 2011, and all three cited higher sales of fuel-efficient vehicles as a contributing factor. Last year, the Smart car was the only conventional car available in the United States with a fuel economy rating of 40 miles per gallon or better. Today there are nine, and three of them – the Cruze, Elantra, and Focus – were among the 10 top-selling vehicles last month. All three are made in the United States.

Unfortunately , similar examples in the clean energy field must be found outside the United States. In Germany, for instance, renewable energy policies helped boost jobs in the renewable energy sector from 160,000 in 2004 to 370,000 in 2010.[18] The German government credits this dramatic growth in clean energy jobs as a major factor in its relatively fast recovery

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[16] National Association of Manufacturers. "Facts About Manufacturing." Available at http://www.nam.org/Statistics-And-Data/Facts-About-Manufacturing/Landing.aspx

[17] Greene, David L., and Steven E. Plotkin. "Reducing Greenhouse Gas Emissions from U.S. Transportation." Pew Center on Global Climate Change. January 2011. Available at http://www.pewclimate.org/publications/reducing-ghg-emissions-from-transportation.

[18] German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, March 16, 2011. German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, "Gross employment from renewable energy in 2010," March 18, 2011.

from the 2008 recession.[19] Germany's renewable energy sector is projected to employ about 450,000 to 580,000 workers by 2020, and between 500,000 and 600,000 in 2030.[20]

By contrast, U.S. clean energy manufacturers are increasingly finding their biggest growth opportunities overseas. First Solar, Inc., of Arizona, the world's second largest solar manufacturer, plans to build a 2,000-megawatt solar photovoltaic power plant in China – the largest planned project of its kind in the world. [21] While First Solar will also add new manufacturing jobs at its U.S. facilities, at least 71 percent of its planned growth is outside the United States. U.S. firms remain among the world's top innovators. But if our clean energy firms are to invest and create jobs at home, and compete effectively overseas, we must provide the regulatory certainty that creates strong, sustained demand for their goods here in the United States. Doing so will strengthen our economy while protecting the United States against the risks of climate change.

Conclusion

Mr. Chairman, U.S. inaction on climate change exposes our nation to real and rising risks. The longer we delay action, the harder it will be to avert the worst consequences of warming, the higher the cost of coping with those that can not be avoided, and the further we fall behind other countries in the clean energy race. Taking steps now to expand clean energy and reduce greenhouse gas emissions is quite clearly in our strong national interest.

As the world's largest economy, leading innovator, and largest cumulative emitter, the United States also has a responsibility to to the international community. Thanks to U.S. efforts, the global climate effort now appears headed on a more reasonable course. Our ability to continue to shape that effort in the years ahead depends heavily on a demonstrated commitment to address climate change here at home.

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[19] http://www.reuters.com/article/2009/02/24/us-climate-germany-jobs-idUSTRE51N2F920090224

[20] German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, "Renewably employed! Short and long-term impacts of the expansion of renewable energy on the German labour market," September 2010.

[21] IEA 2010, and Woody, Todd. "U.S. Solar Firm Cracks Chinese Market," The New York Times, September 8, 2009.

United States House of Representatives
Committee on Foreign Affairs

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Clause 2(g) of rule XI of the Rules of the House of Representatives and the Rules of the Committee require the disclosure of the following information. A copy of this form should be attached to your written testimony and will be made publicly available in electronic format, per House Rules.

1. Name:	2. Organization or organizations you are representing:
Elliot Diringer	Pew Center on Global Climate Change

3. Date of Committee hearing:
May 25, 2010

4. Have you received any Federal grants or contracts (including any subgrants and subcontracts) since October 1, 2008 related to the subject on which you have been invited to testify?	5. Have any of the organizations you are representing received any Federal grants or contracts (including any subgrants and subcontracts) since October 1, 2008 related to the subject on which you have been invited to testify?
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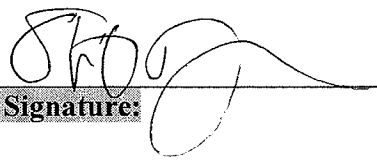

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