SELECT COMMITTEE ON ENERGY INDEPENDENCE AND GLOBAL WARMING
U.S. HOUSE OF REPRESENTATIVES

Staff Report: United Nations (UN) Climate Change Conference 2009: Copenhagen, Denmark

December 7, 2009

Contents

1. Overview

The purpose of the December 7-18, 2009 UN Climate Change Conference in Copenhagen is to reach a new international agreement (or possibly, agreements) on climate change that may replace or amend the current Kyoto Protocol, to which the United States is not a party.

The Conference will consist of six concurrent meetings for two distinct legal agreements—the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol:

- *Fifteenth Session of the Conference of the Parties to the UNFCCC (COP 15);*[1]
- *Fifth Session of the UNFCCC Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP 5);*[2]
- *Eighth Session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 8);*[3]
- *Tenth Session of the Ad Hoc Working Group on Further Commitments for Annex I Parties to the Kyoto Protocol (AWG-KP 10);*[4]
- *31st Session of the Subsidiary Body for Implementation (SBI 31);*[5] *and*
- *31st Session of the Subsidiary Body for Scientific and Technological Advice (SBSTA 31).*[6]

Final negotiations and decisions will take place during the December 16-18 "high-level segment" that will be attended by representatives of ministerial rank and above, including approximately 100 heads of state and government.[7]

On November 25, the White House announced that President Obama would attend the Conference on December 9, and that "in the context of an overall deal in Copenhagen that includes robust mitigation contributions from China and the other emerging economies, the President is prepared to put on the table a U.S. emissions reduction target in the range of 17% below 2005 levels in 2020 and ultimately in line with final U.S. energy and climate legislation." The White House also announced "that a host of Cabinet secretaries and other top officials from across the Administration will travel to Copenhagen for the conference" including Interior Secretary Ken Salazar, Agriculture Secretary Tom Vilsack, Commerce Secretary Gary Locke, Energy Secretary Steven Chu, Environmental Protection Agency Administrator Lisa P. Jackson, Council on Environmental Quality Chair Nancy Sutley, Office of Science and Technology Policy Director John Holdren, and Assistant to the President for Energy and Climate Change Carol Browner.[8]

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[1]The COP is the "supreme body" of the UNFCCC.
[2]The CMP is the "supreme body" of the Kyoto Protocol.
[3]The AWG-LCA, established at COP 13 in Bali in 2007, is conducting negotiations on a strengthened international agreement on climate change under the UNFCCC and is to conclude its work in Copenhagen.
[4]The AWG-KP, established at CMP 1 in Montréal in 2005 to negotiate further commitments of developed countries under the Kyoto Protocol for the period beyond 2012, is also to complete its work in Copenhagen in 2009.
[5]The SBI makes recommendations on UNFCCC and Kyoto Protocol policy and implementation issues to the COP and CMP, respectively.
[6]The SBSTA serves as a link between information and assessments provided by expert sources (such as the Intergovernmental Panel on Climate Change (IPCC)) and the COP and CMP, which focus on setting policy.
[7] http://en.cop15.dk/news/view+news?newsid=2786.
[8]http://www.whitehouse.gov/the-press-office/president-attend-copenhagen-climate-talks.

Subsequently, on December 4, the President's Press Secretary announced that "[b]ased on his conversations with other leaders and the progress that has already been made to give momentum to negotiations, the President believes that continued US leadership can be most productive through his participation at the end of the Copenhagen conference on December 18th rather than on December 9th."[9] The statement also noted that "[t]here are still outstanding issues that must be negotiated for an agreement to be reached, but this decision reflects the President's commitment to doing all that he can to pursue a positive outcome. The United States will have representation in Copenhagen throughout the negotiating process by State Department negotiators and Cabinet officials who will highlight the great strides we have made this year towards a clean energy economy."[10]

At this point, unresolved groups of major issues include:

- Legal form of agreement(s);
- Developed country and developing country commitments/actions to reduce net greenhouse gas (GHG) emissions;
- Developed country provision of financing and technology to developing countries for mitigation of emissions and adaptation to climate change;
- Measurement, reporting, and verification (MRV) of developed and developing country commitments/actions and developed country provision of finance, technology and capacity building; and
- Shared vision for long-term cooperative action.

There is little agreement between developed and developing countries on any of the major groups of issues. The last meetings of negotiators in a formal UN setting took place in Barcelona, Spain, November 2-6, and made little progress, forwarding to Copenhagen a complex text of some 160 pages for the negotiations under the Convention and over 100 pages of text and background materials for the negotiations under the Kyoto Protocol.

Faced with the reality that it would be impossible to reach a comprehensive "legally-binding" agreement at Copenhagen, Danish Prime Minister Rasmussen proposed a "political binding" Copenhagen Agreement "[v]ision of 'one Agreement — two purposes'" at an APEC Leaders gathering in Singapore on November 15. He envisages a 5-8 page political text with "precise language of a comprehensive political agreement covering" commitments "of developed countries to reductions and of developing countries to actions," as well as "[s]trong provisions on adaptation, finance and technology, including up front finance for early action." This political text would then be followed by Annexes "outlining the specific commitments of individual countries" to "be negotiated" and "subject to a transparent system of measurement, reporting and verification." Finally, the Copenhagen Agreement should "mandate continued legal negotiations and set a deadline for their conclusion."[11]

The remainder of this paper provides background on the UNFCCC and its Kyoto Protocol, as well as a discussion of the negotiations leading to Copenhagen, and each of the unresolved

[9] http://www.whitehouse.gov/the-press-office/statement-press-secretary-united-nations-climate-change-conference
[10] *Ibid.*
[11] http://www.stm.dk/_p_12987.html.

groups of major issues. There are also six appendices—the first four elaborating on points made in the text, a fifth containing the testimony of Todd Stern, Special Envoy for Climate Change, at a September 10, 2009 hearing before the Select Committee on Energy Independence and Global Warming, and a sixth containing Mr. Stern's responses to post-hearing questions posed by Select Committee Ranking Republican Member Sensenbrenner.

2. Background

2.1 United Nations Framework Convention on Climate Change (UNFCCC)[12]

The United Nations Framework Convention on Climate Change (UNFCCC), adopted in 1992, is the international political response to climate change. Its ultimate objective, as stated in Article 2, is "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" to "be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner." Currently, 193 countries and the European Union (EU)[13] are Parties to the Convention.[14] This includes the United States, which became the fourth country and the first developed country to ratify it in October 1992.

A major UNFCCC guiding principle states that "[p]arties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities," and calls on "developed country Parties" to "take the lead in combating climate change and the adverse effects thereof." This principle is reflected in the Convention by the division of the countries of the world into two main groups: (1) Annex I Parties, composed of 40 developed countries and the EU;[15] and (2) Non-Annex I Parties, which include the 153 other countries that are Parties to the Convention.[16]

While all countries have commitments under the UNFCCC, Article 4.7 states that "[t]he extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."

Articles 4.3, 4.4, and 4.5 of the Convention place the burden of provision of financial resources and technology on 24 "Annex II" Parties (all countries who were members of the

[12]See http://unfccc.int/resource/docs/convkp/conveng.pdf for the text of the UNFCCC.
[13]The current 27 EU Member States are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
[14]The current list of Parties to the UNFCCC is at http://unfccc.int/files/essential_background/convention/ status_ of_ ratification/ application/pdf/ unfccc_ratification_20091016.pdf .
[15]Currently, two EU Member States—Cyprus and Malta—are Non-Annex I Parties. Malta has submitted a proposal, which will be considered at COP 15 in Copenhagen, to amend Annex I by adding its name.
[16]See Appendix 1 for a list of Annex I and Annex II Parties to the UNFCCC.

Organisation for Economic Co-operation and Development (OECD) with the exception of Turkey)[17] and the EU. The Convention requires Annex II Parties to:

- "[P]rovide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their inventory and reporting obligations under Article 12.1, and to "also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by" Article 4.1. (*Article 4.3)*
- "[A]ssist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects. (*Article 4.4)*
- "[T]ake all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention." (*Article 4.5)*

Annex II countries provide funding to developing countries through the Global Environment Facility (GEF), which operates the financial mechanism established by Article 11 of the Convention, as well as through bilateral, regional and multilateral channels.[18]

The UNFCCC also established the Conference of the Parties (COP) as the "supreme body" of the Convention (Article 7), which meets every year, as well as two permanent subsidiary bodies: (1) the Subsidiary Body for Scientific and Technical Advice (SBSTA), established by Article 9, "to provide the Conference of the Parties and, as appropriate, its other subsidiary bodies with timely information and advice on scientific and technological matters relating to the Convention"; and (2) the Subsidiary Body for Implementation (SBI), established by Article 10, "to assist the Conference of the Parties in the assessment and review of the effective implementation of the Convention." Under the Convention's current rules of procedure, all decisions taken by the COP and its Subsidiary Bodies must be made by consensus, which is considered to be the absence of a stated objection by a Party.

Finally, the Convention established a process under the COP to pursue additional negotiations aimed at stabilizing atmospheric GHG concentrations in the atmosphere—a process that led to the adoption of the Kyoto Protocol.

2.2 Kyoto Protocol[19]

The First Session of the Conference of Parties to the UNFCCC (COP 1) met in Berlin, Germany, and adopted Decision 1/CP.1[20] in April 1995—the "Berlin Mandate"—which initiated a new negotiating process aimed at "strengthening" Annex I Party commitments and

[17] Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.

[18] Developing countries that are Parties to the Kyoto Protocol also have access to the Adaptation Fund to finance concrete adaptation projects and programs. The Fund is financed by a two-percent levy on the share of the proceeds from Clean Development Mechanism (CDM) project activities.

[19] See http://unfccc.int/resource/docs/convkp/kpeng.pdf for the text of the Kyoto Protocol.

[20] http://unfccc.int/resource/docs/cop1/07a01.pdf, pp. 4-6.

"[n]ot introduce any new commitments" for developing countries. COP 1 also established the Ad Hoc Group on the Berlin Mandate (AGBM) and tasked it with developing the text of a new agreement.

Subsequent AGBM negotiations led to the December 1997 adoption of a Protocol at COP 3 in Kyoto, Japan, under which Annex I countries agreed to reduce their overall net emissions of six GHGs—carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride—by an average of 5.2% below 1990 levels between 2008-2012 (the first commitment period). Specific Kyoto Protocol reduction targets vary widely from country-to-country, ranging from increases of 10 per cent above 1990 for Iceland to 8 percent below 1990 for 25 EU countries. In addition, 15 EU Member States are allowed a "bubble" to meet their 8 percent emission-reduction targets collectively, which provides for wide variations of targets among these countries.[21]

The Protocol also includes three "market mechanisms" intended to reduce Annex I Parties' costs of meeting their emission reduction targets:

- Joint implementation under Article 6, which allows a developed country to receive "emissions reduction units" when it helps to finance projects that reduce net greenhouse-gas emissions in another developed country.
- Clean Development Mechanism (CDM) under Article 12, which allows developed countries to finance GHG emission reduction or removal projects in developing countries, and receive credits for doing so; and
- Emissions trading under Article 17, which allows an Annex I Party to transfer Kyoto Protocol units to or acquire units from another Annex I Party

The Kyoto Protocol established the Conference of the Parties serving as the meeting of the Parties to the Protocol (CMP) as its "supreme body" of the Convention (Article 13), which also meets every year in parallel with the COP. The Convention's Subsidiary Bodies—SBI and SBSTA—serve the same functions for the CMP as they do for the COP. The CMP uses the same rules of procedure as the COP, requiring that all decisions taken by the CMP and its Subsidiary Bodies be made by consensus. The Protocol also includes provisions for periodic reviews of its effectiveness.

The Protocol entered into force in February 2005. Currently, 189 countries and the EU are Parties to the Protocol.[22]

The United States is the only Annex I country to have not ratified the Protocol. A key event affecting the U.S. position was the July 25, 1997 Senate passage of the Byrd-Hagel Resolution (S. Res. 98) by a unanimous vote of 95-0. The Resolution expresses the sense of the Senate that the U.S. "should not be a signatory to any protocol to, or other agreement regarding" the UNFCCC at "negotiations in Kyoto in December 1997, or thereafter, which would—(A) mandate new commitments to limit or reduce greenhouse gas emissions for the Annex I Parties, unless the protocol or other agreement also mandates new specific

[21]See Appendix 2 for a list of the Annex I Kyoto Protocol emissions reduction commitments and those under the EU bubble.

[22]The current list of Parties to the Protocol is at http://unfccc.int/files/kyoto_protocol/status_of_ratification/application/pdf/kp_ratification_20090826corr.pdf .

scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period, or (B) would result in serious harm to the economy of the United States."[23] Although the Clinton Administration signed the Protocol in 1998, it was never submitted to the Senate due to its lack of compliance with the Resolution. In March 2001, President George W. Bush announced his opposition to the Protocol because it exempted all developing countries and would cause serious harm to the U.S. economy, thereby ending any uncertainty as to whether the U.S. would join Kyoto.

3.0 Negotiations Leading to Copenhagen

The Kyoto Protocol's Article 3.9 mandates consideration of Annex I Parties' further commitments at least seven years before the end of the first commitment period in 2012. In December 2005, the first Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP 1) held in Montréal, Canada established the Ad Hoc Working Group on Further Commitments for that purpose. In addition, COP 11 agreed in Montréal to consider long-term cooperation under the Convention through a series of four workshops known as "the Convention Dialogue," which continued until COP 13.

COP 13 and CMP 3 took place in Bali, Indonesia in December 2007. These negotiations resulted in the adoption of the Bali Action Plan,[24] which established the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) with a mandate to focus on four building blocks of long-term cooperation identified during the Convention Dialogue: mitigation, adaptation, finance and technology. The Bali Action Plan contains a list of issues to be considered under each of these areas and calls for a "shared vision for long-term cooperative action."

The Bali conference also resulted in an agreement on a two-year process, the Bali Roadmap, which covers the two negotiation "tracks"—one under the Convention and one under the Protocol—and set a deadline for concluding the negotiations at COP 15 and CMP 5, to be held in Copenhagen in December 2009. The two key bodies under the Bali Roadmap—the AWG-LCA and the AWG-KP—held four formal UN negotiating sessions in 2008 and four in 2009. The last formal sessions before Copenhagen took place in Barcelona, Spain, November 2-6, and made little progress, forwarding to Copenhagen a complex text of some 160 pages for the negotiations under the Convention and over 100 pages of text and background materials for the negotiations under the Kyoto Protocol.

At this point, unresolved groups of major issues include:

- Legal form of agreement(s);
- Developed country and developing country commitments/actions to reduce net greenhouse gas (GHG) emissions;
- Developed country provision of financing and technology to developing countries for mitigation of net GHG emissions and adaptation to climate change;
- Measurement, reporting, and verification (MRV) of developed and developing country commitments/actions and provision of finance and technology; and

[23] See http://thomas.loc.gov/ for the text of the Byrd-Hagel resolution.
[24] http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3, pp. 3-7.

- Shared vision for long-term cooperative action.

3.1 Legal Form of the agreement(s)

Developed countries want a single legally-binding agreement under the Convention. However, almost all developing countries want two agreements: one under the Kyoto Protocol—where they have no commitments and where they can reap the benefits of the Clean Development Mechanism; and one under the Convention—where their commitments are contingent on the provision of financing and technology by Annex II countries. Developing countries also want the United States to take on legally-binding emissions reduction commitments under the Convention that are "comparable" to those that would be undertaken by Annex I Kyoto Protocol Parties.

However, there are also disagreements among developed countries about the form of a single legally-binding agreement under the Convention. The EU, for example, wants a single legally-binding agreement that would maintain the "top-down" structure of the Kyoto Protocol and incorporate its essentials, such as the market mechanisms (joint implementation, Clean Development Mechanism, and emissions trading). On the other hand, the U.S. and Japan favor a "bottom-up" approach, where countries would come forward with commitments embedded in their domestic laws, with a minimum of the top-down features of Kyoto.

3.2 Developed country and developing country commitments/actions to reduce net greenhouse gas (GHG) emissions

Paragraphs 1(b)(i) and 1(b)(ii) of the Bali Action Plan differentiate developed and developing country mitigation.

Under paragraph 1(b)(i) of the Bali Action Plan, developed countries are to take "[m]easurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives . . . while ensuring the comparability of efforts among them, taking into account differences in their national circumstances."

An early bone of contention was the meaning of "developed countries" and "developing countries"—terms not defined in the Convention. Non-Annex I countries insisted that "developed countries" meant the UNFCCC Annex I countries and "developing countries" meant the UNFCCC Non-Annex I countries. However, a number of Annex I countries—including the U.S.—argued that these meanings were based on the world as it existed in 1990, and that the Annex I and Annex II lists should be updated to reflect the significant economic growth that had occurred in many Non-Annex I countries since 1990. For example, according to the latest (October 2009) International Monetary Fund data, the country with the largest gross domestic product (GDP) per capita (based on purchasing-power-parity)—nearly $88,000—is Qatar, a Non-Annex I country. Thirteen Non-Annex I countries have a GDP/capita larger than that of Portugal, which has the smallest GDP/capita of any Annex II country—less than $22,000. In addition, 59 Non-Annex I countries, including Brazil, South Africa, and China, have a GDP/capita larger than that of Ukraine, which has the smallest

GDP/capita of any Annex I country—less than $6.500.[25] Annex I countries have accepted that the UNFCCC annexes will not be amended during this round of negotiations, but are resisting any formal definition of "developed countries" and "developing countries" that might prejudice future negotiations.

One major unresolved 1(b)(i) issue is the level of "quantified emission limitation and reduction objectives by all developed country Parties." Early in the AWG-LCA (and in the AWG-KP) negotiations, developing countries proposed that developed countries commit to reduce their net GHG emissions collectively by at least 25 to 40 percent below 1990 by 2020. Now, many developing countries are insisting that developed countries reduce their collective emissions by more than 40 percent from 1990 levels by 2020. To date, only Norway has offered to reduce its emissions by 40 percent below 1990 by 2020, but this offer is contingent on an agreement for significant forestry offsets. President Obama's proposal for a U.S. emissions reduction target of 17% below 2005 levels in 2020, the same as the House-passed Waxman-Markey bill (H.R. 2454) would be about 5.5 percent below 1990 in terms of net GHG emissions and 3.4 percent below 1990 in terms of gross GHG emissions.[26]

Another unresolved 1(b)(i) issue is the meaning of the phrase "ensuring the comparability of efforts among them, taking into account differences in their national circumstances." What constitutes "comparability" and "natural circumstances" can be very subjective and highly dependent on the metrics used. Various metrics have been proposed—including net GHG emissions with differing base years (such as 1990 or 2005), emissions per capita, emissions per GDP, and economic cost of mitigation—but there is no agreement of which should be adopted or who would determine such comparability.

Any GHG emission reduction metric is particularly sensitive to the base year. For example, as shown in Appendix 4, the United States increased its overall GHG emissions from 1990 to 2007 by 16.8 percent—a higher percentage than 31 out of the 41 Annex I Parties. However, U.S. GHG emissions grew by only 1.9 percent between 2000 and 2007—a higher percentage than only 16 out of the 41 Annex I Parties.

Comparison of the U.S. and EU proposed net GHG emissions targets for 2020 provides another example of the sensitivity of baselines. As noted above, President Obama's proposal is that U.S. net GHG emissions in 2020 be 17% below 2005 levels, or about 5.5% below 1990. The EU has made a unilateral commitment for its 27 Member States to reduce their 2020 collective net emissions by 20 percent below 1990, which is 6.8 percent below their 2005 levels. So, in the case of a 1990 baseline, the EU's 2020 emissions target of 20 percent below 1990 looks far superior to the U.S.'s 2020 target of 5.5 percent below 1990; but in the case of a 2005 baseline, the U.S.'s 2020 emissions target of 17 percent below 2005 is far more stringent than the EU's 2020 target of 6.8 percent below 2005.[27]

GHG emissions can also fluctuate significantly from year-to-year depending on "natural circumstances," such as the state of the economy. For example, the Energy Information Administration has estimated that U.S. CO_2 emissions declined by 2.8 percent from 2007 in

[25]See Appendix 3.
[26]Net emissions includes emissions from land use, land-use change and forestry (LULUCF); gross emissions exclude LULUCF emissions.
[27]http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/4771.php

2008[28] and will decline by an additional 5.9 percent from 2008 to 2009[29] due to the economic recession.

Under paragraph 1(b)(ii) of the Bali Action Plan, developing countries are to take "[n]ationally appropriate mitigation actions [NAMAs] . . . in the context of sustainable development, supported and enabled by technology, financing and capacity building, in a measurable, reportable and verifiable manner."

Developing countries emphasize that NAMAs should be country-driven, voluntary and supported through measurable, reportable and verifiable (MRV) technology, financing and capacity building from developed countries. They strongly oppose any suggestion that NAMAs be legally-binding in any international treaty, and MRV of any national actions not supported by MRV finance, technology and capacity building.

The U.S. and other developed countries want "advanced developing economies," such as Republic of Korea, Mexico, China, India, Brazil, South Africa, and Indonesia, to have legally-binding targets to reduce their emissions from "business-as-usual" (BAU) growth levels, and to be subject to MRV processes similar to developed countries. Developing countries strongly oppose, arguing this is a requirement for new commitments.

A number of developing countries have come forward with "voluntary" targets, including, most recently, China and India. Both have pledged to voluntarily reduce the intensity of their CO_2 emissions per unit of GDP in 2020 compared with the level of 2005—China offered a 40-45 percent CO_2 intensity reduction target on November 26[30] and India a 20-25 CO_2 intensity reduction target on December 3.[31] The relevant questions are, of course, are these targets better than BAU and what does it mean for their 2020 CO_2 emissions?

The respected International Energy Agency (IEA) in Paris recently published a BAU "Reference Scenario" that takes into account the global recession, new government policies, and expectations in energy prices. IEA projects that between 2005 and 2020, China will reduce its CO_2 intensity by 40 percent and India by 32 percent by 2020, while China's emissions will increase by 89 percent and India's by 174 percent.[32] So China's lower-bound target is at its IEA's BAU, while India's is much less than BAU. In addition, China's and India's combined 2020 CO_2 emissions are projected to increase by more than 5.5 billion metric tons above their 2005 levels, an amount larger than the 2020 U.S. CO_2 emissions.

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[28] http://www.eia.doe.gov/oiaf/1605/flash/flash.html.
[29] http://www.eia.doe.gov/emeu/steo/pub/contents.html#Carbon Dioxide Emissions.
[30] http://www.ccchina.gov.cn/en/NewsInfo.asp?NewsId=20831
[31] http://moef.nic.in/downloads/public-information/LokSabha_trnscript.pdf, p. 18
[32] *CO_2 Emissions from Fuel Combustion (2009 Edition) Highlights*, IEA, October 2009 at http://www.iea.org/co2highlights/co2highlights.pdf and http://www.iea.org/co2highlights/co2highlights.xls, and *World Energy Outlook 2009*, IEA, November 2009.

3.3 Developed country provision of financing and technology to developing countries for mitigation of net GHG emissions and adaptation to climate change

Developing countries have proposed a new climate change fund (or funds) to be set up under the UNFCCC that would be managed and supervised by the COP and an executive body, with a majority of membership from developing countries. The Group of 77 and China, representing 131 developing countries, made an initial proposal that each Annex I country contribute 0.5-1 percent of their GDP annually over and above their current official development assistance to the fund. This would amount to about $200-$400 billion annually for all of Annex I, and some $70-140 billion annually for the U.S. alone. More recently, other developing countries have called for annual Annex I contributions of 2-5.5 percent of GDP.

Developed countries oppose both the developing countries proposed governance structure as well as their proposed funding levels to be financed by Annex I countries. Most developed countries want to work within existing institutions, such as the Global Environment Facility or the World Bank, which have donor-dominated governance structures.

The EU has made the most ambitious Annex I Party funding proposal to date. On October 30, the EU Council, composed of the heads of the 27 EU Member States, endorsed an overall "level of international public support" for developing countries to address climate change of 22-50 billion euros by 2020, with 5-7 billion euros per year for the first three years "following an ambitious agreement in Copenhagen." The Council did not propose a specific level for the EU, but stated that it is "ready to take its fair share."[33]

On technology, developing countries have a proposed a new technology transfer body under the Convention, with decision-making authority and with a majority of membership from developing countries. The body would, among other things, develop and implement a Technology Action Plan, identify barriers to technology transfer—including intellectual property (IP), facilitate developing country access to technologies at "affordable prices," promote cooperation in research and development, build networks of technology centers, and help developing countries develop, make and design their own technologies. Developed countries oppose the establishment of a new technology body with decision-making authority on policies under the Convention, and firmly oppose the inclusion of any IP issues in a global agreement.

3.4 Measurement, reporting, and verification (MRV) of developed and developing country commitments/actions and developed country provision of finance, technology and capacity building

The group of MRV issues is focusing on a number of basic questions, such as:

- What exactly is to be measured, reported and verified, and what criteria/metrics should be used?
- How are developed and developing country commitments/actions and developed country provision of finance, technology and capacity building to be measured, reported and verified?

[33] http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/110889.pdf, pp. 6-7.

- Who does the measuring, monitoring, and reporting?
- How often should such measuring, monitoring, and reporting take place?
- What are the institutional, governance, legal implications?

There is much discussion on the idea of establishing a registry or annex where countries could report on their commitments/actions and/or provision of finance, technology and capacity building, with subsequent monitoring and verification. However, Parties are far from agreement on this idea, as well as on answers to the basic questions above.

3.5 Shared vision for long-term cooperative action

As noted above, the Bali Action Plan calls for a "shared vision for long-term cooperative action" as part of an agreed outcome. This shared vision is to include "a long-term global goal for emission reductions, to achieve the ultimate objective of the Convention, in accordance with the provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities and respective capabilities, and taking into account social and economic conditions and other relevant factors."

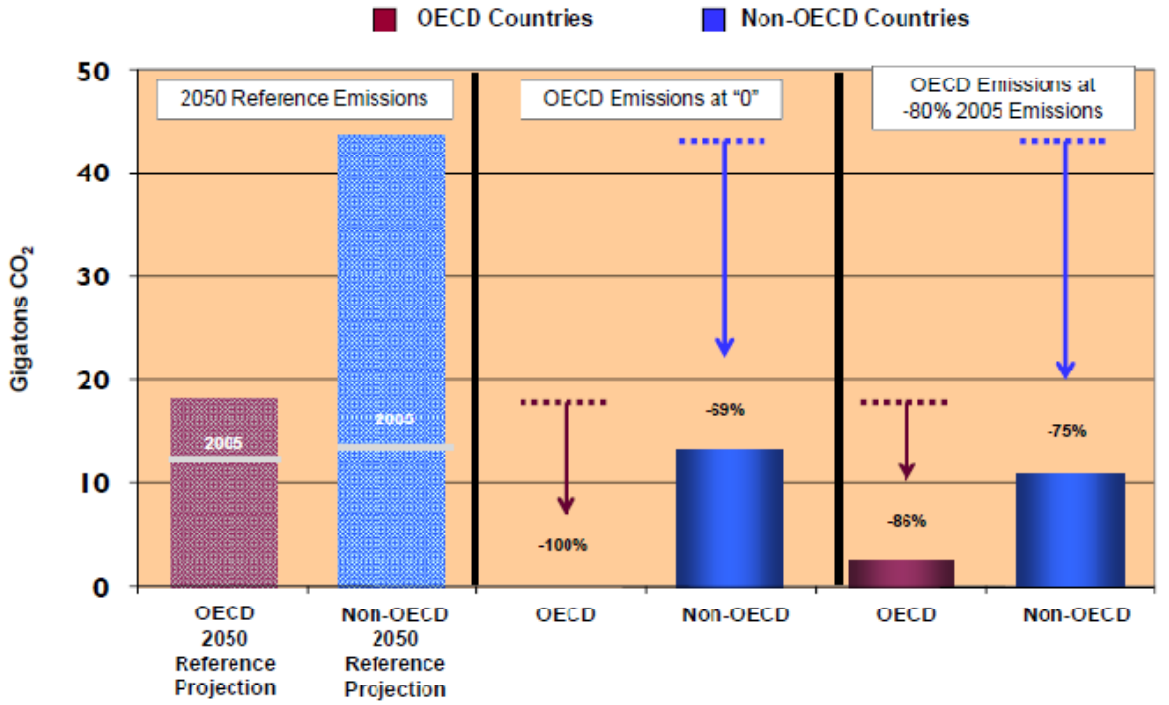
A number of developed countries, such the U.S. and Japan, have proposed that the shared vision be a relatively short political statement that would serve to introduce the four building blocks of the Bali Action Plan (mitigation, adaptation, finance and technology), while many developing countries want a much more elaborate text.

The EU has focused on long-term goal, and has been promoting a number of elements it wants included, such as: (1) a reference to limiting future temperature to rise not more than two degrees Celsius above pre-industrial levels—the so-called 2°C objective; (2) a global emission reductions goal of at least 50 percent by 2050; (3) aggregate developed country emission reductions of at least 80-95 percent by 2050; (4) a near-term peaking of global emissions; and (5) Annex I country emissions reductions commitments for 2020 based on 1990 levels.

The 38 countries who are members of the Alliance of Small Island States (AOSIS) are unhappy with the 2°C objective, as they support a 1.5°C objective.

Many developing countries also oppose the idea of a global emission reduction goal of 50 percent by 2050, for that would require them, as a group, to significantly reduce their emissions from projected levels, and threaten their future economic growth. This is demonstrated in the following figure, based on scenarios for CO_2 emissions from fossil fuel combustion developed by the International Energy Agency.

Annual Gigaton CO_2 and Percent Reductions from 2050 Projected Reference Levels for a Global Emissions Reduction Goal of 50 percent by 2050



Source: International Energy Agency, *Energy Technology Perspectives 2008, Scenarios and Strategies to 2050*. NOTE: Includes CO_2 emissions from energy.

The left panel shows CO_2 emissions levels for OECD (developed) countries and Non-OECD (developing) countries for the year 2005 (which together total 26.6 billion tons (gigatons)), as well as the 2050 projected levels for each. Cutting year 2005 global CO_2 emissions by 50 percent in 2050 would mean a global CO_2 target of 13.3 gigatons. Moving from left to right, we see that even if total developed country CO_2 emissions go to zero in 2050, developing countries would need to cut their total emissions by 69 percent from their 2050 projected level to meet the 13.3 gigaton target. Moving on to the right, the figure includes the case where total developed country CO_2 emissions are reduced by 86 percent in 2050. In this case, developing countries would need to cut their total emissions by 75 percent from their 2050 projected level.

4. What to expect in Copenhagen

The wide differences between and among developed and developing countries on the groups of major issues calls into question how much progress will be made on Danish Prime Minister Rassmussen's proposal of a "political binding" Copenhagen Agreement "[v]ision of 'one Agreement — two purposes'"

However, if the Copenhagen Climate Change Conference follows the pattern of other high-profile UN Climate Change Conferences, such as those in Montréal in 2005 and Bali in 2007, there will likely be moments of high drama with an eventual "Copenhagen Agreement" that will, at a minimum, mandate continued negotiations next year.

Appendix 1: UNFCCC Annex I and Annex II Countries

Annex I Countries	
Australia	Liechtenstein
Austria	Lithuania*
Belarus*	Luxembourg
Belgium	Monaco
Bulgaria*	Netherlands
Canada	New Zealand
Czech Republic	Norway
Denmark	Poland*
European Union	Portugal
Estonia*	Romania*
Finland	Russia*
France	Slovakia
Germany	Slovenia
Greece	Spain
Hungary*	Sweden
Iceland	Switzerland
Ireland	Turkey
Italy	Ukraine*
Japan	United Kingdom (UK)
Latvia*	United States (USA)

*Countries that are undergoing the process of transition to a market economy.

Annex II Countries	
Australia	Italy
Austria	Japan
Belgium	Luxembourg
Canada	Netherlands
Denmark	New Zealand
European Union	Norway
Finland	Portugal
France	Spain
Germany	Sweden
Greece	Switzerland
Iceland	United Kingdom (UK)
Ireland	United States (USA)

Appendix 2: Annex I Parties' Kyoto Protocol Emissions Limitations Commitments for 2008-2012

Party	% Change from 1990	Party	% Change from 1990
Australia	+8	Liechtenstein	-8
Austria	-8	Lithuania*	-8
Belarus*	-8	Luxembourg	-8
Belgium	-8	Monaco	-8
Bulgaria*	-8	Netherlands	-8
Canada	-6	New Zealand	0
Czech Republic	-8	Norway	+1
Denmark	-8	Poland*	-8
European Union	-8	Portugal	-8
Estonia*	-8	Romania*	-8
Finland	-8	Russia*	0
France	-8	Slovakia	-8
Germany	-8	Slovenia	-8
Greece	-8	Spain	-8
Hungary*	-8	Sweden	-8
Iceland	+10	Switzerland	-8
Ireland	-8	Ukraine*	0
Italy	-8	United Kingdom	-8
Japan	-6	United States	-7
Latvia*	-8		

*Countries that are undergoing the process of transition to a market economy

**15 European countries are allowed a "bubble" to meet their -8 percent target collectively, which provides for wide variations among EU countries, as shown in the table below.

EU Member State Kyoto Protocol Emissions Limitations Commitments for 2008-2012 under the EU Bubble

EU Member State	% Change from 1990	EU Member State	% Change from 1990
Austria	-13	Italy	-6.5
Belgium	-7.5	Luxembourg	-28
Denmark	-21	Netherlands	-6
Finland	0	Portugal	+27
France	0	Spain	+15
Germany	-21	Sweden	+4
Greece	+25	United Kingdom	-12.5
Ireland	+13	**EU Bubble Total**	**-8**

Appendix 3. 2009 Gross Domestic Product Based on Purchasing-Power-Parity (PPP) per Capita GDP (Current International dollars)

Annex I Non-Annex I *Non-Party

Rank	Country	GDP/Capita
1	Qatar	87,716.73
2	Luxembourg	78,723.50
3	Norway	53,268.57
4	Brunei Darussalam	50,102.70
5	Singapore	49,433.48
6	United States	46,442.64
7	Switzerland	42,948.46
8	Hong Kong SAR*	42,573.88
9	Ireland	39,441.41
10	Netherlands	39,277.75
11	Austria	38,896.39
12	Kuwait	38,875.59
13	Canada	38,290.31
14	United Arab Emirates	38,283.57
15	Australia	37,302.03
16	Iceland	37,242.52
17	Denmark	36,724.75
18	Sweden	35,934.43
19	Belgium	35,682.80
20	Bahrain	35,561.24
21	United Kingdom	35,164.98
22	Finland	34,461.99
23	Germany	34,219.02
24	France	33,744.45
25	Japan	32,817.23
26	Greece	30,856.11
27	Cyprus	29,898.10
28	Taiwan*	29,828.50
29	Spain	29,527.16
30	Italy	29,289.78
31	Slovenia	28,524.11
32	Israel	28,271.07
33	Korea, Republic of	27,790.60
34	Bahamas, The	26,876.58
35	New Zealand	26,625.46
36	Oman	25,829.28
37	Czech Republic	24,400.50
38	Malta	23,622.34
39	Saudi Arabia	23,387.63
40	Portugal	21,847.54

Rank	Country	GDP/Capita
41	Slovakia	21,373.54
42	Trinidad and Tobago	20,436.81
43	Seychelles	19,274.43
44	Barbados	18,639.30
45	Hungary	18,547.93
46	Antigua and Barbuda	18,160.80
47	Estonia	18,050.56
48	Poland	17,989.30
49	Croatia	17,876.29
50	Equatorial Guinea	16,852.81
51	Lithuania	15,803.47
52	Russia	15,039.05
53	Gabon	14,420.69
54	Libya	14,380.85
55	Latvia	14,304.26
56	Chile	14,299.37
57	Argentina	14,125.57
58	Lebanon	13,951.96
59	Malaysia	13,551.39
60	Mexico	13,541.61
61	St. Kitts and Nevis	13,491.29
62	Botswana	13,416.66
63	Uruguay	13,019.28
64	Venezuela	12,495.92
65	Belarus	12,485.65
66	Mauritius	12,356.23
67	Turkey	12,339.19
68	Bulgaria	11,759.52
69	Romania	11,755.41
70	Panama	11,542.10
71	Kazakhstan	11,369.17
72	Iran	11,201.91
73	Grenada	11,179.25
74	Montenegro	10,832.61
75	Costa Rica	10,572.17
76	St. Lucia	10,547.09
77	Serbia	10,539.77
78	Brazil	10,455.60
79	Dominica	10,403.88
80	St. Vincent and the Grenadines	10,197.75

Rank	Country	GDP/Capita
81	South Africa	9,961.02
82	Azerbaijan	9,352.21
83	Macedonia	9,046.69
84	Jamaica	8,737.21
85	Peru	8,722.88
86	Dominican Republic	8,671.98
87	Suriname	8,317.41
88	Tunisia	8,284.82
89	Colombia	8,205.84
90	Thailand	7,998.45
91	Belize	7,914.33
92	Ecuador	7,719.84
93	Bosnia and Herzegovina	7,489.76
94	El Salvador	7,438.62
95	Albania	7,018.74
96	Algeria	6,854.93
97	Namibia	6,610.35
98	China	6,546.30
99	Ukraine	6,460.74
100	Kiribati	6,310.84
101	Angola	6,179.24
102	Egypt	6,147.12
103	Turkmenistan	5,983.16
104	Swaziland	5,839.31
105	Bhutan	5,792.57
106	Jordan	5,661.98
107	Tonga	5,595.68
108	Samoa	5,445.54
109	Armenia	4,915.73
110	Guatemala	4,882.32
111	Syria	4,857.58
112	Maldives	4,841.56
113	Sri Lanka	4,762.97
114	Georgia	4,747.12
115	Morocco	4,587.11
116	Paraguay	4,550.87
117	Bolivia	4,447.72
118	Vanuatu	4,334.40
119	Honduras	4,167.54
120	Guyana	4,160.95
121	Congo, Republic of	4,155.91
122	Indonesia	4,149.38
123	Fiji	4,120.93
124	Iraq	3,587.59

Rank	Country	GDP/Capita
125	Cape Verde	3,579.73
126	Mongolia	3,566.75
127	Philippines	3,536.22
128	Vietnam	2,932.82
129	India	2,932.49
130	Solomon Islands	2,893.51
131	Uzbekistan	2,805.58
132	Moldova	2,766.37
133	Pakistan	2,670.82
134	Nicaragua	2,654.36
135	Timor-Leste	2,525.65
136	Djibouti	2,495.52
137	Yemen, Republic of	2,474.75
138	Sudan	2,376.43
139	Kyrgyz Republic	2,226.76
140	Laos	2,217.41
141	Nigeria	2,199.08
142	Papua New Guinea	2,174.68
143	Cameroon	2,147.15
144	Mauritania	2,086.09
145	Tajikistan	2,082.77
146	Cambodia	2,018.24
147	São Tomé and Príncipe	1,820.81
148	Senegal	1,751.62
149	Kenya	1,750.82
150	Côte d'Ivoire	1,679.58
151	Chad	1,674.00
152	Benin	1,643.14
153	Ghana	1,571.83
154	Zambia	1,544.01
155	Bangladesh	1,470.39
156	Gambia, The	1,430.05
157	Tanzania	1,414.36
158	Haiti	1,340.05
159	Burkina Faso	1,303.08
160	Lesotho	1,288.21
161	Uganda	1,202.69
162	Myanmar	1,199.78
163	Nepal	1,196.95
164	Mali	1,166.84
165	Comoros	1,162.57
166	Rwanda	1,092.42
167	Guinea	997.566
168	Madagascar	981.148

Rank	Country	GDP/Capita
169	Ethiopia	955.286
170	Mozambique	938.018
171	Malawi	880.883
172	Afghanistan	869.58
173	Togo	822.946
174	Central African Republic	754.367
175	Sierra Leone	746.587

Rank	Country	GDP/Capita
176	Eritrea	738.618
177	Niger	736.055
178	Guinea-Bissau	488.915
179	Burundi	400.75
180	Liberia	378.921
181	Congo, Democratic Republic of	333.839
182	Zimbabwe	8.542

Source: International Monetary Fund, World Economic Outlook Database, October 2009 at http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx

Appendix 4. Percentage Changes in Annex I Greenhouse Gas (GHG) Emissions: 2007-1990 and 2007-2000

Rank	Country	2007-1990 GHG Emissions
1	Latvia	-54.7%
2	Ukraine	-52.9%
3	Lithuania	-49.6%
4	Estonia	-47.5%
5	Belarus	-38.0%
6	Romania	-37.3%
7	Slovakia	-35.9%
8	Bulgaria	-35.6%
9	Russia	-33.9%
10	Hungary	-23.5%
11	Czech Republic	-22.5%
12	Germany	-21.3%
13	United Kingdom	-17.3%
14	Poland	-12.2%
15	Monaco	-9.3%
16	Sweden	-9.1%
17	Belgium	-8.3%
18	France	-5.3%
19	EU-15 Bubble	-4.3%
20	Denmark	-3.3%
21	Switzerland	-2.7%
22	Netherlands	-2.1%
23	Luxembourg	-1.6%
24	Croatia	3.2%
25	Liechtenstein	6.1%
26	Italy	7.1%
27	Japan	8.2%
28	Finland	10.6%
29	Norway	10.8%
30	Austria	11.3%
31	Slovenia	11.6%
32	United States	16.8%
33	New Zealand	22.2%
34	Greece	24.9%
35	Ireland	25.0%
36	Canada	26.2%
37	Australia	30.0%
38	Iceland	31.8%
39	Portugal	38.1%
40	Spain	53.5%
41	Turkey	119.1%

Rank	Country	2007-2000 GHG Emissions
1	Monaco	-18.2%
2	Belgium	-9.5%
3	United Kingdom	-5.4%
4	Germany	-5.2%
5	France	-4.4%
6	Liechtenstein	-4.4%
7	Sweden	-4.0%
8	Netherlands	-3.2%
9	Slovakia	-3.0%
10	Hungary	-2.7%
11	Denmark	-1.6%
12	EU-15 Bubble	-1.4%
13	Switzerland	-0.7%
14	Portugal	0.2%
15	Ireland	0.4%
16	Italy	0.6%
17	United States	1.9%
18	Japan	2.1%
19	Czech Republic	2.4%
20	Poland	2.5%
21	Norway	3.2%
22	Greece	3.7%
23	Canada	4.2%
24	New Zealand	7.0%
25	Russia	8.0%
26	Austria	8.5%
27	Australia	9.4%
28	Bulgaria	9.5%
29	Slovenia	9.6%
30	Ukraine	11.9%
31	Romania	12.4%
32	Finland	12.7%
33	Belarus	12.7%
34	Spain	14.7%
35	Latvia	19.6%
36	Estonia	19.8%
37	Iceland	20.2%
38	Croatia	24.8%
39	Lithuania	28.9%
40	Luxembourg	29.5%
41	Turkey	33.1%

Source: 2009 National Inventory Reports and Common Reporting Formats at [*http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/4771.php*](http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/4771.php)

Appendix 5

Todd Stern
Special Envoy for Climate Change
Statement to the House Select Committee for Energy Independence and Global Warming
September 10, 2009

Thank you Mr. Chairman, Mr. Ranking Member, and members of the Committee for inviting me here today.

I want to thank you and the Committee in particular for all of your work during the past year. The passage of the American Clean Energy and Security Act by the House marked an important milestone in the effort to craft a 21st century energy policy that will galvanize our economy, enhance our security and protect our environment. The passage of your bill, in record time, has had a major impact on the nature of our international discussions. It demonstrates vividly that the United States is serious about climate change and clean energy, and it has clearly strengthened our overall position.

As you requested, I am here today to speak to you and answer your questions about the state of our negotiations on a new international climate agreement. With only three months left before the Copenhagen climate change conference, this is a matter of real importance to President Obama, Secretary Clinton and our whole Administration.

As you know, the problem we face is one of historic proportions. Science tells us that the world is on an unsustainable course. That, indeed, is why we must act with strength and determination at home. But at the same time, the climate challenge is global and the solution must be global. Only through a multilateral solution that involves everyone - and in which key players all contribute - can we solve the problem.

Let me begin by providing you with a brief update on the state of the negotiations, including what the crucial issues are, where we have made progress, where we still face significant challenges, and what we think needs to be done going forward.

As has been the case since I started at State in February, the negotiations we are engaged in revolve primarily around the following issues: mitigation undertakings for both developed and the more advanced developing countries; a regime for measuring, reporting, and verifying all actions taken; the provision of appropriate financial and technology assistance by major economies; and adaptation and forestry issues.

We are concentrating our efforts on three related fronts: the formal negotiating track under the United Nations Framework Convention on Climate Change, the Major Economies Forum for Energy and Climate, and bilateral discussions. In addition, we have also worked closely with our colleagues at the Treasury Department who have recently engaged in a new G-20 process on issues related to climate finance.

Let me say bluntly that the tenor of negotiations in the formal UN track has been difficult. North-South rhetoric still permeates the discussions, as it has for the past seventeen years. Developing countries tend to see a problem not of their own making that they are being asked to fix in ways which, they fear, could stifle their ability to lift their standards of living. Developed countries tend to see an unforgiving problem with potentially grave and irreversible consequences and that cannot be solved without the full participation of developing countries – particularly China and the other emerging market economies. According to the International Energy Agency, 97 percent of the projected increase in global emissions between now and 2030 will come from developing countries.

And yet we must find a way to bridge this developed/developing country divide, which is still the heart of the struggle for an international solution.

The good news – and it *is* good – is that the major developing countries have started recognizing the seriousness of the problem, their own vulnerability to it, and the need for global action. In some cases, they are taking action at the federal level that outstrips our own.

China, for example, has demonstrated a growing commitment to clean energy in the past several years. China's current five year plan includes the goal of reducing the energy intensity of the economy by 20% by 2010 and the aim of increasing the share of renewable energy in the primary energy supply to 15% by 2020. China has implemented increasingly stringent auto emissions standards. And there are many other initiatives underway.

India last year launched its first-ever National Action Plan on Climate Change. This plan outlines existing and future climate change mitigation and adaptation policies and programs. As part of this effort, India will soon launch a "National Solar Mission" to reach 20 gigawatt s of solar capacity by 2020, which would be more than twice the current installed capacity in the United States. India has announced plans to bring one-third of its land under forest cover by 2012, and it will also soon announce a new national energy efficiency plan to upgrade energy efficiency standards and building codes.

Brazil is already an enviable model in many ways, as the world's major economy least dependent on fossil fuels. Brazil gets more than 40% of its energy from hydropower and it is a global leader in producing sugar cane ethanol. Brazil's challenge revolves fundamentally around deforestation. To address that problem, the Brazilian government is seeking to reduce deforestation 70% by 2017, which would dramatically reduce emissions.

South Africa has announced a national long-term mitigation strategy, aimed at stopping emission growth by 2025. Unlike Brazil, South Africa has a fossil fuel heavy energy portfolio. Coal provides about 88% of its total primary energy, and supports about 90% of electricity. Measures contained in the plan include ambitious mandatory energy efficiency targets and expanded renewable and nuclear generation by 2025.

In short, many of the biggest developing countries are focusing on climate change and taking, or starting to take, significant action. The challenge – and make no mistake, it is a real one – is to convince these and other countries that they must both step up their activities and reflect them in an international agreement. I have said on occasion that countries like these are often willing to *do* more than they are willing to *agree* to do. But we can't get an international deal done unless they are willing to *agree* in an international context.

The other relatively positive news this year has come from the Major Economies Forum, launched by President Obama earlier this year to provide an opportunity for more candid discussions than is possible in the 190-nation UNFCCC negotiations.

After four preparatory sessions and a Leaders-level meeting in L'Aquila, Italy, the MEF has indeed proven to be a useful venue. The Leaders Declaration at L'Aquila included several important points: (1) a pledge by developing countries to promptly undertake actions whose effect on emissions would represent a meaningful deviation from business as usual in the midterm; (2) agreement to prepare "Low Carbon Growth Plans;" (3) agreement that emissions should peak as soon as possible (while recognizing development imperatives); (4) recognition of the scientific view that the increase in global temperatures ought not to exceed 2ºC; (5) agreement on broad principles for financing related to climate change; and (6) agreement to launch a work program on transformational technologies.

This is meaningful progress, and we will seek to build upon it in the weeks ahead by continuing to meet at the level of leaders' representatives in September, October, and November.

On the bilateral track, we have engaged in dozens of private discussions with key countries to delve into the particulars of our respective concerns and generate ideas for moving forward. These conversations also are an opportunity to discuss the important role that this issue plays in our overall bilateral relationships. This was evident in the US-China Strategic and Economic Dialogue that took place in June, where climate change was the featured issue in the joint opening session. We left no doubt that we consider climate and clean energy to be central to the US-China relationship.

In brief, then, we have made some progress this year and there is a positive foundation in many key countries from which to work. And yet time is short and the negotiations have still, too often foundered as a result of the, been developed/developing country divide.

In light of all this, what do we have a right to expect of China and the other major developing countries? They must take actions that will significantly reduce their emissions below their so-called "business-as-usual" path in the mid-term (around 2020), to an extent consistent with what is called for by the science; they must reflect these actions in an international agreement, just as we must reflect our own undertakings; and these actions must be subject to a strong reporting and verification regime. And all countries, developed and developing, major and lesser, must, with assistance where needed, develop low-carbon growth plans to steer the course of their future development and put the world on the path to a low-carbon global economy.

At the same time, we cannot expect developing countries – or indeed any country – to commit to actions that they cannot plausibly achieve or to make promises that are antithetical to their need to fight poverty and build a better life for their citizens. We have to send the message, in word and deed, that the effort to reach a new climate change agreement is not simply about putting a cap on emissions, it is about development – low-carbon development. Countries that would cling to the old developing world adage that development must precede environment make a fundamental error: in the world we inhabit now, the only *sustainable* development is low-carbon development.

And what do other countries, whether developed or developing have a right to expect from us? Frankly, that we stand and deliver. That we apply the global leadership that is our hallmark to an issue of profound, generational meaning. The steps President Obama and Congress have taken already – including the $80 billion for clean energy investments in the stimulus package and the new joint tailpipe fuel economy standards that EPA and DOT pledged to issue – are important but are just the beginning.

The centerpiece is the comprehensive energy and climate legislation that bears your name, Mr. Chairman, and that the House passed in May. That's what puts in place a national law to limit our emissions and that puts us on a pathway toward a low-carbon economy that will create jobs across a range of emerging clean energy sectors. It is critical that the Senate now do its part to move this process forward in a timely manner. Nothing the United States can do is more important for the international negotiation process than passing robust, comprehensive clean energy legislation as soon as possible.

The United States can also be expected to play a key role in helping to provide support to countries in need for technology and adaptation. We must make the development and dissemination of technology a top priority in order to help bring sustainable, low-carbon energy services to people around the world, and we must do so in a way that recognizes the importance of protecting and enforcing intellectual property rights.

In this respect, the adoption of appropriate financing provisions is pivotal to getting a deal, and I hope that the Senate takes this into account as it develops its own version of a bill. This is not charity. It is squarely in our national interest to help ensure that all countries -- not simply the ones that already have the necessary infrastructure and resources at their disposal – pursue a clean development pathway. As has been often said, this is not at all like local environmental problems. The CO2 emitted in the Middle East hurts us as much as the CO2 emitted in the Mid-West.

Moreover, the national security threats posed by climate change are real. As detailed in a recent front page story in the *New York Times*, discussing the rising concerns of the national security community, a world of uncontrolled climate change – with ever worsening storms, droughts, floods, the increased spread of disease; melting glaciers, rising sea levels, and more severe shortages of food and water – means a world of new and intensified security threats as millions of people are displaced, states are destabilized, and competition for resources intensifies.

In short, we have a lot of work to do this fall. The Congress has a crucial role to play on the domestic front. And internationally, we will be engaged full-out on all three of our fronts - the UN talks, the Major Economies Forum, and bilateral consultations with every relevant country and country block. President Obama and the Secretary of State, along with our entire Administration, are committed to action on this issue.

We are approaching this issue with the sense of urgency that it demands and are determined to do all we can to make the progress that is necessary to have a successful outcome in Copenhagen. Mr. Chairman, the world is going to make history over the course of the next months and years. We will either make it for the right reasons - because we found common ground and set ourselves on a path toward a new, sustainable, low-carbon model; or for the wrong reasons - because we blinked at the moment of truth and left our children and grandchildren to face the consequences. We have to get this right.

Thank you, and I look forward to answering any questions you might have.

Appendix 6

Questions for the Record Submitted to
Special Envoy Todd Stern by
Representative James Sensenbrenner, Jr.
House Select Committee on Energy Independence and Global Warming
September 10, 2009

Question 1: Would the Administration treat a Copenhagen climate deal, if one will be reached, as an Article II Treaty that required the advice and consent by 2/3 of the Senate?

Answer: Our expectation is that a new legal instrument under the Framework Convention would be sent to the Senate for advice and consent to ratification. We continue to press for such an instrument in Copenhagen, including legally binding mitigation commitments from all major economies.

Question 2: During the September 18, 1992 hearing on the United Nations Framework Convention on Climate Change (UNFCCC), the U.S. Senate Committee on Foreign Relations asked the George H.W. Bush Administration whether protocols and amendments to the Convention and to the Convention's Annexes would be submitted to the Senate for its advice and consent. The George H.W. Bush Administration responded:

> **"Amendments to the convention will be submitted to the Senate for its advice and consent. Amendments to the convention's annexes (i.e., changes in the lists of countries contained in annex I and annex II) would not be submitted to the Senate for its advice and consent. With respect to protocols, given that a protocol could be adopted on any number of subjects, treatment of any given protocol would depend on its subject matter. However, we would expect that any protocol would be submitted to the Senate for its advice and consent."[34]**

Does the Obama Administration agree with the George H.W. Bush Administration's response? If not, why not?

Answer: Yes, we agree with this response.

Question 3: During the September 18, 1992 hearing on the UNFCCC, the U.S. Senate Committee on Foreign Relations also asked whether a protocol containing targets and timetables for emissions reductions would be submitted to the Senate. The George H.W. Bush Administration responded:

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[34]Hearing before the Senate Committee on Foreign Relations, 100th Cong., 2d Sess. (Sept. 18, 1992) at 105 (appendix).

> **"If such a protocol were negotiated and adopted, and the United States wished to become a party, we would expect such a protocol to be submitted to the Senate."[35]**

Does the Obama Administration agree with the George H.W. Bush Administration's response? If not, why not?

Answer: Yes, we agree with this response.

Question 4: The Senate did not attach any formal conditions to its resolution of ratification for the Convention. But the report of the Senate Committee on Foreign Relations on the resolution stated:

> **"The Committee notes that a decision by the Conference of the Parties to adopt targets and timetables would have to be submitted to the Senate for its advice and consent before the United States could deposit its instruments of ratification for such an agreement. The Committee notes further that a decision by the executive branch to reinterpret the Convention to apply legally binding targets and timetables for reducing emissions of greenhouse gases to the United States would alter the 'shared understanding' of the Convention between the Senate and the executive branch and would therefore require the Senate's advice and consent" [36]**

The Committee made clear, in other words, its view that "[t]he final framework convention contains no legally binding commitments to reduce greenhouse gas emissions" and its intent that any future agreement containing legally binding targets and timetables for reducing such emissions would have to be submitted to the Senate.

The George H.W. Bush Administration concurred with that view and agreed to submit any such agreement to the Senate. That commitment was cited during the Senate debate on the resolution of ratification as an important element of the Senate's consent.[37]

Does the Obama Administration concur with the George H.W. Bush Administration's response? If not, why not?

Answer: Yes, we agree that the Convention's "aim" to reduce greenhouse gases to 1990 levels in the year 2000 was not legally binding and that a reinterpretation of that provision to constitute a legally binding target would warrant the Senate's advice and consent.

Question 5: On June 4, 2009, the U.S submitted a "proposed implementing agreement" to the UNFCCC.

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[35] *Id.* at 106.
[36] S. Exec. Rep. No. 102-55 at 14.
[37] 138 Cong. Rec. S 17150 (daily ed. Oct. 7, 1992) (statement of Sen. McConnell).

Question 5.1: Does the Administration intend for its "Proposed Implementing Agreement" to be legally-binding, including the appendixes?

Answer: Many provisions of the proposed Implementing Agreement would be legally binding. For example, Article 1.1 on mitigation (Parties "shall" implement…) would be legally binding. Whether an appendix is legally binding depends upon the structure and language of that appendix. Mitigation actions listed in the appendix would be legally binding by virtue of Article 1.1 (not the appendix per se), while the provisions in the adaptation appendix, for example, would not (Parties "should"…).

Question 5.2: If the Conference of the Parties (COP) were to adopt such an implementing agreement, is the Administration committed to submitting it to the United States Senate for its advice and consent?

Answer: Our expectation is that such an agreement would be sent to the Senate for advice and consent.

Question 5.3: What is the rationale for proposing an "implementing agreement" in the form of a protocol under Article 17.2 of the Convention, rather than as a decision or an amendment under Article 15 of the Convention?

Answer: In Bali, when the mandate for the negotiations was decided, there were differences among Parties whether there should be an entirely new legal instrument, at one extreme, or a non-legally binding COP decision, at the other. We intended for the idea of an implementing agreement, which elaborated existing specifically-referenced provisions of the FCCC, to provide a possible middle ground. We did not consider an amendment to be a viable option, given that, per Article 15 of the FCCC, the entry into force requirements for an amendment do not ensure that the key countries would have ratified.

Question 5.4: Why did the Administration decide that an "implementing agreement" to the UNFCCC is the best legal instrument to further "implement" the Convention?

Answer: See answer 5.3 above.

Question 5.5: What does the Administration believe to be the legal, policy and procedural advantages to the U.S. of this choice? Alternatively, what are the potential disadvantages?

Answer: Legal and procedural advantages include, for example, that the entry into force provision can be crafted *de novo* (unlike in the case of an amendment) and that provisions can be made legally binding (unlike in the case of a COP decision, generally speaking). Policy advantages are noted in the answer to Q 5.3.

Question 6: The "Introductory Comments" to the U.S. Proposed Implementing Agreement to the UNFCCC states that the U.S. "*is committed* to reaching a *strong international*

agreement **in Copenhagen based on** ***both the robust targets and ambitious actions*** **that will be** ***embodied in U.S. domestic law*** **and on the** ***premise*** **that the agreement will** ***reflect the important national actions of all countries*** **with significant emissions profiles to** ***contain*** **their respective emissions". (Emphases added) .**

Question 6(a): What does the word "contain" in the above quote mean in regards to other countries' emissions?

Answer: As set forth in the July Declaration of the Major Economies' Leaders, we would expect the major developing countries to undertake actions whose projected effects on emissions represent a meaningful deviation from business as usual in the midterm.

Question 7: The term "in conformity with domestic law" used in Article 2.1(a) of the U.S. proposed Implementing Agreement appears to be overly vague, uncertain, open to wide interpretation, and likely to have uneven or inconsistent application from country-to-country, all of which could lead to establishing economic and competitive advantages and disadvantages for UNFCCC Parties.

Question 7.1: How would/could each Party's domestic law be incorporated into any UNFCCC agreement that would be legally binding, particularly if that law does not exist when the COP adopts such an agreement?

Answer: Domestic laws would be incorporated by reference, as has been done in other international environmental agreements. A U.S. legally binding commitment would not be finalized absent legislation.

Question 7.2: How does the U.S. contemplate such domestic law would be referenced in, or by, the U.S. in the proposed implementing agreement?

Answer: See answer above.

Question 7.3: What would happen if the U.S. or any other Party's domestic law is amended or otherwise changed?

Answer: The issue of updating and/or revising mitigation actions is still under discussion internationally.

Question 8: As I understand the Administration's proposed Implementing Agreement, Article 2.1 calls for developed countries to take on binding targets and timetables "in conformity with domestic law," while Article 2.3 calls for developing countries "with greater responsibility or capability" to take actions that might or might not lead to emissions reductions. Article 2.4 calls for "[o]ther developing countries" to implement

actions . . . consistent with their capacity." In all cases, countries are to develop low-carbon strategies.

Question 8.1: Are all of these Articles intended to be legally-binding?

Answer: Under Articles 1 and 2, developed and more advanced developing countries have the most legally binding commitments; other developing countries have fewer, with the least developed countries having no legally binding commitments, so it depends upon the type of Party in question.

Question 8.2: What is the enforcement mechanism?

Answer: We do not favor an enforcement mechanism, such as that under the Kyoto Protocol, with an enforcement branch and consequences for non-compliance. Such a regime would raise issues of intrusiveness for the United States, even if other countries favored such an approach. Rather, consistent with the Bali mandate from 2007, we are focusing transparency and accountability through measurement, reporting, and verification.

Question 8.3: What would be the penalties for failure to meet the requirements of this Article?

Answer: See answer above.

Question 9: Developing countries are leading efforts to weaken or even destroy intellectual property rights (IPR) by seeking to gain free access to American and other developed countries IPR for clean-energy technologies. Their proposals include preventing patenting in developing countries, requiring compulsory licensing, and ensuring access to new technologies on non-exclusive royalty-free terms. All of which ignore the fact that new technologies will only be developed if there are incentives to create them. Is the Administration committed to protecting our IPR from this assault?

Answer: It is our view that protecting and enforcing intellectual property provides an essential foundation for the development and deployment of environmentally sound technologies. Robust IPR regimes support investment in and the diffusion of environmentally sound technologies—IP protection gives companies the confidence to engage in FDI, joint ventures, partnerships and licensing arrangements with local partners; to establish local operations and work with local manufacturers and suppliers; and to open research facilities in markets abroad. In short, intellectual property protections foster creativity and innovation, and contribute to economic development and improved quality of life around the world. In addition, the sustained innovation and competition that result from adequate and effective IPR regimes will drive down the cost, increase the accuracy of market pricing, and improve the quality of products over time—all of which are fundamental to solving the energy challenge. Clear and transparent

policies with regard to the protection and enforcement of intellectual property rights, along with a predictable and stable legal system, consistent contract enforcement, and responsible and consistent environmental policies will increase all countries' ability to gain increased access to cutting-edge clean energy technologies.

The Administration will not support any language in the UN Framework Convention on Climate Change (UNFCCC) that seeks to undermine or weaken protection and enforcement of intellectual property rights. We will not support it in a Copenhagen outcome. We have made this very clear in the negotiations, where we have argued intellectual property is an essential building block for technology innovation that we will need if we are to achieve the ultimate objective of the Convention. Undermining the intellectual property system, as has been suggested by various proposals, will only hinder the development and diffusion of new environmentally-sound technologies.

Question 10: On September 10, 2009, the European Commission released a Communication entitled "Stepping up international climate finance: A European blueprint for the Copenhagen deal," which presents a blueprint for scaling up international finance to help developing countries combat climate change.[38]

According the Communication, the Commission's "best estimate" of "finance requirements for adaptation and mitigation actions in developing countries could reach roughly €100 [$146] billion per year by 2020," and "international public funding in the range of €22 to 50 [$32 to $73] billion per year should be made available in 2020," which would be "shared out on the basis of ability to pay and responsibility for emissions and include economically more advanced developing countries." The Communication also states that "[o]n the basis of these assumptions, the EU share would be from around 10% to around 30% depending on the weight given to these two criteria" and "could therefore be between €2 to 15 [$3 to $22] billion per year in 2020."

The Communication also includes a proposal to introduce a global emissions trading system for international aviation and shipping or a tax on their emissions as a source of financing.

Question 10.1: Does the Administration agree with the Commission's "best estimate" that "finance requirements for adaptation and mitigation actions in developing countries could reach roughly €100 [$146] billion per year by 2020"?

Answer: While agreeing that the existing levels of available resources need to be scaled up significantly, the Administration does not endorse any particular estimate of finance requirements. We note that many studies of climate finance needs exist, employing widely varying methodologies to arrive at their aggregate figures.

[38] See http://ec.europa.eu/environment/climat/pdf/future_action/com_2009_475.pdf.

Question 10.2: Does the Administration agree with the Communication statement that such international public funding should be "shared out on the basis of ability to pay and responsibility for emissions and include economically more advanced developing countries" and if so, what should be the U.S. share?

Answer: See answer 10.1 above.

Question 10.3: Does the Administration agree with the Communication statement that such international public funding should be "shared out on the basis of ability to pay and responsibility for emissions and include economically more advanced developing countries" and if so, what should be the U.S. share?

Answer: All countries are already expending resources to address the challenges of climate change mitigation and adaptation. Going forward, significant funding will continue to come from countries' own resources, including developing countries. The Administration believes that all countries but the least developed should contribute to the effort to mobilize international public funding, in line with their capacities. We do not believe it will be constructive to mandate a specified level of contributions from each country according to a formula or mandatory scale of assessment. However, the United States is clearly a country of high capability, and should be ready to play an enhanced role in climate financing in a manner appropriate to our capabilities and consistent with our standing in the global community.

Question 10.4: Does the Administration support the European Commission's proposal to introduce a global emissions trading system for international aviation and shipping or a tax on their emissions as a source of financing?

Answer: Our position on various proposals to establish levies on international aviation and maritime activities is consistent with Congressional guidance. In international negotiations, we have been clear that the United States will not be able to participate in any arrangement that sought to impose international taxes and levies on all countries.

Question 11: You mention on page 3 of your submitted written testimony that the Major Economies Forum will continue "to meet at the level of leaders' representatives in September, October, and November."

Question 11.1: What are the dates and venues of each of those meetings?

Answer: The Major Economies Forum met September 17-18 in Washington and October 18-19 in London. A date and venue for a possible meeting in November is still under consideration.

Question 11.2: What do you plan to accomplish?

Answer: The meetings provide an opportunity for a detailed and candid conversation among leaders' representatives about key elements of agreement for Copenhagen. While the MEF is not a negotiating venue, these discussions can help provide greater clarity on approaches different parties are promoting, and can in turn help us build support for the outcomes we seek.

The meetings also are reviewing progress on the development of action plans on specific clean energy technologies, and other technology-related efforts called for by MEF leaders at their summit in L'Aquila in July.

Question 12: At the bottom of page 3 of your submitted written testimony, you state that "China and the other major developing countries . . . must take actions that will significantly reduce their emissions below their so-called 'business-as-usual' path in the mid-term (around 2020), to an extent consistent with what is called for by the science; they must reflect these actions in an international agreement, just as we must reflect our own undertakings; and these actions must be subject to a strong reporting and verification regime."

Question 12.1: "Business-as-usual paths" include assumptions of GDP and population growth rates, population, penetration of low-carbon energy sources, energy efficiency improvements, and so on, as well as differences in model assumptions, model structure and data, and scenario definitions. How does one determine the "business-as-usual path?" Who would make that determination?

Answer: The U.S. will evaluate major developing country actions using a range of analytical tools including energy demand and emissions projections from U.S. and international institutions such as the Energy Information Administration and the International Energy Agency.

Question 12.2: What is the level of emissions reductions of these countries below their so-called "business-as-usual" path that would be "consistent with what is called for by the science"?

Answer: The U.S. will assess the impact of actions of major developing countries on an ongoing basis, both in the context of actions by developed countries and the latest climate science, to assess the adequacy of global action in meeting the climate change challenge. Meaningful and verifiable mitigation efforts in major developing economies are absolutely necessary if we are to achieve the scientifically-recognized target to halve global emissions by 2050.

Question 12.3: Who would determine these emissions reductions levels and how would they be verified?

Answer: The actions taken by major developing countries to reduce emissions would be derived from their own domestic processes, as would ours, and would be subject to international scrutiny before an international agreement, in which these actions are inscribed, is finalized. These

actions would be reported to the international community in a credible and transparent manner to allow countries to assess the adequacy of global efforts to combat climate change. See answer to Q 12.4 below with regard to verification.

Question 12.4: What is the Administration's view of a "strong reporting and verification regime?" What organization is responsible for verification? What penalties would exist for a failure to report?

Answer: The U.S. sees the need for a strong system for measurement, reporting and verification (MRV) that would provide enhanced international transparency and credibility, and a process that would encourage and facilitate implementation of Parties' actions. Under the UNFCCC, the U.S. has proposed an MRV system that includes enhanced reporting (including robust and more frequent inventories, strategies, and national communications), a review by an expert panel, and a formal review by Parties. With regard to penalties, see answer to Q 8.2 [above].

Question 13: On page 4 of your testimony, you state that "[w]e must make the development and dissemination of technology a top priority in order to help bring sustainable, low-carbon energy services to people around the world, and we must do so in a way that recognizes the importance of protecting and enforcing intellectual property rights." How specifically do you propose to do that?

Answer: To promote both technology R&D and commercialization of clean technologies, we must examine how best to provide the necessary incentives and help to reduce risks. This may include programs by export credit agencies, as well as through loan guarantees and through a variety of development institutions and agencies. These efforts are, in our view, national and bilateral. We believe the UNFCCC should promote countries to undertake such activities. On deployment—we need a large-scale deployment of existing technologies, and here we see a role for all our governments in establishing laws and policies that can drive massive investment at the scales we need them to make the transition. Here, we emphasize the importance of efficient and effective market signals, including the growth and expansion of the carbon market both domestically and through this process. We see a role for the UNFCCC in facilitating and delivering on deployment efforts. Copenhagen should play a major role in advancing our efforts across this spectrum. A climate change agreement can and must enable us to pursue and support clean technology development and dissemination at a larger scale.

Question 14: On page 4 of your testimony, you also state that "the adoption of appropriate financing provisions is pivotal to getting a deal." Please define what would be "appropriate financing provisions."

Answer: All countries except the least developed should act in accordance with the demands of science and their capabilities. Many, if not all, of these actions, particularly in the more advanced developing countries, would be self-financed. Some countries would, in proportion to their needs, receive international support for implementing their actions. It is therefore clear that

mobilizing substantially scaled-up international financial resources will be necessary — both public and private finance. The international financing provisions of Waxman-Markey are important in this regard, and should be retained.

Appropriate financing provisions include strengthening existing institutions and delivery channels for climate finance, both bilateral and multilateral. They may also include new arrangements to channel scaled-up public financing in an efficient and effective manner according to strong fiduciary standards. The financing provisions should leverage private capital wherever possible, both by encouraging national mitigation policies that create a carbon price signal and by designing public funding institutions that attract private co-financing.

Question 15: The water cycle will be one place where climate change shows itself most significantly. With water and sanitation already a challenge for many of the poorest nations around the world, how is this being factored into the international climate negotiations? It is clear that the impacts of climate change will be felt in all sectors — including both in water and in sanitation.

Answer: The impacts of climate change are felt disproportionately by the poor and most vulnerable. We anticipate that agreement in Copenhagen will include language promoting more effective approaches to adaptation, including through galvanizing climate resilient development, calling for all countries to institute better climate adaptation planning, and providing new sources of financial assistance to the most vulnerable.

This particularly applies to countries in Africa, Asia and Central America who are the hardest hit. Basic human health needs, in particular those in water and sanitation, are high on our own — and on all nations' — priorities for adaptation funding and support.

Question 16: What are the impacts on international negotiations of the United States either passing or not passing climate legislation reducing our emissions?

Answer: Passing domestic legislation on climate change is enormously important to the international negotiations and our international reputation. Other countries are looking to our domestic actions to evaluate the seriousness of our intentions. Passing strong legislation will show U.S. commitment and leadership and dramatically increase our leverage in negotiations.

Question 17: What are the next steps for an international climate treaty if we don't reach agreement in Copenhagen?

Answer: The United States is fully committed to trying to get a strong, pragmatic and solid agreement in Copenhagen and the administration is working tirelessly to do so. There is still work to be done, but we think there's a deal to be done and we're committed to trying to make that happen.

Question 18: In the legislative discussions of a climate bill there have been a number of options raised to protect US industry from potentially unfair competition. Based on your discussions, do you see some mechanisms as being more acceptable to the developing world and should these trade protections be part of a climate treaty?

Answer: The Administration believes that the most effective approach to prevent carbon leakage is to negotiate a new international climate change agreement that ensures that all the major emitters take significant actions to reduce their greenhouse gas emissions. Recent legislation provides for so-called border adjustments. We will review the need for such an approach. Countries like India and China have reacted negatively to the idea of U.S. border adjustments.