



**The Road to Copenhagen and Beyond:
Elements of a Global Climate Deal between
Developed and Developing Countries**

Testimony of Ned Helme
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before the
Senate Committee on Foreign Relations

April 22, 2009

Mr. Chairman, Ranking Member Lugar, and Members of the Committee: I would like to thank you for the opportunity to testify before you today. My name is Ned Helme and I am the President of the Center for Clean Air Policy (CCAP), a Washington, DC and Brussels-based environmental think tank with on the ground programs in New York, San Francisco, Mexico City, Beijing, Jakarta and many other places.

Since 1985, CCAP has been a recognized world leader in climate and air quality policy and is the only independent, non-profit think-tank working exclusively on those issues at the local, national and international levels. We are committed to advancing pragmatic and market-based climate solutions that balance both environmental and economic interests.

CCAP is actively working on national legislation in the United States (U.S.) and is advising European governments as well as developing countries such as China, Brazil, and Mexico on climate and energy policy. Our behind the scenes dialogues educate policymakers and help them find economically and politically workable solutions. Our Future Action Dialogue provides in-depth analyses and a “shadow process” for climate negotiators from 30 nations around the world to help them develop the post-2012 international response to climate change. It has produced important agreements among key nations on emissions trading, the design of the United Nations’ Clean Development Mechanism, and key features of the Bali Action Plan.

In our work with the developing countries, nationally appropriate mitigation actions in key sectors (focusing on major industrial sectors and forestry) have emerged as the most promising approach to the post-2012 international climate change agreement because they both raise the bar on developing countries’ performance and fit well with how developing countries view their role in an international agreement.

In December of this year, all eyes will be on Copenhagen, Denmark, where we have the first opportunity to reach a truly global accord on climate change mitigation and adaptation.

In my time today, I would like to emphasize a few key points:

- The Bali Roadmap is the breakthrough developed countries have been waiting for that makes the agreement in Copenhagen most likely very different from the agreement in Kyoto in 1997 and will bring meaningful developing country actions into the agreement.
- Developing countries are taking action already and are prepared to take additional measurable, reportable and verifiable actions contingent on receiving support from developed nations for capacity building, technology and finance.
- The objective in Copenhagen is to agree on new green house gas (GHG) reduction goals along with a new architecture to govern developing country action in the post-2012 framework, and
- The willingness of the U.S. and other developed countries to propose and enact meaningful domestic national emissions reduction targets and provide financing to support additional developing country action are the linchpins for a successful outcome in Copenhagen.

1. An historic opportunity: The Bali Action Plan raises the bar for developing country participation in a global climate pact

The U.S., as almost all other countries of the world, is a signatory to the 1992 United Nations Framework Convention on Climate Change (UNFCCC). The U.S. Senate ratified the treaty in 1994. The UNFCCC calls for international climate policy “to prevent dangerous anthropogenic [human] interference with the climate system” (UNFCCC, Art. 2). To prevent dangerous climate change, the Intergovernmental Panel on Climate Change calls for keeping worldwide temperature increase below 2°C (3.6°F) during the course of this century.

The Bali Action Plan, which the U.S. and other developed and developing countries agreed upon in December 2007, makes the negotiations going into Copenhagen notably different than those in 1997 in Kyoto. The Bali Action Plan builds on the key principle in Article 3 of the United Nations Framework Convention on Climate Change (UNFCCC), “The Parties should protect the climate system...on the basis of equity and in accordance with their **common but differentiated responsibilities and respective capabilities.**”

However, it goes much further and establishes for the first time that the negotiation process will cover both developed and developing country actions to mitigate climate change. It also importantly sets up much stronger accountability by calling for developing countries to consider: “Nationally appropriate mitigation actions ... in the context of sustainable development, supported and enabled by technology, financing and capacity-building, **in a measurable, reportable and verifiable manner**”. In effect, both the actions and the support are to be measured, reported, and verified. It is important that we understand this link as the basis of the Copenhagen deal.

The UN talks earlier this month in Bonn, Germany were the first in a series of meetings this year scheduled in the run-up to Copenhagen. The next round of negotiations will be held in Bonn, Germany, on June 1-12, followed by several other 85 meetings before December. In June, the first drafts of negotiating texts for the Copenhagen agreement will need to be on the table, as UNFCCC rules require.

The accord in Copenhagen is likely to be an agreement on the basic policy architecture for both developed and developing countries for action beginning in 2013. Many of the details of the accord will be worked out during 2010 and 2011 (the same way the Marrakech Accords were for the Kyoto Protocol). The agreement can be expected to have three critical components:

- Developed country absolute emission reduction commitments for 2020 and possibly 2030.
- A new architecture for developing country actions and their finance and verification, and
- Developed country financing commitments for clean technology, deforestation and adaptation to help developing countries go beyond their voluntary/unilateral reduction commitments.

The process will also need to have produced a strong sense of the overall scope of likely developing country actions and of the aggregate emissions reductions that can be expected from those actions.

The Chinese Minister and Vice-chairman of the National Development and Reform Commission (the most powerful Chinese Agency), Mr. XIE Zhenhua, in his recent visit to Washington D.C. referred to this basic new agreement framework by describing that China would toughen and extend to 2020 their already bold goal of improving energy intensity by 20 percent across the economy by 2010 and increase their 15 percent renewable energy 2020 target in return for financial assistance to develop advanced innovative technologies.

2. Developing countries' actions and elements of a globally acceptable climate deal

CCAP's extensive policy work in key developing countries has shown that developing countries are doing more to reduce the growth in their emissions than conventional wisdom here in the United States would suggest. China, Brazil and Mexico have already put in place national laws that collectively, if fully implemented, will reduce the projected growth in emissions by more aggregate tons in 2010 than the reductions the Lieberman-Warner bill (S. 2191 of the 110th Congress) was projected to achieve by 2015 and by almost as many tons as the European Union's 30 percent reduction pledge for 2020 (Figure 1).

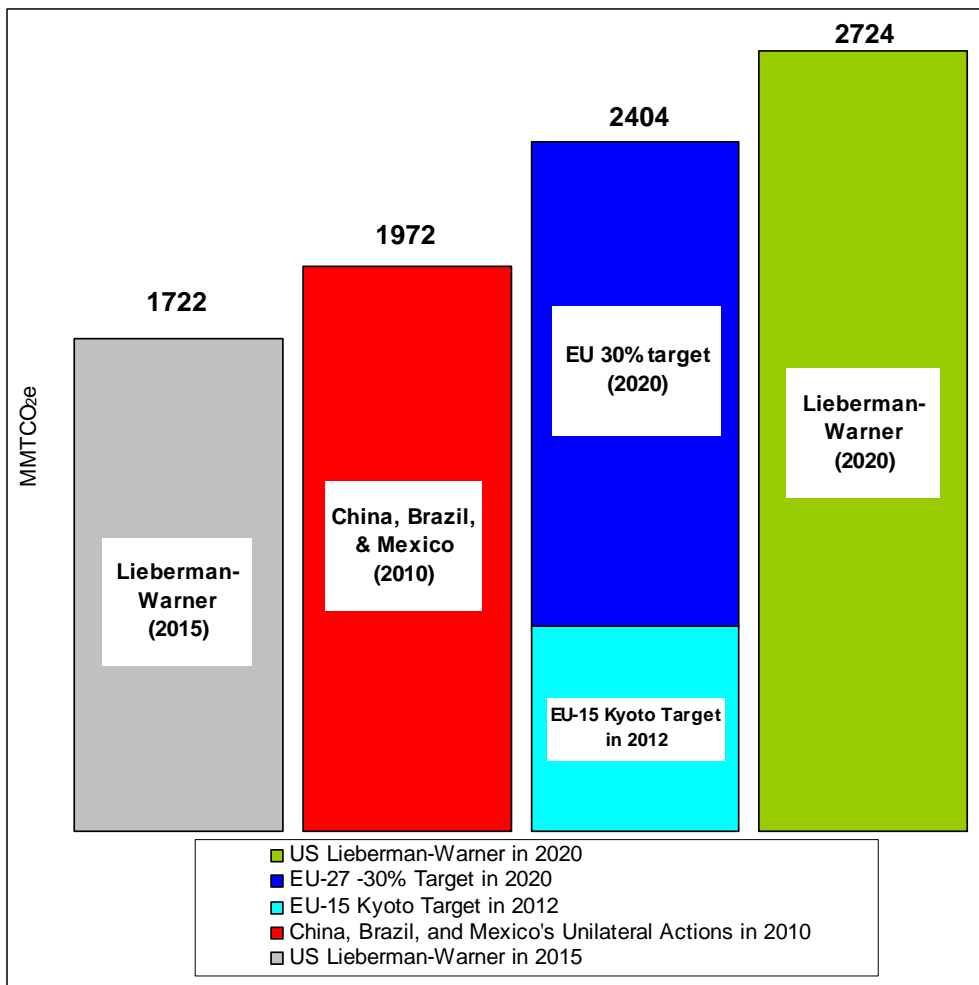


Figure 1. Emissions reductions from BAU for full implementation of proposed measures (CCAP, 2009).

Nevertheless, the outlook for developing country CO₂ emissions growth remains substantial in the aggregate and as a percentage of global emissions (Figure 2). In 2000, developing country emissions from fossil fuels and industrial processes were roughly 40 percent of global emissions. By 2050, developing country emissions are expected to grow to 64 percent of global emissions. If we want to keep global warming below 2°C (3.6°F), we cannot allow this to happen but need substantial cuts in these parts of the world as well.

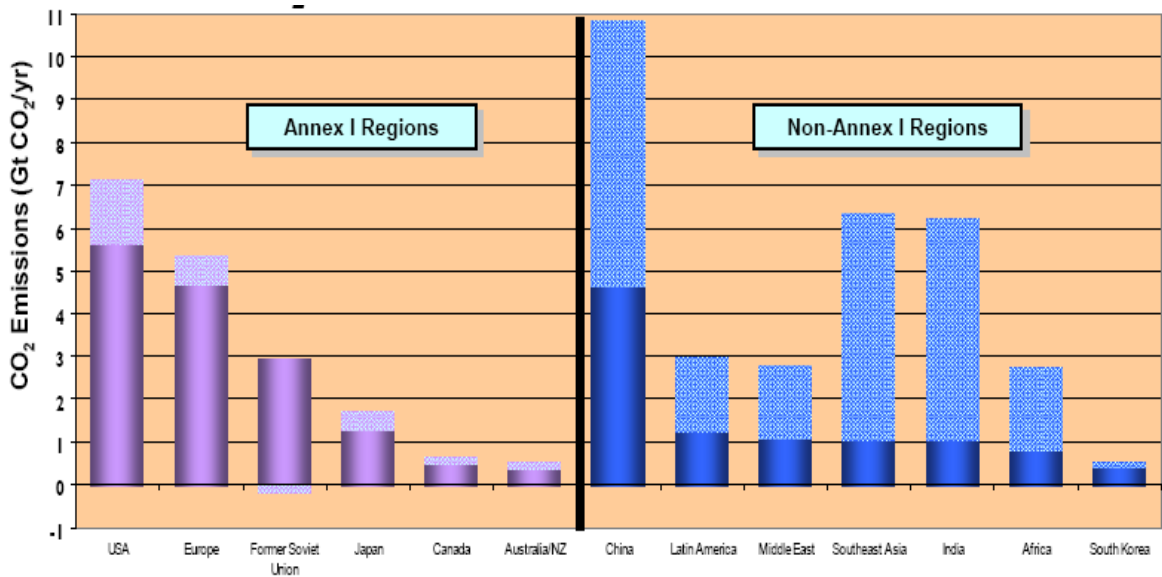


Figure 2. Fossil Fuel and Industrial Process CO₂ Emissions by Region in 2000 (solid bars) and 2050 (checked bars) (U.S. Climate Change Science Program. 2007. *Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations; MINICAM Results*).

The Bali Action Plan’s concept of “Nationally Appropriate Mitigation Actions” (NAMAs) provides needed incentives to encourage developing countries to make those reductions. Discussions since Bali have begun to define a menu of options for what actions will constitute NAMAs. It is expected that each developing country will choose those actions that make the most sense for its own circumstances, just as we will do in the U.S.

South Korea and South Africa have suggested there could be three types of NAMAs: *unilateral actions* that developing countries will take on their own without any assistance; *conditional actions* they will take conditioned on receiving financial and technology assistance from developed countries; and *emission credit generating policies* — where credits may be earned and sold in the international market if the country exceeds the goal it has set.

Although all developing countries will be encouraged to implement NAMAs, the main focus appropriately will be on the six to ten largest emitting economies in the

developing world which, when combined with developed nations, are responsible for 80-90 percent of the emissions in key industrial sectors. Reaching agreement on specific actions in these countries and on the support for those actions from developed nations will be the key to the Copenhagen agreement.

The Kyoto Protocol has long been criticized in the U.S. and elsewhere because it does not require explicit emission reductions by developing countries. Instead, it rewards developing countries who implement specific emission-reducing projects with emission credits through the Clean Development Mechanism (CDM) that they may sell to developed countries or to companies and individuals within such countries. These credits in effect substitute for or “offset” required domestic carbon reductions in developed nations. By purchasing these credits, developed nations are paying the full market cost of these emission reductions. This reduces the cost of compliance with Kyoto targets, but it does not increase the net reduction in emissions beyond the level that would otherwise be achieved by compliance in developed nations.

The Kyoto Protocol does not contain any explicit system for recognizing actions taken by developing countries to reduce GHG emissions outside the CDM. One of the tests of any agreement in Copenhagen will be whether it creates a system for recognizing unilateral actions by developing nations to reduce their emissions that constitute their contribution toward protecting the climate. A large portion of the nearly two billion tons of projected reductions in emissions growth by China, Brazil, and Mexico that I detailed for you earlier in Figure 1 of my testimony are unilateral reductions that contribute to protection of the climate, not reductions that generate credits for sale to developed nations under the CDM. These unilateral actions are one form of a NAMA. Negotiators have proposed creating a formal registry in the UNFCCC that will record these and other NAMAs proposed by developing nations.

Recent actions by key developing countries give us a sense of what some of these actions or NAMAs might look like. For example, in Poznan, Poland, in December 2008, Mexico took a significant step, announcing its plans to set a national

aspirational goal to reduce absolute emissions by 50 percent below 2000 levels by 2050. It also announced plans to set emission goals for four key industrial sectors — cement, steel, aluminum and electricity — and to achieve these goals through a domestic cap and trade program. It suggested an initial reduction target that it would undertake unilaterally in each sector and suggested that each sectoral target could be made more stringent if developed nations provided focused loan support (to overcome domestic financing barriers) in the post-2012 agreement. Mexico has also created and financed its own Energy Transition Fund of three billion Mexican pesos a year for three years (about \$210 million annually) to provide incentives for more aggressive emissions reduction activities.

There are two key elements here that distinguish the Mexican proposal from today's CDM approach:

- first, the support for a more stringent sector-wide policy involves loans, not full payment for the incremental emissions reductions, and
- second, it does not involve any generation of offset credits for developed nations in meeting the new more stringent target. All of these reductions will help reduce global aggregate emissions to safe levels rather than replacing or offsetting required reductions by developed nations. Offset credits would be generated only if the sector (e.g. Mexican oil refining) reduces its emissions in aggregate below the sectoral cap level. The heart of this program is then to generate a Mexican net contribution to the protection of the climate.

China also has taken bold action to reduce emissions. The government released its climate plan in 2007 and has set an aggressive goal to reduce its energy use per unit of GDP by 20 percent between 2006 and 2010. In the plan's first year in 2006, China fell short of its 4 percent per year goal, but in 2007 and 2008 it has reached the aggregate 8 percent reduction for those two years. If fully achieved, this goal alone would reduce GHG emissions by more than 1.5 billion metric tons of CO₂ from business-as-usual annually by 2010. The plan also includes measures to: increase the use of renewable and nuclear energy; recover and use methane from coal beds, coal

mines and landfills; increase the development and use of bio-energy; utilize clean coal technologies; improve agricultural practices; and plant forests. China led the world in renewables investment in 2007 with over \$10.8 billion; it is projected to displace Germany as the world leader in investment in renewables as a percentage of GNP in 2010 and has already exceeded its 2010 goals for additions of wind generation capacity. Its vehicle efficiency standards are ten years ahead of the new U.S. standard already and excise taxes on SUVs were recently doubled to more than \$8,000 per vehicle. It has retired scores of inefficient coal power plants, cement kilns, and steel mills in the last several years.

South Africa has analyzed a number of long-term mitigation scenarios. It has announced its intent to peak its emissions no later than 2025 and expects to have a final domestic climate policy adopted by the end of 2010. South Africa also continues to implement sustainable development policies and measures that will reduce GHG emissions. These policies and measures include moving from traditional coal-fired electricity production to renewables, nuclear power and clean coal technologies, improving energy efficiency and improving the efficiency of the transportation system.

Brazil has released a climate plan that emphasizes energy efficiency and reducing emissions from deforestation, including a goal to reduce the average deforestation rate by 70 percent over the period 2006-2017. It would lower CO₂ emissions by about 413 million metric tons CO₂ in 2010 (roughly one quarter of the emissions reduction expected in the Lieberman-Warner bill by 2015) and by a total of 4.8 billion metric tons CO₂ over the 12-year life of the program. In the last two years, Brazil has reduced deforestation by more than 250 million tons of CO₂ equivalent through incentives for landowners and aggressive enforcement against those who deforest illegally.

South Korea intends to announce a long-term, economy-wide target for emissions reductions later this year. South Korea is already a global leader in the efficiency of

its production in the major heavy industrial sectors, so its new effort will focus on domestic energy use and transportation-related emissions.

Each of these efforts by key developing countries can fall into one of the three categories (unilateral, conditional, and credit-generating) of nationally appropriate mitigation actions (NAMAs) which are now the central focus of the international climate negotiations. The new policy architecture will likely create a UN registry where these NAMAs will be recorded.

The purposes of such a registry could include:

- providing recognition of developing countries' unilateral actions – in the current UNFCCC there is no such place,
- listing developing countries proposals for more aggressive actions along with requests for developed country assistance to incentivize that action,
- listing completed agreements on which NAMAs will be supported, by whom, for what and at what level, and
- recording decisions for crediting baselines for NAMAs that are authorized to generate carbon credits.

The next critical steps in the negotiations will be to decide on the governance for the matching of developing countries NAMAS and developed countries assistance funds, and on the process for establishing NAMA crediting baselines.

As widely agreed in the negotiations, the basic characteristics of the governance process should be:

- effective, efficient, equitable, and transparent
- objective criteria for evaluation of conditional NAMAs (as opposed to a project by project approval process) and
- effective matching of conditional NAMAs financing needs and available funds

The debate on these key issues is just beginning, and a variety of existing and new governance entities and processes are under consideration including the Global Environment Facility (GEF), the World Bank, the CDM Executive Board, the Montreal Protocol's Multilateral Fund, and the new UNFCCC Adaptation Fund.

Some countries including developing nations prefer to decide separately (i.e. outside the NAMA-fund matching body) where to set a sectoral crediting baseline for a NAMA. They favor an approach of having one entity comprised of donors and developing countries to handle the matching and a separate "Super CDM Executive Board" to decide the sectoral crediting baselines. Developing countries through the G-77 have proposed having separate entities to handle capacity building, technology, and mitigation respectively.

In addition, the Bali Action Plan calls for monitoring, reporting and verification of both the NAMAs and the provision of finance by developed nations. However, little detail is provided in the Action Plan regarding the forms that potential financial assistance could take, or on how private investment can be stimulated to assist in this effort.

In short, many key issues remain to be settled between now and Copenhagen. An attractive idea proposed by CCAP is to give the process a "fast start" after Copenhagen (by getting agreements on key NAMAs and their finance) so that countries can have some sense by late 2010 or early 2011 what the size of the major developing countries actions are likely to be in aggregate. This will be a key to the success of the ratification process.

3. U.S. and developed countries' emissions and financing commitments are critical to an agreement in Copenhagen

Strong commitments and actions from developed countries on their emissions targets and on financing for developing countries are needed to reach an agreement in

Copenhagen. Developed countries, including the U.S., are expected to agree to national, quantified GHG emission reduction targets in Copenhagen. The stronger the proposed U.S. target, the greater the likelihood of stronger developing country actions. Although it would be ideal if the U.S. could pass domestic legislation setting out its emissions reduction targets before Copenhagen, in my view that is not necessary to reach a deal in Copenhagen. What is needed is sufficient action in both the House and Senate to give our negotiators a good sense of where our national cap is likely to be set.

One only needs to look at the impact of the United States' recent decision to reverse its position and support the development of a new international agreement to reduce mercury emissions¹ to understand the implications of U.S. engagement. Almost immediately after the U.S. decided to support the development of a new agreement, China and then India supported the process as well.

For developing nations, participation in a global accord is contingent on developed nations' providing meaningful financing assistance as was agreed to most recently in the Bali Action Plan. If done well, developed country financing will support the sectoral NAMAs discussed earlier and not only bring developing countries into a global accord for the first time, but do so in a way that raises the bar on their performance and accelerates the pace of deployment of advanced carbon reducing technologies.

What targets are other developed countries proposing?

The European Union has already committed to reduce emissions 20 percent below 1990 levels in 2020 on its own, and increase its target to 30 percent below 1990 levels if other countries join. Australia also announced a national target in its recent submission to the UNFCCC. The Australian Government committed to reduce

¹ "Final Omnibus Decision on Chemicals Management" (UNEP/GC/25/CW/L.4) adopted by Twenty-fifth session of the Governing Council/Global Ministerial Environment Forum.

Australia's emissions by 5 percent below 2000 levels by 2020. Accordingly, emissions will peak in 2010 and fall thereafter, with a long-term goal of national emissions reductions by 60 percent of 2000 levels by 2050. Like the EU, Australia is willing to commit to more stringent emission reductions (15 percent below 2000 levels by 2020) as part of an international agreement.

Japan is expected to announce a 2020 target by June, but has committed to 80 percent reduction below 1990 levels by 2050. Canada has adopted a 20 percent reduction below 2006 levels by 2020 and a 60-70 percent reduction below by 2050. The decisions of both these countries on their final target level could be strongly influenced by the U.S. choice of cap level, much as developing country action will be affected.

Other industrialized countries have set more ambitious industrialized targets: Norway, for example, intends to cut its emissions 30 percent below 1990 levels by 2020 and to become a totally carbon-neutral nation by 2030. It currently has in place a substantial carbon tax as well as a cap and trade program for CO₂, while maintaining its major role in international oil and gas production.

What target should the U.S. adopt?

The Bali Action Plan calls for comparable actions across developed countries. Parties are still analyzing various indicators of comparability. Australia proposes the economic costs of mitigation as one of the relevant indicators for comparable effort. The EU is proposing a different system of comparability using four separate criteria, including: the capability to pay for domestic emission reductions and to purchase emission reduction credits from developing countries; the GHG emission reduction potential; domestic early action to reduce GHG emissions; and national circumstances such as population trends.

Based on a modeling study by Michel den Elzen of the Netherlands Environmental Assessment Agency that compared developed countries on the basis of six different comparability metrics, if developed countries collectively agree to reduce emissions by 20 percent below 1990 levels by 2020, based on the metrics evaluated, the U.S. share would come to roughly 1990 levels – as President Obama has suggested – while an equivalent reduction for the EU, for example, would range from -20 to -25 percent below 1990 levels.

This, however, will not be enough to avoid the worst effects of climate change. Mainstream science suggests that global emissions would have to peak by 2020, and some scientist believe that this means that developed countries collectively would have to reduce their GHG emissions by 25-40 percent by 2020. According to the den Elzen analysis, if Annex I countries collectively agree to reduce emissions by 30 percent below 1990 levels by 2020, comparable effort across the range of metrics evaluated will require the U.S. to reduce to between 10 and 20 percent below 1990 emission levels, and the EU to reduce by 30 to more than 40 percent below 1990 levels.²

In short, while the Obama Administration deserves great credit for putting the U.S. back on the proverbial map with its proposal for reducing emissions to 1990 levels by 2020, we will need to do a bit more. As the den Elzen analysis suggests, the U.S. does not need to take the same percentage reduction target as Europe or Norway, but we do need to make a comparable effort in terms of the economic effort we put forward if we are to keep the globe on track to hold temperature increases in the 2 degrees centigrade range most scientists recommend. That means reducing emissions below 1990 levels by 2020 in the U.S.

Before Senators despair of the potential cost of going well below 1990 levels, I want to call your attention to an innovative approach championed by Representatives Waxman (D-CA) and Markey (D-MA) in their recently introduced discussion draft.

² Source: den Elzen, Michel, “Exploring comparable post-2012 reduction efforts for Annex I countries,” CCAP Future Action Dialogue, Wellington, New Zealand, 2-4 February 2009.

Simply put, the emission reduction target does not need to be confined solely to what a country proposes to achieve within its own borders. They suggest additional reductions should be achieved in developing countries by supporting efforts to reduce the rate of deforestation. These reductions would not be a substitute or offset for domestic emission reductions. Instead, these additional reductions would mean the U.S. would be making an additional contribution toward protecting the climate in collaboration with key developing countries.

Their proposal sets a goal to reduce emissions the equivalent of an additional ten percent below 2005 emission levels via investments in programs to reduce deforestation in developing countries. It allocates about 5 percent of emission allowances over a number of years to programs and efforts in developing countries. This approach has several advantages: it avoids potentially flooding the allowance market with new forestry-based credits; it allows this new program for reducing forestry emissions to develop in a stable and orderly fashion; and it also helps meet developed countries' commitments to helping developing country with financial assistance.

Other countries, most notably Norway and Germany, have embarked on similar, more broad-based efforts using revenue from auctioning of emission allowances not only to reduce deforestation but also to finance technology development and climate adaptation efforts in developing countries.

We believe funding deforestation through these approaches could be cheaper and less risky than simply tightening the U.S. domestic target to 30 percent below 2005 levels (16 percent below 1990 levels) and allowing more international offsets from reduced deforestation to meet the tighter cap. It would be cheaper because such a program may be able to purchase reductions for less than the full market price for carbon. It would be a less risky path for the U.S. because if developing country programs to reduce deforestation fail to materialize or are ineffective, U.S. companies would not

be stuck with much more stringent targets and strict compliance penalties when there were no readily available alternative sources of required emission reductions.

Financing for developing countries

As described earlier, the U.S. and developed countries will be judged in Copenhagen by whether they provide meaningful financing, technology and capacity building assistance to developing countries as they agreed to consider in the Bali Action Plan?

The level of developed countries' financial and technological support has become one of the most critical issues in the negotiations. The concept of committing to financing supplemental reductions in deforestation in developing countries as part of the U.S. domestic climate legislation would certainly qualify as providing meaningful support per the Bali Action Plan.

Whether financing is for deforestation or clean technology deployment, some observers incorrectly assume that any financing agreement in the Bali Action Plan must mean large unrestricted amounts of funding. However, the behind the scenes negotiations are more likely to focus on specific and tailored financial mechanisms like support to "write down" the cost of advanced but not yet commercial technologies like carbon capture and storage, and financing for special purpose entities that can help overcome resistance from banks in developing countries to make financing available for energy efficiency. As we have seen with Mexico's recent proposals in Poznan for caps in key internationally competitive industrial sectors, the financing element comes down to targeted loans that help overcome domestic policy barriers. The European Commission has proposed the creation of a "facilitative mechanism" by which developing country proposals for action and specific requests for assistance can be evaluated based on objective criteria. The idea of "block grants" and the like are not under serious consideration.

One framework for providing financial incentives in the industrial arena that has been garnering support internationally would rely on establishing the NAMAs discussed earlier in my testimony in key internationally competitive industrial sectors. This concept is included in the Bali Action Plan as “cooperative sectoral approaches and sector-specific actions” which are part of the actions suggested for mitigation of climate change. Under such sectoral approaches, developing countries would be asked to take a new commitment to reduce GHG emissions in a given industry sector beyond any recent unilateral actions they may have already adopted. They could receive up-front financial and/or technology incentives from developed countries in return. Mexico’s announcement in Poznan of sectoral targets for key industrial sectors coupled with a 4-sector cap and trade program is the first concrete example of how such an effort might proceed.

Technology and finance assistance could be provided to developing countries by developed countries for a number of purposes. For example, assistance could be dedicated to build first-of-a-kind advanced technologies, such as carbon capture and storage, which are not yet cost effective, to accelerate technology deployment by bringing down the cost of advanced technologies, and as an incentive for participating developing countries to establish more aggressive “performance goals.” This approach also creates opportunities for leading U.S. companies to gain access to growing new markets (creating jobs at home) and moves toward leveling the playing field for carbon in internationally competitive sectors.

This committee in the past has been very effective in trying to develop a technology assistance fund that can provide incentives for more aggressive developing country action while not stirring fears of “subsidizing our competitors”. Your thoughtful contribution to the coming U.S. discussion of financing international technology deployment and of the possibility of adding an international emission reduction target not based on generating domestic offsets will be a key element in making a historic global climate deal between the developing and developed world in Copenhagen possible.