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To the
Select Committee on Global Warming
U.S. House of Representatives
October 10, 2007

Chairman Markey, distinguished members of the Committee, thank you for the opportunity to join you this morning. I appear before you today both in my capacity as President of World Resources Institute and as a founder of the US Climate Action Partnership.

The United States Climate Action Partnership (US CAP) believes climate change is an urgent problem, that we know enough to act, and that policy delay will only increase the costs to our economy and our environment. We are 33 leading companies and non-profit organizations with market capitalization over US $2.2 trillion and environmental groups with over 2 million members. We have tripled in size since our launch last January.

The CEOs of this consensus driven, leadership group continue to meet to refine and expand our policy recommendations. The companies have been clear that they are prepared to make very large long term investments in new products, technology and infrastructure to shift to a low carbon economy, but to do this they need:

- A long term road map of reductions required
- A carbon price
- Clear rules
- A level playing field

What they have so far is no carbon price, no road map, no clear rules, and States stepping into the leadership vacuum to create a national patchwork rather than a level playing field. I'd like to spend some time this morning reflecting on what type of policy action is required to tackle global warming – and how climate legislation can help the U.S. economy become more competitive, create new jobs and become a positive economic force.

The Roadmap

There are four reasons why laying out the pathway of steadily declining emissions is important:

- It is what is required to control global warming;
- It will signal future market conditions for companies making choices regarding new technologies and products;
- It will encourage investors to support innovative low carbon technologies;
- It will greatly enhance U.S. credibility in seeking international agreement on reductions.

Deep cuts in emissions will require fundamental changes in our energy systems over a period of decades. Legislation should focus on a step-wise, cost-effective approach -- US CAP efforts focused on targets over the next 20-30 years that would harness the innovation and entrepreneurial nature of the private sector through markets for new technologies.

US CAP recommends that legislation be designed to be consistent with limiting global atmospheric concentrations of greenhouse gases to a level of 450-550 parts per million – a level that scientists tell us will be required to avoid the most disruptive climate impacts. In light of that goal, US CAP seeks mandatory targets that slow, stop and reverse the growth of U.S. emissions, achieving emissions levels of:

- Between 100-105% of today's levels within five years of rapid enactment
- Between 90-100% of today's levels within 10 years
- Between 70-90% of today's levels within 15 years

We suggest a long-term goal of reducing emissions by 60-80% by 2050. Since markets play an important role in shaping behavior, we believe there needs to be a price for GHG emissions for all sectors of the economy – an economy wide approach.

A Carbon Price

Our environmental goal and economic objectives can best be accomplished through an economy-wide, market driven approach that includes a cap-and-trade program with specific limits on greenhouse gas emissions. By signaling a price on carbon now, and for the next 40 years, investors seeking to make decisions today will factor in a cost of carbon into investment decisions. Cap-and-trade creates an obligation on regulated entities to meet specified targeted reduction levels.

Cap-and-trade provides both certainty and flexibility. Sources can choose whether to make reductions or buy credits. Innovators can invest in technology to produce and sell excess credits. Cap-and-trade creates a market that chooses the best solutions.

Cap-and-trade programs like the SO2 program in the Clean Air Act have a demonstrated track record of creating environmental value at acceptable economic cost. As the SO2 program was being debated in Congress, there were many who thought the costs of controlling acid rain would ruin U.S. competitiveness. It did not, and CO2 trading will not. According to venture capitalist John Doerr, who endorses cap-and-trade, "The choice is clear: Are we going to innovate and prosper, or stagnate and suffocate?"

If cost control measures are used in climate policy, US CAP believes they would need to be designed to:

- Enable a long-term price signal that is stable and high enough to ensure that the investments in low and zero emitting technologies are not undercut;
- Ensure that the integrity of the emissions cap;
- Preserve the market's effectiveness in driving reductions, investment and innovation.

Clear Rules

According to the International Energy Agency, the world will spend $20 trillion on new energy infrastructure in the coming decades (and approximately $4 trillion in North America alone). If those investments are made in old fossil fuel-based technologies, the opportunity to prevent dangerous climate change will be lost.

There is tremendous interest around the world in transitioning to low carbon energy sources, efficient cars, electronics, homes, and breaking the link between energy and living standards. The U.S. can choose to lead or follow. U.S. businesses in US CAP recognize this is a global market and an opportunity for them to thrive in a marketplace that seeks solutions.

The solution lies in a shift in energy technology development and deployment at an unprecedented rate. The change in technology must affect the three primary uses of energy – power, transportation, and heating – all basic elements to modern life, whether in industrialized or developing economies.

The catalysts for this shift are straightforward: government policy and private sector investment. Importantly, the transformation of the energy sector to a diversified, low-carbon system need not be an economic hardship. Rather, it offers an opportunity to manufacture and develop cutting-edge technologies that will clean the air, improve people's health, and provide greater economic and political stability.

US CAP recognizes that in addition to an economy wide cap-and-trade program, there may be a need for complementary policies to overcome market failures and behavioral inertia – a suite of complementary policies may be required.

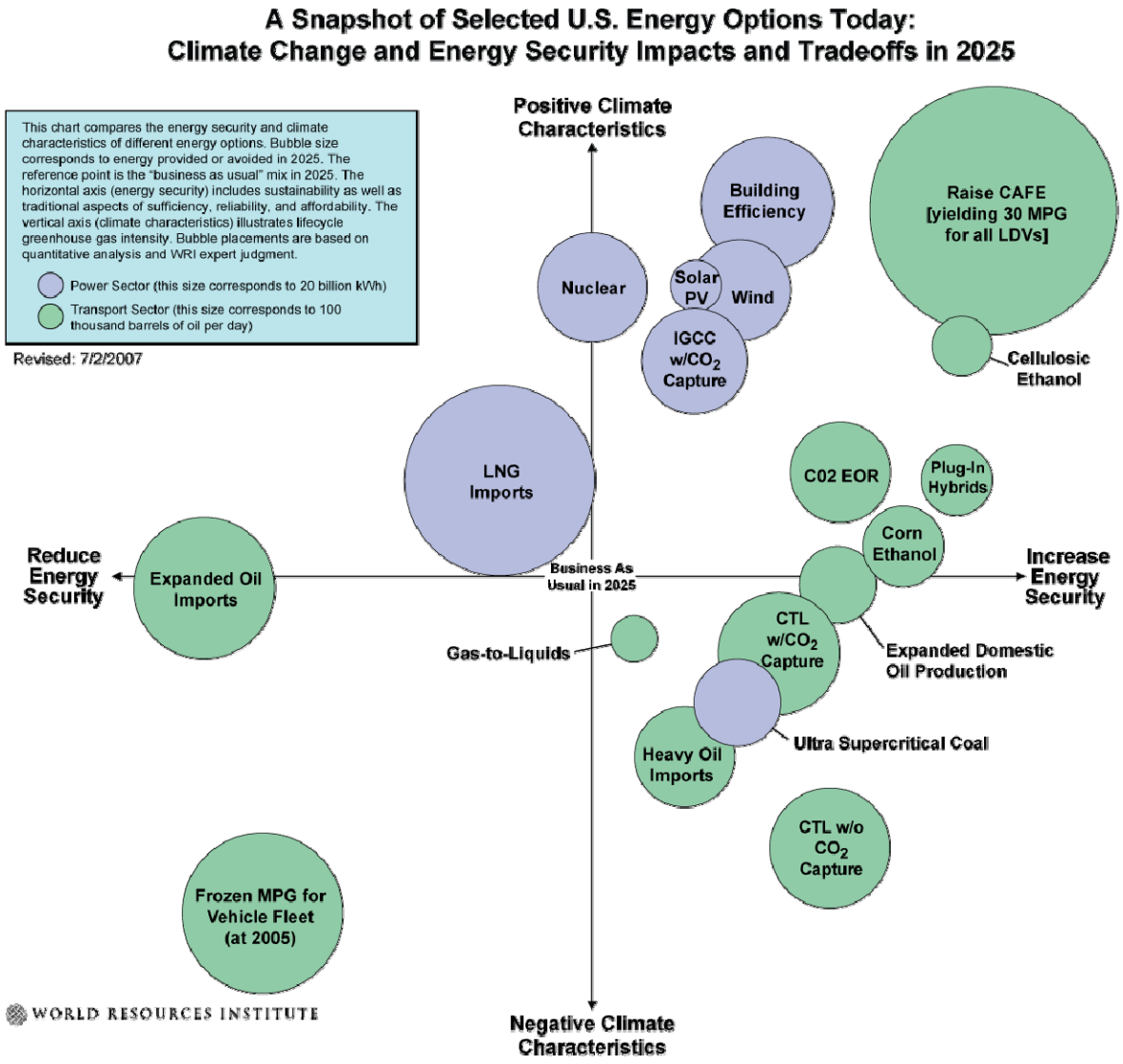
Table 1 provides a sense of the types of policy action that may be required immediately and over the long term by sector.

Table 1: Policy outcomes required to achieve reductions

Sector	**Near Term Priorities**	**Medium term Priorities**	**Long term priorities**
Power	Avoid lock-in of conventional coal by setting performance standards and a creating a price on carbon through tax or cap and trade program	Post-combustion CCS; Renewable Energy at scale	Biomass + CCS; safe nuclear
Buildings	Avoid lock-in of inefficient buildings Energy efficiency	Carbon neutral building design	Regenerative buildings
Transport	Avoid lock-in of inefficient infrastructure Increase efficiency	Sustainable fuel systems Vehicle innovation Advanced mass transit	Transport innovation
Industry	Avoid lock-in of inefficient production	Advanced industrial production	Low emissions intensity material use
Land Use	Slow deforestation	Enhance sinks; change Agricultural practices	

The U.S. Congress faces a variety of policy and technology choices as it reviews energy security and climate change issues. However, not all options are equal in terms of greenhouse gas emissions, and choices made in the name of energy security may have significant and detrimental impacts on the climate. The trade-offs are represented in **Chart 1**, below.

Chart 1: Energy Technology choices and security and climate impacts



The chart looks at U.S. energy options today and calculates and compares selected energy technology options and the impacts these choices would have on our relative energy security and climate performance in 2025.

As you can see, energy technologies in the upper right quadrant have a positive impact on climate change and energy security, while those in the lower left have a negative impact on both. Those in the other quadrants involve tradeoffs. The size of each bubble represents the potential of that technology to meet future energy demand.

Key take-away messages from this review:

- Increasing fuel efficiency standards has the potential to make the biggest contribution to meeting our energy needs. In addition, this option has very strong positive implications for both energy security and climate.
- While coal-to-liquids can make a small contribution to increase U.S. energy security in this timeframe, pursuing this option would have significant negative impacts to the climate. Even if most of the CO_2 from the conversion process is captured and stored, climate impacts are still negative compared to petroleum.
- Ethanol from corn would deliver significant new energy and increase U.S. energy security, but would deliver relatively small benefits to the climate. This is due to the high energy input required to produce and process corn – and the fact that most of this energy is derived from fossil fuel (in particular, coal). Cellulosic ethanol will likely deliver slightly less energy than corn-based ethanol over this timeframe, but has a greater positive impact on climate change on a life-cycle basis.

The options graphed here are not drawn from specific pieces of legislation, nor are they part of an energy forecast. Different policy designs would lead to different placement of "bubbles" on the chart as well as influence the size of the bubbles themselves.

A Level Playing

Without federal leadership, states move ahead on their own to stem greenhouse gas emissions, recognizing the critical role their legislation can make in preparing their states and economies for a carbon-constrained world. They see the impacts of climate change already – they seek investments in clean technologies, and they act as innovators of policy. California, Oregon and Washington already require power plant operators to purchase offsets for a portion of their CO2 emissions and are crafting a Western regional climate initiative, and the Regional Greenhouse Gas Initiative cap and trade program in the Northeast will be operational January 1, 2009. But this creates a patchwork of regulation, and does not send a uniform signal throughout the economy. It does not scale up technologies and investment into those technologies. A strong federal program is required.

States and regions differ in their power generation sources, their renewable resource base, and their energy efficiency. An emission allowance allocation system in a cap-and-trade program can help mitigate economic transition costs. Allocations can help the regions or groups relatively more adversely affected by GHG emission limits and recognize those who have made investments in higher cost, low-GHG technologies.

Recognizing that there are differences between states, regions and among companies, US CAP suggests that a significant portion of allowances should be initially distributed free to capped entities and to economic sectors particularly disadvantaged by a cap, including the possibility of funding transition assistance to adversely affected workers and communities. Free allocations to the private sector should be phased out over a reasonable period of time. Early actors should be recognized.

We must act now if we are to preserve all our options for cost-effective greenhouse gas reductions and engage the international community. We in the U.S. must take the first step by reducing our own emissions. And we hope Congress will urge the Administration to re-engage the international community at it discusses post-2012 policies. International cooperation is necessary, and can also help to improve cost-effectiveness, but U.S. action is imperative from both an environmental and political perspective.

This year, the IPCC offered as stark a picture of the scale and immediacy of the environmental challenge we face as I have ever seen. And the economic assessment completed a year ago by Sir Nicholas Stern offered a vision of significant risks associated with climate events – contrasted with a more moderate economic impacts if we act today to put the wheels in place for a smooth transition to a global economy fueled by clean energy technologies.

The transition to a clean energy future can be met with new jobs, new opportunities and American ingenuity. Without significant mandatory federal policy, however, markets are unlikely to receive direct signals that spur investment and sustain change. Delays in federal action only hinder our ability to innovate and invest in solutions.

I look forward to the opportunity to work with you and your colleagues across the House and Senate on both sides of the aisle as you take up global warming legislation. We urge you to continue exploring this topic, and request that Congress move rapidly from debate to enactment of policy solutions. Thank you for the opportunity to join you today.