NATIONAL WILDLIFE FEDERATION®
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March 19, 2007

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Rick Boucher
Chairman
Subcommittee on Energy and Air Quality
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Dingell and Chairman Boucher:

The National Wildlife Federation appreciates your prompt examination of the issue of global warming in the 110th Congress. Global warming action is National Wildlife Federation's highest priority as we fulfill our mission of protecting wildlife for our children's future.

National Wildlife Federation is America's largest wildlife conservation organization, representing more than 4 million members and supporters throughout the United States, including more than one million hunters and anglers. National Wildlife Federation includes 48 affiliated state and territorial conservation organizations, which in turn support hundreds of local clubs across the nation. We are a non-partisan organization, and our membership mirrors the political diversity of Americans everywhere. We have helped lead a coalition of 375 sportsmen organizations, scientific societies, and state fish and wildlife agencies who have written to you and other members asking that you ensure that global warming legislation meets the needs of protecting America's fish and wildlife resources.

I am confident America can be a worldwide leader in solving global warming if we act with the urgency and determination with which we have successfully confronted past threats to wildlife and our environmental security. The House Energy and Commerce Committee has an important legacy of helping advance some of America's most successful environmental laws. None of these efforts would have succeeded without dedicated leaders in Congress. By providing the moral and political leadership to achieve prompt and decisive action on global warming, you have an opportunity to help extinguish the most dangerous threat to the future of wildlife.

For the first time in history, we are nearing the tipping point in an ecological crisis that could see wholesale loss of wildlife populations and profound changes in our outdoor experiences. Wildlife species are ill-prepared to meet the threat of global warming's rapid and disruptive climate changes, which extend well beyond temperature changes to include a much broader array of threats to vital habitat. Rising sea levels, drying wetlands, changing water temperatures, more favorable climates for wildlife pests and diseases, and shifting vegetation zones are some of the manifold dangers that make global warming a deadly threat to wildlife.

The threat of global warming to wildlife was vividly illustrated by the U.S. Fish and Wildlife Service's proposal on December 27, 2006, to list the polar bear as a threatened species. Secretary of the Interior Dirk Kempthorne stated that "the polar bears' habitat may literally be melting."

A study in the journal *Nature* has concluded that, within the next 50 years, as many as a third of wildlife species in some regions worldwide could be headed for extinction because of global warming. Species that survive global warming may nevertheless undergo large population reductions. For example, global warming-induced drought conditions in the Prairie Pothole Region of central North America could dry up vital wetlands and lead to a two-thirds decline in the abundance of ducks breeding in the region. This will affect mallards, gadwall, blue-winged teal, northern pintails, canvasbacks, redheads and ruddy ducks throughout North America's flyways.

The rapid pace of climate change is already unraveling the tapestry of life in entire ecosystems. In Alaska and other states, as well as parts of Canada, millions of acres of forest have been wiped out in recent years by pest outbreaks brought about by warmer winters. Warmer, drier conditions due to global warming have caused a four-fold increase in the number of major wildfires in U.S. western forests.

We will be happy to provide additional information on global warming's impacts on wildlife. Additional resources on global warming and wildlife, including state-by-state fact sheets on global warming impacts and solutions, are also available at www.nwf.org/globalwarming.

I would like to draw attention to the views of America's hunters and anglers on the issue of global warming. One in five voters hunts or fishes, and sportsmen have been a powerful force for conservation in America. In 2006 the National Wildlife Federation commissioned Responsive Management to conduct a nationwide, non-partisan survey of hunters and anglers on the issue of global warming. Respondents were randomly selected, largely from the pool of people who have recently purchased hunting and fishing licenses.

This first-ever comprehensive nationwide survey of licensed hunters and anglers about their attitudes on global warming provided quantifiable evidence of what our members have been telling us: A vast majority of sportsmen are witnessing the effects of global warming and believe immediate action is necessary to address it. According to the survey, 85 percent of sportsmen believe we have a "moral responsibility to confront global warming to protect our children's future." Eighty percent of sportsmen believe the United States should be a world leader in addressing global warming. Seventy-five percent agree that Congress should "pass legislation that sets a clear national goal for reducing global warming pollution with mandatory timelines because industry has already had enough time to clean up voluntarily." Additional findings are available online at www.TargetGlobalWarming.org.

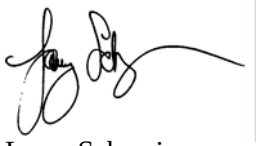
Protecting America's wildlife resources is not only the right thing to do, it is also essential to the economic future of thousands of communities throughout the nation where hunting, fishing and other outdoor recreation are critical parts of the economy. According to a study by the Outdoor Industry Foundation, active outdoor recreation, which includes fishing, hunting, wildlife viewing and other outdoor activities, contributes a total of $730 billion annually to the U.S. economy and supports 6.5 million jobs (1 in 20 U.S. jobs).

I have attached answers to the specific questions you have posed on global warming policy. National Wildlife Federation has recently joined the U.S. Climate Action Partnership and endorses the Partnership's *Call to Action* (available at www.us-cap.org.). National Wildlife Federation is also a member of the U.S. Climate Action Network (www.usclimatenetwork.org), and we are a signatory to the joint statement USCAN is submitting to you on behalf of a diverse coalition of national, regional, state and local advocacy organizations.

Congress has delayed action on global warming for too long, and we are quickly running out of time to act. I urge you to move with urgency and to advance solutions that put us on track to achieve the bold reductions in global warming pollution that scientists say are needed in the coming years.

National Wildlife Federation is committed to working with you and other members of Congress to advance effective responses to the global warming threat.

Sincerely,



Larry Schweiger
President & CEO

National Wildlife Federation
Response to Chairmen Dingell and Boucher
March 19, 2007

1. ***Please outline which issues should be addressed in the Committee's legislation, how you think they should be resolved, and your recommended timetable for Congressional consideration and enactment. For any policy recommendations, please address the impacts you believe the relevant policy would have on:***
    a. ***emissions of greenhouse gases and the rate and consequences of climate change; and***

The Committee has an opportunity to take action that both solves global warming and simultaneously drives a transformation in how we produce and use energy, yielding far-reaching benefits for our economy, for our energy security and independence from foreign oil, and for the health of children jeopardized by air pollution.

We must act quickly. Carbon dioxide remains in the atmosphere for generations; the longer we wait, the more aggressive our actions will have to be. Delay will commit us either to making emission reductions on a much more costly crash basis later, or to inflicting dangerous global warming impacts on our children and grandchildren.

The National Wildlife Federation asks Congress to act now to set enforceable, science-based goals to reduce U.S. global warming pollution, bolstered with new laws to promote renewable energy and more energy efficient vehicles, appliances and buildings. Establishment of a declining cap on total U.S. global warming pollution is essential to setting the national framework to achieve the reductions scientists have deemed necessary to avoid global warming's worst effects.

Most importantly, we need new laws that start promptly and put the United States on a pathway to cut global warming pollution levels by about 2 percent annually, setting concrete goals to cut emissions 20 percent every decade and on the order of 80 percent by mid-century. After enacting such a plan, the U.S. will be positioned to provide global leadership and to encourage other nations to do their share to help stabilize our climate.

Cutting global warming pollution levels by two percent annually is an effective response to global warming, which is being driven largely by carbon dioxide pollution from fossil fuels we use as our primary sources of energy, particularly oil and coal. Every minute, we emit 25 million pounds of carbon dioxide into the atmosphere in the United States. The oil used for transportation and the coal used in power plants to generate most of the electricity we use in our homes and offices together account for about two-thirds of U.S. global warming pollution from energy. By cutting pollution from these and other sources 2 percent annually, we can spur global progress to cut emissions and work to prevent the planet from warming more than an additional 2

degrees Fahrenheit—a potential 'tipping point' threshold scientists are warning we must not exceed if we are to avoid the most severe risks of global warming.

Without urgent action, the Department of Energy projects that our dependency on fossil fuels will climb dramatically in coming years, resulting in a 37 percent increase by 2030 in carbon dioxide pollution from oil and coal. In short, if current energy practices persist, we will make the problem worse and worse every year, adding to the pollution legacy we are leaving our children.

b. the effects on the U.S. economy, consumer prices, and jobs.

To address economic impacts, global warming policies should be designed to:

(I) First and foremost, minimize economic damage from global warming

(II) Maximize economic opportunity from cleaner energy future, and minimize and mitigate any adverse impacts on the U.S. economy, consumer prices and jobs

I. <u>Minimize Economic Damage from Global Warming</u>

A recent report by a United Kingdom commission chaired by Sir Nicholas Stern, former chief economist of the World Bank, found that global warming could reduce world economic output by as much as 20 percent if we fail to take action. In contrast, the cost of taking steps to reduce worldwide pollution significantly would only amount to perhaps one percent over a period of decades.

With more frequent weather extremes – heat waves, droughts, and heavy precipitation events – and more intense hurricanes, we are already experiencing the economic impacts of more frequent natural disasters. According to Munich Re – a leading insurance provider – the insurance industry has experienced a massive increase in the frequency and cost of natural disasters in recent years. Between 1994 and 2005 there were nearly three times as many weather-related natural disasters than during the 1960s. The trend is even clearer in light of the economic losses, which increased by more than a factor of five in the same period. In 2004, the insurance industry had to pay a record $30 billion for losses caused by North Atlantic hurricanes.

The following three recommendations will help minimize economic damages from global warming. Global warming policies should:

(1) *Reduce Pollution and Stabilize Climate.* Policies should promptly reduce U.S. greenhouse gas emissions 2 percent per year as outlined above and reengage internationally to encourage international progress. The United States should provide the technological and political leadership to minimize further change in the global climate.

(2) *Protect America's Wildlife Resources.* In addition to reducing global warming pollution, Congress needs to take steps to fund and manage America's wildlife resources to prepare for the climate changes already underway. Protecting America's wildlife resources is also essential to the economic future of thousands of communities throughout the nation where hunting, fishing and other outdoor recreation are critical parts of the economy. According to a study by the Outdoor Industry Foundation, active outdoor recreation, which includes fishing, hunting, wildlife viewing and other outdoor activities, contributes a total of $730 billion annually to the U.S. economy and supports 6.5 million jobs (1 in 20 U.S. jobs). Policies should include an auction of emission allowances and dedicate a portion of revenues to provide funding for the Wildlife Conservation and Restoration Account of the Pittman-Robertson Act, which funds the State Wildlife Grant Program. By using the well-established structure of this account, a part of one of America's landmark conservation laws, funds derived from a market-based regulatory system would be efficiently and fairly distributed to the states.

(3) *Protect Vulnerable Communities*. In addition to reducing global warming pollution, policies should protect vulnerable communities from the economic and other damages of global warming. Policies should include an auction of emission allowances and dedicate a portion of revenues to help communities prepare for and respond to the impacts of global warming, such as extreme climate events including hurricanes, floods and droughts. Smart planning early can prevent much larger expenses after these extreme events hit home. Aid should be provided both to U.S. communities and to developing nations, with a particular focus on the vulnerability of the poor. These preparations should include restoring and protecting natural habitats such as wetlands that can provide vital protections from storm surges and other threats.

II. Maximize Economic Opportunity from Shift to Clean Energy Technologies, and Minimize and Mitigate Any Adverse Impacts on the U.S. Economy, Consumer Prices and Jobs

Because our growing dependency on fossil fuels is at the heart of the global warming crisis, a transformation in how we produce and use energy is a cornerstone for building a safer climate future. We can diversify our energy sources with clean alternatives such as wind and solar power as well as with a new generation of advanced, sustainably managed biofuels crops. As we wean ourselves from our over-reliance on oil and coal, we can greatly improve our energy security and stabilize energy prices to avoid the radical jolts we have experienced at the gas pump. We can also keep more of America's hard-earned money here to bolster our economy rather than shoveling it overseas.

The Apollo Alliance, a coalition of national labor unions and other partners, has estimated that a bold program of investments in clean-energy technology will create more than 3 million high-wage jobs in construction, manufacturing and industrial machinery by 2015 and expand the economy by $330 billion. These estimates echo the findings of a government commission that, in 1999, determined that clean energy investments are critical to help U.S. firms "capture much of the $10 trillion which will be spent worldwide for energy supply technologies over the next 20 years."

Companies that have voluntarily stepped forward to take action have clearly demonstrated that technologies exist today to reduce emissions significantly. Companies that have set goals for reducing emissions have been able to achieve those goals consistently ahead of schedule and at a corporate profit. For example, BP, one of the world's largest energy companies, met its internal greenhouse-gas-reduction target in 2001, nine years ahead of schedule, reducing emissions by 18 percent and saving $650 million over three years after an initial investment of $20 million.

As documented in the report *Carbon Down, Profits Up*, five global companies, including IBM and DuPont, have achieved greenhouse gas reductions of 60 percent or more with combined savings of more than $5.5 billion from improved energy efficiency, fuel switching and reduced waste.

Global warming policy should not only create economic opportunity and advantage, but also be fair and minimize and mitigate any adverse impacts on the U.S. economy, consumer prices and jobs. The following twelve recommendations will help improve the economics of climate policy:

(1) *Avoid Delays.* According to the U.S. Climate Action Partnership, which includes 10 major corporations as well as National Wildlife Federation and four other NGOs: "Each year we delay action to control emissions increases the risk of unavoidable consequences that could necessitate even steeper reductions in the future, at potentially greater economic cost and social disruption. Action sooner rather than later preserves valuable response options, narrows the uncertainties associated with changes to the climate, and should lower the costs of mitigation and adaptation."

(2) *Provide Credible Certainty for Business Planning.* The policies should provide business certainty by setting near-term, mid-term, and long-term emission reduction goals and policies that send a clear signal to businesses to aid their capital investments. Policies that fail to align with science-based emission reduction goals will increase the long-term costs to consumers and industry by encouraging short-sighted investments in high carbon technologies. These investments will become obsolete in the face of future global warming policies at the federal, state and local level, stranding investors and ratepayers with the added costs.

(3) *Allow Unlimited Emissions Trading*. The policies should allow unlimited emissions trading, which gives industry flexibility to deploy the most cost-effective options to reduce emissions and stimulates innovation across the economy, all without sacrificing the overall emission goals of the program.

(4) *Cover All Major Greenhouse Gases*. The policies should give industry flexibility to achieve reductions across all major industrial greenhouse gases recommended by the Intergovernmental Panel on Climate Change, including carbon dioxide, methane, nitrous oxide, PFCs, HFCs and SF6. This allows companies to pursue options that get the most "bang for the buck."

(5) *Avoid Economic Disruptions.* Policies should avoid year-to-year economic disruptions by allowing emissions banking and limited borrowing across years, with appropriate safeguards (such as paying interest on borrowing) to ensure the environmental targets are achieved.

(6) *Include Forestry, Land Use Offsets.* The policies should allow a balanced amount of offsets for high quality (real, verifiable, permanent, enforceable, and additional to baseline) offsets for sequestration of carbon in forests and other natural ecosystems, or through better agricultural processes that store carbon in soils. These offset programs should be designed to maximize the health of natural ecosystems and should avoid perverse incentives to degrade native ecosystems. Decisions about offsets must be linked to the full package of emission targets and other design elements. The overall combination of emission reduction targets and offsets and other measures must be sufficient to drive a transformation to low-carbon energy technologies throughout the economy.

(7) *Mitigate Transition Impacts on Workers, Economy*. The policies should mitigate economic transition costs to entities and regions of the country that will be relatively more adversely affected by emission limits, including funding transition assistance to adversely affected workers and communities. This assistance for workers should include transitional income and benefits as well as tuition for training in alternative fields.

(8) *Mitigate Impacts on Low- and Middle-Income Americans.* The policies should mitigate any regressive impacts on low- and middle- income Americans by auctioning emission allowances and using a large portion to help families lower their energy use and carbon footprint, and to cushion any energy price increases.

(9) *Promote Renewable Energy*. Emissions caps should be complemented with policies to drive technologies important to diversify America's clean energy choices. Renewable electricity standards that increase the share of electricity from clean, renewable energy

sources such as wind, solar and geothermal can, for example, reduce natural gas demand and prices, according to analysis by the U.S. Energy Information Administration. A national Renewable Electricity Standard that requires the U.S. to obtain 20% of its electricity from renewable energy sources by 2020 would achieve substantial reductions in global warming pollution, ensure growing investment in sources of clean energy, and spur development and job creation in our domestic renewable energy industry. Also, emission allowances should be auctioned and a portion of revenues used to spur renewable energy technology research, development and deployment.

(10) *Promote Energy Efficiency*. Reducing energy demand through energy efficiency is often the most cost-effective option for reducing emissions. Emissions caps should be complemented with policies to improve appliance efficiency standards, building energy codes, and the fuel economy of new passenger vehicles. These measures will help minimize the costs of an emissions trading program by spurring consumer investments to reduce demand. Also, emission allowances should be auctioned and a portion of revenues used to spur research, development and deployment of advanced energy efficiency technologies that are not fully competitive in the marketplace.

(11) *Jumpstart a New Future for Coal.* By avoiding short-sighted investments in highly polluting energy technologies in the near term, policies can help foster a smooth, low-cost transition to a low carbon future. Over the long-term, an emissions cap and trade program with science-based emission targets will encourage this shift. Policies should jumpstart a new direction for coal by spurring investment in state-of-the-art carbon capture and storage technologies and heading off investments in high-carbon power plants and liquid coal facilities. An emissions cap and trade program could use a portion of emission allowances or auction revenues to stimulate investments in advanced carbon capture and storage technologies for coal-fired power plants. Also, policies should avoid providing perverse incentives, such as freely allocating permits for projects built in the coming years that don't meet aggressive carbon performance standards.

(12) *Retool America's Auto Industry and Reduce Oil Dependency.* Reducing America's dependency on foreign oil will help reduce world oil prices, sending less money overseas and instead investing those resources in America's economy. An emissions cap and trade program could use a portion of emission allowances or auction revenues to help retool America's auto factories to manufacture vehicles with lower tailpipe emissions of carbon dioxide per mile. Other measures should be adopted to reduce the carbon content of transportation fuels. Congress should ensure that the carbon content of transportation fuels decreases over time by establishing a low-carbon fuel standard. And revenues from an auction of emission allowances could provide incentives for building advanced cellulosic ethanol plants that produce fuels with significantly lower life-cycle carbon emissions than gasoline.

2. ***One particular policy option that has received a substantial amount of attention and analysis is "cap-and-trade." Please answer the following questions regarding the potential enactment of a cap-and-trade policy:***
    a. ***Which sectors should it cover? Should some sectors be phased in over time?***

The environmental goal and economic objectives can best be accomplished through an economy-wide, market-driven approach. This approach will ensure emission reduction targets will be met while simultaneously generating a price signal resulting in market incentives that stimulate investment and innovation in the technologies that will be necessary to achieve the environmental goal. The U.S. climate protection program should create a domestic market that will establish a uniform price for greenhouse gas emissions for all sectors and should promote the creation of a global market.

    b. ***To what degree should the details be set in statute by Congress or delegated to another entity?***

We recommend that Congress establish a mandatory emission reduction pathway with specific targets.

    c. ***Should the program's requirements be imposed upstream or downstream or some combination thereof?***

We recommend the cap and trade program should cover as much of the economy's greenhouse gas emissions as is possible. The program must balance the needs for administrative feasibility with the value of ensuring that the point of regulation is as close to the point of capital investment decisions as feasible. Under an upstream system, price signals may be masked and distorted by the volatile prices that already exist in fossil fuel markets, making smart investments downstream more problematic. A hybrid system, covering different economic sectors individually, may be appropriate where large emitters can be easily regulated. National Wildlife Federation does not believe that small businesses and consumers should be directly regulated.

    d. ***How should allowances be allocated? By whom? What percentage of the allowances, if any, should be auctioned? Should non-emitting sources, such as nuclear plants, be given allowances?***

Legislation should start from the principle that pollution allowances under a national cap are a public trust: they are a permit to use the atmosphere, which belongs to all of us. Allowances will be worth tens of billions of dollars each year, and their value will increase over time as the pollution cap declines. Allowances should be distributed in a manner that is fair, addresses critical climate-related public purposes, and avoids windfall profits/assets for polluters.

Allocating allowances for free to industry is unlikely to reduce the overall cost of the program to energy consumers in most instances. However, an emission allowance allocation system can help mitigate economic transition costs, including funding transition assistance to entities and to adversely affected workers and communities. Free allocations to the private sector should be phased out over a reasonable period of time, with allowances instead auctioned or otherwise distributed to achieve public benefits.

e. How should the cap be set (e.g., tons of greenhouse gases emitted, CO2 intensity)?

The cap-and-trade program should place specified limits on tons of greenhouse gas emissions. Any meaningful emissions reduction system must work first and foremost on the basis of the total quantity of what is emitted to the atmosphere, as opposed to a rate-based or "intensity" approach. Greenhouse gas intensity is an abstract construct that exists only in speeches and on spreadsheets. It cannot be measured coming out of a smokestack or tailpipes. What matters to the environment, to wildlife, and to public health is the amount of pollution we emit into the atmosphere.

Effectively limiting global warming will require us to promptly reverse the total quantity of emissions. It is not enough simply to improve intensity while total emissions continue to grow. The economy can expand indefinitely, but the atmosphere cannot expand at all. Intensity measures have been used in recent years to obscure the fact that our emissions continue to grow, increasing the burden on future generations when we should be taking credible action to reverse course.

f. Where should the cap be set for different years?

In brief, National Wildlife Federation believes that the United States should cut global warming pollution levels by about 2 percent annually (twenty percent per decade), starting within five years.

The U.S. Climate Action Partnership, of which National Wildlife Federation is a member, recommends a consistent but broader range of possible emission reductions with specific timetables. USCAP recommends that Congress establish a mandatory emission reduction pathway with specific targets that are:

- between 100–105% of today's levels within five years of rapid enactment
- between 90–100% of today's levels within ten years of rapid enactment
- between 70–90% of today's levels within fifteen years of rapid enactment

Furthermore, USCAP recommends that Congress should specify an emission target zone aimed at reducing emissions by 60% to 80% from current levels by 2050.

g. Which greenhouse gases should be covered?

The program should cover all six greenhouse gases recommended by the Intergovernmental Panel on Climate Change, including carbon dioxide, methane, nitrous oxide, PFCs, HFCs and SF6.

h. Should early reductions be credited? If so, what criteria should be used to determine what is an early reduction?

Prior to the effective date of mandatory emission limits, every reasonable effort should be made to reduce emissions. Those companies that take early action should be given appropriate credit or otherwise be rewarded for their early reductions in GHG emissions.

i. Should the program employ a safety valve? If so, at what level?

We believe the most powerful cost control measure is a robust cap and trade program since markets do the best job of controlling costs over time. Twelve cost-control measures that National Wildlife Federation believes are acceptable are recommended in response to question #1. Any cost control measure must ensure the integrity of the emissions cap over a multi-year period and preserve the market's effectiveness in driving reductions, investment, and innovation.

j. Should offsets be allowed? If so, what types of offsets? What criteria should govern the types of offsets that would be allowed?

Legislation could permit entities subject to the cap to meet part of their obligations through the purchase of verified emission offsets from a range of domestic sinks, domestic sources of emissions that are not subject to the cap, and projects outside the U.S. The offset must be environmentally additional, verifiable, permanent, and enforceable. Offset measures are only fully appropriate in the framework of a comprehensive policy that meets science-based goals for solving global warming. The comprehensive policy, including offsets and other cost control measures, should preserve the market's effectiveness in driving reductions, investment, and innovation.

k. If an auction of a safety valve is used, what should be done with the revenue from those features?

Revenues generated from an auction of emission allowances should be used for climate related public purposes, such as reducing the cost of the program through energy efficiency and conservation, spurring technological innovation, greater investment in the low-carbon re-tooling

of the U.S. economy, and facilitating smart investments to prepare for the impacts of global warming, including funding to help wildlife survive an altered climate.

Many of the following specific uses of auction money are also part of our response to question #1, because they pertain directly to the program's ability to mitigate the economic damage of global warming and improve the economic impact of climate policy:

Mitigate Transition Impacts on Workers, Economy. The policies should mitigate economic transition costs to entities and regions of the country that will be relatively more adversely affected by emission limits. A portion of allowances could be used to help retool America's auto factories to manufacture more fuel efficient models.

Mitigate Impacts on Low- and Middle-Income Americans. The policies should mitigates regressive impacts on low- and middle- income Americans by auctioning emission allowances and using a large portion to help families lower their energy use and carbon footprint, and to cushion any energy price increases.

Protect America's Wildlife Resources. Ten percent of auction revenues should be dedicated to provide funding to help protect America's wildlife in the face of climate changes we cannot avoid. At least seventy percent of this wildlife funding should be for the Wildlife Conservation and Restoration Account of the Pittman-Robertson Act, which funds the State Wildlife Grant Program. By using the well-established structure of this account, a part of one of America's landmark conservation laws, funds derived from a market-based regulatory system would be efficiently and fairly distributed to the states. The remainder can be dedicated to priority funding needs for federal agencies and in key regions that will be most directly impacted.

Protect Vulnerable Communities. A portion of revenues should be used to help communities prepare for and respond to the impacts of global warming, such as extreme climate events including hurricanes, floods and droughts. Smart planning early can prevent much larger expenses after these extreme events hit home. Aid should be provided both to U.S. communities and to developing nations, with a particular focus on the vulnerability of the poor.

Promote Low Carbon Technologies. A federal technology research, development and demonstration and deployment program is a necessary complement to the emissions trading system that will drive demand for low carbon technology. Technologies should focus first and foremost on renewable energy and energy efficiency technologies, and also pursue investments in carbon capture and storage from coal plants and in advanced cellulosic ethanol plants.

Promote Investment in Atmospheric Carbon Removal Strategies. The overwhelming share of climate action should focus on strategies to reduce our emissions of greenhouse gases, bolster natural ecosystem sinks, and slow the pace of global warming. However, a small share of auction revenues should be used to provide incentives to develop and test innovative strategies

that have the potential to deploy on a large scale to directly stabilize greenhouse gas emissions in the atmosphere. We are currently locked in to a rate of change that already is having damaging effects on people and wildlife. While numerous technology options exist to reduce the amount of pollution we put into the atmosphere, no feasible options currently exist to directly draw down greenhouse gas concentrations in the atmosphere on the scale necessary to reverse course to below current concentration levels. The government should only invest in strategies that don't risk significant changes in ocean ecology and other habitat.

l. Are there special features that should be added to encourage technological development?

The cost-effective deployment of existing technologies to improve energy efficiency and reduce greenhouse emissions should be a priority, as it will yield emission reductions in the near-term while new technologies are developed. The most efficient and powerful way to stimulate private investment in research, development, and deployment is to adopt policies establishing a market value for greenhouse gas emissions over the long term. Where near-term price signals are insufficient to deploy cleaner existing technologies, additional incentives or other measures must be considered, especially where carbon emissions could be significantly reduced and the "lock-in" of future carbon emissions avoided. Rapid advancement and deployment of new, breakthrough technologies are also core elements of any climate change solution. Thus, an effective climate change program must include policies to promote significant research, development and deployment of hyper-efficient end use technologies; low-or zero- emitting technologies; and cost-effective carbon capture and storage, which will be particularly important in the deployment of advanced coal technologies.

m. Are there design features that would encourage high-emitting developing countries to agree to limits on their greenhouse gas emissions?

See response to question #4.

3. How well do you believe existing authorities permitting or compelling voluntary or mandatory actions are functioning? What lessons do you think can be learned from existing voluntary or mandatory programs?

Companies that have taken a serious approach to voluntary reductions have demonstrated that significant emission reductions are readily achievable. For example, BP, one of the world's largest energy companies, met its internal greenhouse-gas-reduction target in 2001, nine years ahead of schedule, reducing emissions by 18 percent and saving $650 million over three years after an initial investment of $20 million. As documented in the report *Carbon Down, Profits Up*, five global companies, including IBM and DuPont, have achieved greenhouse gas reductions of 60 percent or more with combined savings of more than $5.5 billion from improved energy efficiency, fuel switching and reduced waste. The lesson from these experiences is that

aggressive reductions can be achieved if businesses are given the flexibility to determine the best ways of achieving emission reduction goals.

Nevertheless, the past fifteen years have also proven that voluntary partnerships and emissions reporting systems as a whole are not a substitute for new government safeguards to curb U.S. emissions. Most companies have ignored calls for voluntary reductions. Emissions today are at least 15 percent higher than they were in 1990, and we are emitting 25 million pounds of carbon dioxide every minute. Without urgent action, the Department of Energy projects that our dependency on fossil fuels will climb dramatically in coming years, resulting in a 37 percent increase by 2030 in carbon dioxide pollution from oil and coal. These numbers include the Department of Energy's assessment of current voluntary efforts. In short, if current energy practices persist, we will make the problem worse and worse every year, adding to the pollution legacy we are leaving our children.

In particular, government partnerships with the U.S. electric utility industry have been a failure. U.S. power companies, which account for 40 percent of U.S. carbon dioxide emissions, have been required to disclose their carbon dioxide emissions under the Clean Air Act for decades. In 1994, the nation's major utility trade associations, including Edison Electric Institute and American Public Power Association, signed a Memorandum of Understanding with the Department of Energy launching the Climate Challenge program to voluntarily reduce greenhouse gas emissions from power plants. Despite these reporting requirements and the voluntary industry-government partnerships, U.S. power companies have increased emissions by more than 25 percent since 1990, emitting 460 million more tons of carbon dioxide into the atmosphere in 2003 than they did in 1990.

Today, more than 150 coal-fired power plants have been proposed to be built across the United States. Over their sixty-year lives, these coal plants will emit more than 35 billion tons of carbon dioxide. That's more global warming pollution – just from the coal plants we plan on building in the coming years – than Canada and Mexico combined have emitted from all sources in their entire history.

Recently, the electric utility industry used the "greenhouse gas intensity" metric as a smokescreen to hide the industry's lack of progress. In February 2003, power companies entered into a new voluntary commitment with the Department of Energy that allows for a further 19 percent emissions increase in carbon dioxide emissions from power plants over the next decade. This is actually a faster pace than the official government energy forecast by the Energy Information Administration had projected in its "business as usual" forecast. Even the Administration was confused about what the reality was behind this agreement. According to a report on the launch written by the Los Angeles Times:

> "The Edison Electric Institute and six other power sector groups that together represent all U.S. electricity generation pledged to reduce their carbon intensity -- the quantity of their

> emissions relative to the amount of electricity sold -- by 3 percent to 5 percent over this decade. The Energy Information Agency's 2003 Annual Energy Outlook had projected that the industry would reduce its emissions relative to electricity sold by 7 percent over that time, without the president's program. Even top Energy Department officials seemed to have misunderstood what the electric utilities had pledged. Abraham said the industries' pledges were 'intended to be in addition to what could have happened under the normal business course.' But the president of the Edison Electric Institute, Thomas Kuhn, said the commitment was for an 'absolute' decrease of 3 percent to 5 percent in his industry's emissions per unit of energy sold over the decade. 'That would not be our understanding,' said Energy Undersecretary Bob Cart (sic). 'The electric power sector needs to do more than 3 percent to 5 percent absolute over this time period.' (reported by Elizabeth Shogren, "13 Industries Set Emissions Targets as Part of Bush Initiative," *Los Angeles Times*, February 13, 2003).

In announcing the agreement, Secretary Abraham stated "the electric power sector has been a leader in voluntary climate activities," and noted that the industry agreements serve as "impressive testimony to the ability of the private sector to get the job done." Clearly, a new approach is needed if we are to expect real reductions on a widespread scale.

It is important to differentiate the overall adequacy of voluntary approaches from the value of individual voluntary programs themselves. As mentioned previously, a number of companies have taken real and laudable action. Some government programs, such as EPA and DOE's Energy Star programs, have been vital in educating consumers and companies about energy efficiency opportunities. Energy Star has successfully delivered energy and cost savings across the country, saving businesses, organizations and consumers approximately $10 billion in 2004. The availability of non-biased information on environmental and energy performance will be an important complement to an emissions cap-and-trade program, and other emissions control policies.

4. ***How should potential mandatory domestic requirements be integrated with future obligations the United States may assume under the 1992 United Nations Framework Convention on Climate Change? In particular, how should any U.S. domestic regime be timed relative to any international obligations? Should adoption of mandatory domestic requirements be conditioned upon assumption of specific responsibilities by developing nations?***

U.S. leadership is essential for establishing an equitable and effective international policy framework for robust action by all major emitting countries. U.S. action to implement mandatory measures and incentives for reducing emissions should not be contingent on simultaneous action by other countries.

The effects of climate change are global, as are the sources of GHG emissions. Success will

require commitments by all of the major emitting countries. Toward this end, the U.S. government should become more involved in developing the post-2012 international arrangements for addressing climate change that are now being discussed. Ultimately there must be an international program for addressing climate change and its impacts.

While taking the necessary first step of placing limits on our own emissions, Congress should strongly urge the Administration to safeguard U.S. interests by engaging in international negotiations with the aim of establishing commitments by all major emitting countries. The post-2012 global framework should establish international greenhouse gas markets, assist vulnerable populations in adapting to climate impacts, and boost support for climate-friendly technology in developing countries.