

NATURAL RESOURCES DEFENSE COUNCIL

**Testimony of David D. Doniger
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Hearing on

The Asia Pacific Partnership

**Committee on Environment and Public Works
United States Senate**

September 20, 2006

Thank you for the opportunity to testify today on science and policy issues related to the Asia Pacific Partnership. My name is David Doniger, and I am climate policy director at the Natural Resources Defense Council (NRDC). NRDC is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.2 million members and online activists nationwide, served from offices in New York, Washington, Los Angeles and San Francisco. I have worked for NRDC in two separate stints for nearly 20 years. I also served in the Environmental Protection Agency in the 1990s, where I helped direct the Clinton administration's domestic and international policy on global warming.

The Asia Pacific Partnership is symptomatic of the current administration's failure to take meaningful action to curb global warming either at home or abroad. The U.S. has limited the terms of engagement with the other participating countries to strictly voluntary measures and technology cooperation backed by what can only be described as token governmental funding. On these terms, the Partnership *cannot* make a difference. It is simply an exercise in looking busy while other nations engage in real efforts internationally and while business leaders, elected officials, and others work towards real policies here at home.

Time Is Running Out

Most serious climate scientists now warn that there is a very short window of time for beginning serious emission reductions if we are to avoid truly dangerous greenhouse gas concentrations without severe economic impact. The science debate is over.

Significant emission reductions are needed, and delay only makes the job harder. As the National Academy of Sciences stated last year:

Despite remaining unanswered questions, the scientific understanding of climate change is now sufficiently clear to justify taking steps to reduce the amount of greenhouse gases in the atmosphere. Because carbon dioxide and some other greenhouse gases can remain in the atmosphere for many decades, centuries, or longer, the climate change impacts from concentrations today will likely continue well beyond the 21st century and could potentially accelerate. Failure to implement significant reductions in net greenhouse gases will make the job much harder in the future—both in terms of stabilizing their atmospheric abundances and in terms of experiencing more significant impacts.¹

The evidence continues to pile up that we are *already* suffering dangerous climate impacts due to the build-up of carbon dioxide that has already occurred: stronger hurricanes, melting ice caps, killer heat-waves, and severe droughts. NASA reported last week that the Arctic ice cap is melting at an unprecedented rate. Scientists have recently detected accelerated melting of the Greenland and West Antarctic ice sheets – much faster melting than anyone had expected. If *either* of these ice sheets melt away, sea levels will rise more than *20 feet*, with utterly disastrous implications for Louisiana, Florida, and other low-lying regions of the country and around the world.

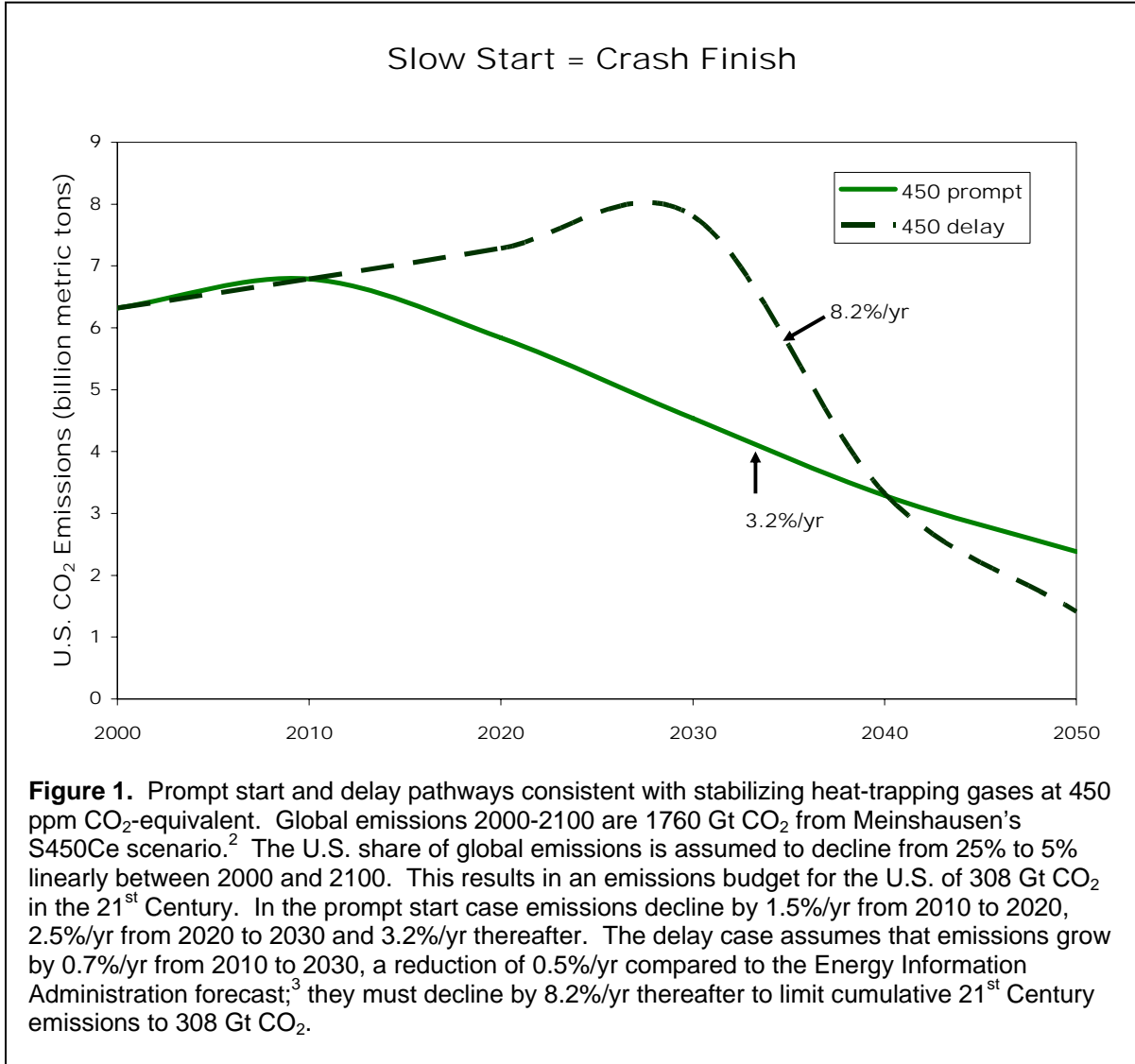
There is only a short window of time to stop this from happening. Since the start of the industrial revolution, carbon dioxide concentrations have risen from about 270 parts per million (ppm) to more than 380 ppm today, and global average temperatures have risen by more than one degree Fahrenheit over the last century. A growing scientific consensus is forming that we face extreme dangers if global average temperatures are allowed to increase by more than 3.5 degrees Fahrenheit. We have a

¹ National Academy of Sciences, *Understanding and Responding to Climate Change: Highlights of National Academies Reports*, p.16 (October 2005), http://dels.nas.edu/dels/rpt_briefs/climate-change-final.pdf (emphasis added).

reasonable chance of staying within this envelope if atmospheric concentrations of CO₂ and other global warming gases are kept from exceeding 450 ppm CO₂- equivalent and then rapidly reduced. We still can stay within this 450 ppm target – but only if we stop U.S. emissions growth within the next 5-10 years and cut emissions by at least half over the next 50 years. U.S. action on this scale – together with similar cuts by other developed countries and limited emissions growth from developing countries – would keep the world within that 450 ppm limit.

So here is our choice. If we start cutting U.S. emissions soon, and work with other developed and developing countries for comparable actions, we can stay on the 450 ppm path with an ambitious but achievable annual rate of emission reductions – one that gradually ramps up to about 3.2% reduction per year. (See Figure 1.)

But if we delay a serious start and continue emission growth at or near the business-as-usual trajectory for another 10 years, the job becomes much harder – the annual emission reduction rate required to stay on the 450 ppm path jumps between two- and three-fold, to 8.2% per year. In short, a slow start means a crash finish – the longer emissions growth continues, the steeper and more disruptive the cuts required later.



Here's a common sense illustration of what this means. Imagine driving a car at 50 miles per hour, and you see a stop light ahead of you at a busy intersection. If you apply the brakes early, you can easily stop your car at the light with a gentle deceleration.

² Simple Model for Climate Policy assessment (SiMcaP), available at: <http://www.simcap.org/>

³ Reference case from U.S. Department of Energy, Annual Energy Outlook 2006 with Projections to 2030, Report # DOE/EIA-0383(2006)

The longer you wait to start braking, the harder the deceleration. There's some room for choice. Within some limits, you can brake late and still stop in time. But the higher your speed, the earlier you must start braking. If you wait too long, you'll find yourself in the middle of the intersection with your forehead through the windshield.

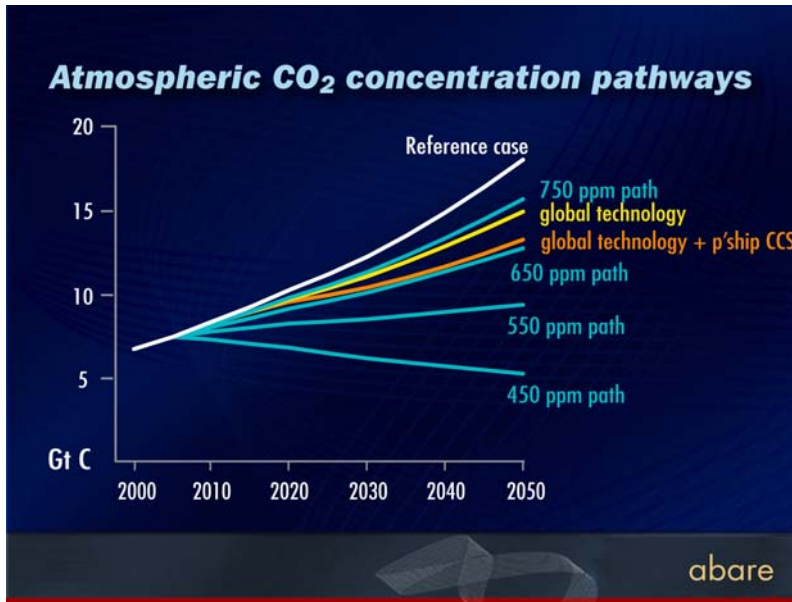
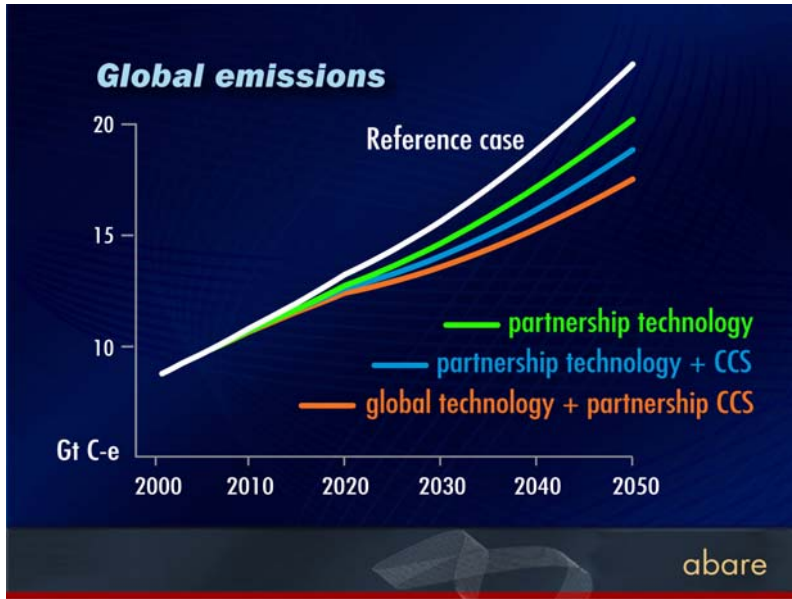
The captain of the Titanic learned a similar lesson. If he had started turning just a couple of minutes earlier, he would have missed the iceberg. But traveling at full speed, by the time he saw the iceberg, it was too late to miss it. He lost his ship. Will we repeat the same mistake?

Advocates of the Asia Pacific Partnership's voluntary approach argue that it is still cheaper to delay mandatory emission cuts because (somehow) we will develop breakthrough technologies in the interim and these will enable faster reductions later at lower cost. But this argument is implausible for two reasons. First, as already demonstrated, delaying the start of reductions dramatically increases the rate at which emissions must be lowered later. Reducing emissions by more than 8 percent per year would require deploying advanced low-emission technologies at least several times faster than conventional technologies have been deployed over recent decades. Second, delay means that a whole new generation of capital investment will be made in billions of dollars of high-emitting capital stock – conventional power plants, vehicles, etc., that will be built or bought during the next 10-20 years in the absence of meaningful near-term limits. Under the delay scenario, our children and grandchildren would then have to bear the costs of prematurely retiring an even bigger capital stock than exists today. Even taking discounting into account, it is virtually impossible that delaying emission reductions is cheaper than starting them now.

Limited as it is to voluntary measures, the Asia Pacific Partnership has no hope of preventing the “crash finish” scenario. Indeed, the Asia Pacific Partnership approach will only guarantee that we reach extremely dangerous CO₂ concentrations. This is demonstrated by an analysis done for the Australian government (an APP partner) by the Australian Bureau of Agricultural and Resource Economics (ABARE).⁴

The ABARE analysis assumed that the Asia Pacific Partnership meets its stated goal that all new power plants built after 2015 in the U.S., Australia, and Japan, and after 2020 in China, India, and South Korea are equipped with carbon capture and storage (CCS) technology and deposit their CO₂ emissions underground. ABARE further assumed that this technology gradually diffuses around the world. The analysis also included modest improvements in efficiency and some other zero-emission generation (renewables and nuclear). No limits are placed, however, on existing power plant emissions, or on other sectors. With these assumptions, ABARE finds that even if the Partnership’s goals are met, CO₂ emissions and concentrations keep rising above 650 ppm – well over a doubling of pre-industrial levels. See Figures 2 and 3. This would lock in devastating climate impacts.

⁴ Technological Development and Economic Growth, ABARE research report 06.1 (January 2006).



Figures 2 and 3

Voluntary Measures Aren't Working At Home Either

The Asia Pacific Partnership is only the latest manifestation of the president's "voluntary" policy. That approach, however, is not working at home either. The inadequacy of a voluntary program is plain to see for a growing number of business

leaders, state and local elected officials, and a majority of the U.S. Senate, as well as to nearly all other nations.

In 2002, President Bush recommitted the United States to “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” – the objective of the climate change treaty (the U.N. Framework Convention on Climate Change) adopted and ratified by his father. The president said his goal was to “slow, stop, and reverse” U.S. global warming emissions growth. He set a purely voluntary target of reducing the emissions *intensity* of the U.S. economy – the ratio of emissions to GDP – by 18 percent between 2002 and 2012.

But emissions *intensity* is a deceptive measure, because what counts for global warming is *total* emissions. Even if the president’s target were met (and recent reports indicate that it may not be), *total* U.S. emissions will still increase by 14 percent between 2002 and 2012 – exactly the same rate as they grew in the 1990s. (See Figure 4.)

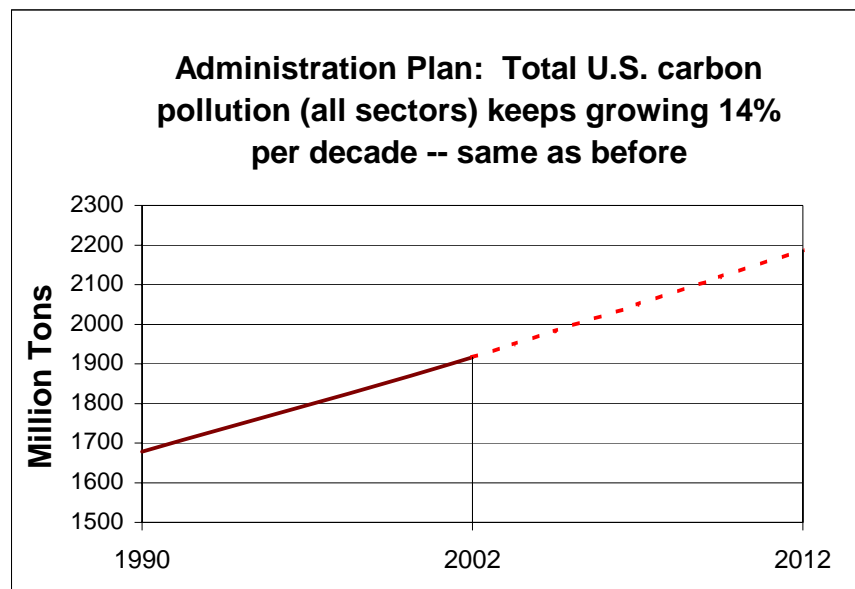


Figure 4

The Need for Mandatory Limits

While the administration clings doggedly to the voluntary fiction, most political, civic, and business leaders in the United States are moving on. A majority of the Senate voted last year for a Sense of the Senate resolution endorsing the need for “mandatory, market-based limits” that will “slow, stop, and reverse the growth” of global warming pollution. The resolution affirms that U.S. mandatory action can be taken without significant harm to the economy and that such action “will encourage comparable action by other nations that are major trading partners and key contributors to global emissions.”

State and local governments are leading, with mandatory limits on power plant emissions in the northeast and in California. California and 10 other states have adopted limits on global warming emissions from motor vehicles. Last month, California – the 12th largest emitter in the world – enacted the most far-reaching state plan to reduce the state’s global warming pollution to 1990 levels by 2020. The state’s new law enjoys wide support from businesses and other constituencies, going well beyond the usual environmental suspects: PG&E; Silicon Valley Leadership Group; Bay Area Council; Sacramento Municipal Utility District; Waste Management; Calpine; California Ski Industry Association; the cities of Los Angeles, San Francisco, Oakland, and Sacramento; the American Academy of Pediatrics; the California Nurses Association; CDF Firefighters; and Republicans for Environmental Protection.

Many other states have adopted standards to increase the percentage of renewable power generation. Stakeholder processes to address global warming are underway or in development in a growing number of states in all regions of the country. More than 200 cities have announced plans to reduce their global warming pollution.

The constituency for real action is broadening and growing. Earlier this year, more than 80 evangelical leaders called for mandatory limits on global warming pollution, citing their duty to care for God's creation.

In April, appearing before the Senate Energy Committee, some of the largest electric utilities, suppliers of generating equipment, and electricity customers called for mandatory limits. Huge companies such as Duke Energy, Exelon, and GE said that voluntary programs won't work and that they need certainty and clear market signals in order to make sensible investments in new power plants that will last 50 years. Big electricity consumers like Wal-Mart endorsed mandatory limits and committed to cut their energy use and emissions through investments in energy efficiency and renewable energy.

They all get it. Voluntary programs and tax incentives are insufficient to get these technologies deployed at a sufficient scale and speed to avoid a climate catastrophe. The market conditions for these new investments will not be created without a limit on CO₂ emissions.

Mandatory Limits Abroad

Other countries get it too. Not just the Europeans, but developing countries as well. In December 2005, more than 180 countries committed to new negotiations on mandatory steps to follow and supplement the current Kyoto Protocol after 2012. What struck me most was the near consensus – save only our own government – on the market logic of mandatory requirements. The European Union, of course, has taken the tools of emissions trading pioneered in this country and implemented a mandatory cap-and-trade program for CO₂. China and India now understand the market-based framework offers

them the potential for new flows of capital to finance cleaner energy development – with obvious benefits for them in terms of cleaning up their awful local pollution problems, in addition to reducing their CO₂ emissions.

We need to recognize that key developing countries are also *already* taking actions to reduce their global warming emissions growth. For example:

- China’s GHG emission intensity has improved due to macro economic reforms and energy sector liberalization. China’s Eleventh Five-Year Plan, which goes into effect this year, calls for a 20 percent reduction in energy use per unit of GDP by 2010. China’s renewables sector is the world’s fastest growing, at more than 25 percent annually. China has enacted a new Renewable Energy Law and vowed to meet 15 percent of its energy needs with renewable energy by 2020.⁵
- China has far surpassed the U.S. fuel efficiency standards for vehicles of all classes. China’s new fuel efficiency standards require vehicle classes to achieve on average 34.4 mpg by 2005 and 36.7 mpg by 2008 (normalized for the CAFE test cycle). American fuel efficiency standards are calculated using the average fuel use of the entire fleet sold by an automaker. However, in China, as well as Japan, the standards require that each model sold meet the criteria. China’s Standardization Administration finalized fuel economy standards for light-duty vehicles—cars and light trucks, including sport utility vehicles (SUVs)—that are up to twenty percent more stringent than U.S. CAFE standards. The standards will save 60 million tons of carbon in 2030, displacing 517 million barrels of oil in that year—equivalent to removing 35 million cars from the road. China’s leaders are serious about enforcing the standards—vehicles that don’t meet the standards cannot be certified for sale or operation—and intend to broaden them to include heavy duty trucks.⁶
- Brazil’s GHG emission intensity levels have risen in recent years because of increased gas use, which increases emissions relative to hydropower, on which Brazil has traditionally relied. However, in the transportation sector Brazil has saved 574 million tons of CO₂ since 1975 through its development of ethanol, which is roughly ten percent of Brazil’s CO₂ emissions over that period.⁷

⁵ “Gov’t demands more focus on green energy,” *China Daily* (Jan. 13, 2006).

⁶ An and Sauer, *Comparison of Passenger Vehicle Fuel Economy and GHG Emission Standards Around the World*, Prepared for the Pew Center on Global Climate Change, December 2004

⁷ Baumert, Herzog, and Pershing, *Navigating the Numbers: Greenhouse Gases and International Climate Change Agreements*, World Resources Institute 2005, ISBN: 1-56973-599-9

Even though they have already begun to act, other countries (both developed and developing) are likely to take U.S. action or inaction heavily into account in deciding on their future actions. Our leadership is fundamental.

Chinese and Indian officials are working with the Europeans and others on serious steps to make the market-based system work – for example, developing limits or benchmarks for emissions in key sectors, in order to set the baseline for earning emissions credits that can be sold through the marketplace to raise funds for cleaner energy development. The stage is set, over the next several years, to develop a win-win deal that helps cut emissions, opens markets for firms in industrial countries while cutting their domestic compliance costs, and draws all key nations into a global effort to prevent global warming.

U.S. on the Sideline, or Worse

Where does the Asia Pacific Partnership fit into this? First, in principle, it is not a bad idea to work with a smaller set of key countries. That is what Prime Minister Tony Blair set out to do last year in forming a group known as the “G-8 plus 5” – the major industrial nations plus China, India, Mexico, Brazil, and South Africa. A consensus on a new market-based agreement among under 20 countries – including Europe, the U.S., Japan, and those five developing countries – would cover the bulk of world emissions and go a long way to solving the global warming problem.

But the U.S. has refused to play ball in this ballpark. Instead, the Bush administration has sought to manufacture another ballpark – cutting out the Europeans – and run the game on its own voluntary rules.

The results of the Asia Pacific Partnership process so far are truly meager. Limited by the U.S. “voluntary only” approach, the meetings thus far have been nothing more than a gabfest about process and studies. The participants released a grab bag of announcements about sharing technology experiences and agreeing to meet again. The U.S. put a measly \$50 million on the table – not even enough to build one clean electricity plant.

China, India – and the U.S. – are planning to build hundreds of new power plants powered by coal. If nothing is done, these plants will emit huge amounts of CO₂ for 50 years and foreclose any chance to stave off a climate catastrophe. But if we act at home and work with them abroad, we can change this future, by investing in a new generation of coal plants that dispose of their CO₂ underground, not in the atmosphere, as well as by increasing investments in energy efficiency and renewable power. This will not happen under the voluntary Asia Pacific Partnership as presently structured. We need more than that.

This is not to say that the solution lies in more government funding. It does not. The solution lies in embracing the market. But as the companies testified last April to the Energy Committee, without mandatory limits on emissions, there is no market.

Without mandatory limits, the Asia Pacific Partnership is just theater – theater that does not meet the interests of China, India, and other countries in constructing a real system that fuels cleaner development and cuts emissions. And it is theater that does not protect the American people from stronger hurricanes, heat-waves, drought, and coastal inundation that is coming from global warming.

If we are to prevent catastrophic global warming, we have to take mandatory action – both at home and internationally. No serious environmental challenge was ever solved by voluntary action alone. American business gets it. American leaders at the state and local level get it. Our partners and competitors abroad get it. It's time for our national leaders to get it, and to act.