

OUR COMMON PURPOSE: ADDRESSING CLIMATE CHANGE



"If we are flexible and pragmatic, if we can resolve to work tirelessly in common effort, then we will achieve our common purpose: a world that is safer, cleaner, and healthier than the one we found; and a future that is worthy of our children."
- **President Barack Obama, September 22, 2009**



Our Common Purpose: Addressing Climate Change

Climate Change is one of the greatest threats facing our planet, and the United States is taking significant action to meet this challenge. Under President Obama, The United States has done more to reduce greenhouse gas emissions than ever before, and is demonstrating its commitment to lead through science and technology advancement and robust domestic action, including historic investments in clean energy, stringent vehicle and appliance efficiency standards, and comprehensive clean energy and climate legislation that is making its way through Congress.

But no nation can solve this crisis on its own. Climate change is a global challenge that demands a global solution. The United States is engaging developed and developing country partners around the world to forge the necessary international response and to achieve a successful international agreement.

Basing Actions on Sound Science

The need for aggressive action on climate change is clear. Climate change impacts are already being felt and the consequences will be increasingly severe. Arctic sea ice is disappearing, sea levels are rising, oceans are becoming more acidic, storms are becoming more frequent and intense, and water supplies are increasingly at risk from both melting glaciers and increased incidence of climate events, such as droughts and floods. These impacts are not forecasts, but are documented changes that are already occurring.

The impacts of climate change underscore the importance of scientific information to aid decision-makers in addressing climate variability, mitigating climate change and adapting to a changed climate. Government decision-makers, non-governmental organizations, business leaders, and individual citizens are asking how they can best prepare their communities for the impacts of climate change.

U.S. scientists play a key role in deepening our understanding of climate change. Leading experts in U.S. government agencies, national laboratories, research organizations, and the academic

Carbon cycle monitoring network

For decades, U.S. scientists have led efforts to measure and monitor global greenhouse gases. The United States has an extensive global network of surface, tower, aircraft, satellite, and ocean observing systems. One example of such a system is the National Oceanic and Atmospheric Administration's carbon cycle monitoring network, which contributes 70 percent of the atmospheric monitoring data submitted to the World Meteorological Organization's Greenhouse Gas Data Centre.



community provide state-of-the-art modeling, in-depth analyses and comprehensive observations on climate profiles, land cover changes, ocean chemistry, atmospheric make-up, and other scientific issues. The United States is also working to expand access to and facilitate distribution of climate information. At the recent third World Climate Conference in Geneva, the United States championed an initiative to establish a Global Framework for Climate Services for that purpose.

Extreme Ice Survey

The Extreme Ice Survey is the most wide-ranging glacier study ever conducted using ground-based real-time photography. Sponsored by the U.S. National Aeronautics and Space Administration, National Science Foundation, and other organizations, the Survey combines cutting-edge research with stunning photographs from 27 time-lapse cameras installed at 15 glaciers. The project, which was featured in a PBS documentary on March 24, 2009, creates a unique photographic archive of melting glaciers, which will provide key clues to understanding their dramatic retreat.

www.extremeicesurvey.org

Wind energy

Wind energy is the world's fastest-growing energy-supply technology. Today, the U.S. has more than 30,000 megawatts of wind-generating capacity. Through public-private research and development partnerships, the U.S. Department of Energy (DOE) is working to improve the performance of wind technologies and lower the cost of wind energy. DOE has worked with corporations and others to help lower the cost of wind energy to between five and eight cents per kilowatt hour, making large wind farms in some regions cost-competitive with other power sources.

Projected greenhouse gas reductions by 2020: 360 million metric tons of CO₂ equivalent

<http://windandhydro.energy.gov>

Building a Clean Energy Economy and Advancing Technology

Meeting the climate challenge requires developing and distributing clean energy technology around the world. The United States is investing significant resources in clean energy technology research, development, and deployment. The 2009 U.S. economic recovery package contains over \$80 billion for clean energy – the largest ever investment of its kind in U.S. history. Across America, entrepreneurs are installing wind turbines and solar panels and developing improved batteries for hybrid cars with the help of government grants, financing



assistance and tax credits. We're investing billions to cut energy waste in our homes, buildings, and appliances helping American families save money on energy in the process. And we're working to develop breakthrough energy solutions, such as carbon capture and storage technologies, next generation biofuels, and advanced batteries.

Abroad, the United States is forging new bilateral and multilateral clean energy partnerships. Through the U.S.-China Clean Energy Research Center, joint teams of Chinese and U.S. scientists will conduct innovative research on high priority areas, such as highly efficient buildings, carbon capture and storage, and clean vehicle technologies. Through the Major Economies Forum on Energy and Climate, the United States is leading the formation of a 'Global Partnership' to promote development and deployment of transformational low-carbon technologies and energy efficiency. Another effort, the Asia-Pacific Partnership on Clean Development and Climate is supporting projects that demonstrate the feasibility of employing low-carbon technologies in energy-intensive industries. The Carbon Sequestration Leadership Forum has built multilateral collaboration on the diffusion of technologies that capture carbon from power plants and other industrial facilities and store it underground. The United States is committed to accelerating the diffusion of clean technologies to developing countries, and has proposed creating effective multilateral mechanisms to provide developing countries with technical assistance and training.

Rural Energy for America

The U.S. Department of Agriculture's Rural Energy for America Program provides support to agricultural producers and rural small businesses to purchase renewable energy systems and improve energy efficiency. The program helped finance 694 renewable energy systems and 1,329 energy efficiency improvements between 2002 and 2008.

www.rurdev.usda.gov/rbs/farbill/index.html



Taking Domestic Action

In the past year, the United States has demonstrated a renewed commitment to promoting clean energy at home, increasing energy security, creating green jobs, and reducing emissions of heat-trapping pollutants. The President is working with Congress on climate and energy legislation that would establish legally binding economy-wide emission targets implemented through market-based caps to lower emissions more than 80 percent below current levels by 2050. New vehicle efficiency standards will reduce greenhouse gas pollution and cut oil use. In September, the Environmental Protection Agency

finalized a rule requiring emissions reporting by facilities with the highest annual greenhouse gas emissions - the requirement will cover approximately 10,000 facilities and 85 percent of domestic greenhouse gas emissions. In October, the President issued an executive order that requires government agencies to be leaders in increasing energy efficiency and reducing emissions through sustainable operations plans. Additionally, U.S. businesses are stepping up to green their operations and reduce their carbon footprints.

At the city, state and regional levels, people are working together to do their part to combat climate change. Ten Northeast and Mid-Atlantic states have initiated a market-

New vehicle standards

In May, 2009, President Obama proposed a new program to simultaneously promote fuel economy and limit tailpipe emissions of greenhouse gases. This program, supported by the U.S. Department of Transportation and U.S. Environmental Protection Agency, will increase the average fuel economy standard to 35.5 miles per gallon by 2016 for model years 2012 through 2016. The program will reduce oil consumption by about 1.8 billion barrels and reduce greenhouse gas emissions by about 900 million metric tons.

<http://www.nhtsa.dot.gov/portal/fueleconomy.jsp>



based cap to lower carbon dioxide emissions in their power sectors 10 percent by 2018, through the Regional Greenhouse Gas Initiative. Through the Midwestern Greenhouse Gas Reduction Accord, governors of six Midwestern states have committed to develop a multi-sector cap-and-trade system and other policies to achieve regional greenhouse gas emissions reduction targets. Similarly, several western states collaborating through the Western Climate Initiative have developed a greenhouse gas emissions cap-and-trade system. More than 30 states have passed renewable or alternative energy standards, and another five states have set renewable energy goals. To support a comprehensive federal energy strategy that addresses climate change, 30 U.S. governors have

established the Governors' Energy and Climate Coalition to find common ground on a national strategy for climate change action. At the local level, more than 1000 U.S. Mayors have signed on to a Climate Protection Agreement to reduce carbon emissions in their cities. These cities and states are promoting renewable energy, expanding public transportation, working toward energy efficiency, and educating their citizens on climate and energy issues.

Weatherization Assistance Program

The U.S. Department of Energy's Weatherization Assistance Program works through state and local agencies to increase residential energy efficiency and reduce energy costs for low-income families. The program has improved the energy efficiency of over 6.2 million homes since 1976, saving households an average of \$350 in first-year energy costs. In February 2009, the U.S. Congress dedicated \$5 billion to significantly ramp up the weatherization of low-income family residences, helping millions of Americans save money on their energy bills, reduce their carbon emissions, and make their homes more comfortable and livable.

Projected greenhouse gas reductions by 2020:
260 million metric tons of CO₂ equivalent

<http://apps1.eere.energy.gov/weatherization/>



Arches National Park, Utah

Forging Stronger Global Partnerships

U.S. efforts to combat climate change are essential but not sufficient. Climate change is a global challenge that demands a global solution. The United States is working toward a global strategy to combat climate change by actively seeking an international agreement through the UN climate change negotiations process, by engaging 17 of the largest economies through the Major Economies Forum on Energy and Climate, and by elevating climate and clean energy to a top tier issue in key bilateral relationships.

U.S. agencies and organizations are developing tools and methods that will help facilitate a strong international climate agreement. Addressing climate change at a global level will require frameworks for assisting other countries with developing low-carbon development strategies, plans for measuring and analyzing global greenhouse gas levels and climate factors, tools for analyzing national mitigation plans, and inventories for compiling and calculating carbon emissions and sequestration.

Fossil fuel subsidy phase-out

At the 2009 G-20 Summit in Pittsburgh, President Obama initiated a commitment by G-20 leaders to phase out fossil fuel subsidies. An Organization for Economic Development, International Energy Agency report estimates that eliminating these subsidies worldwide would reduce global greenhouse gas emissions 10 percent or more by 2050.



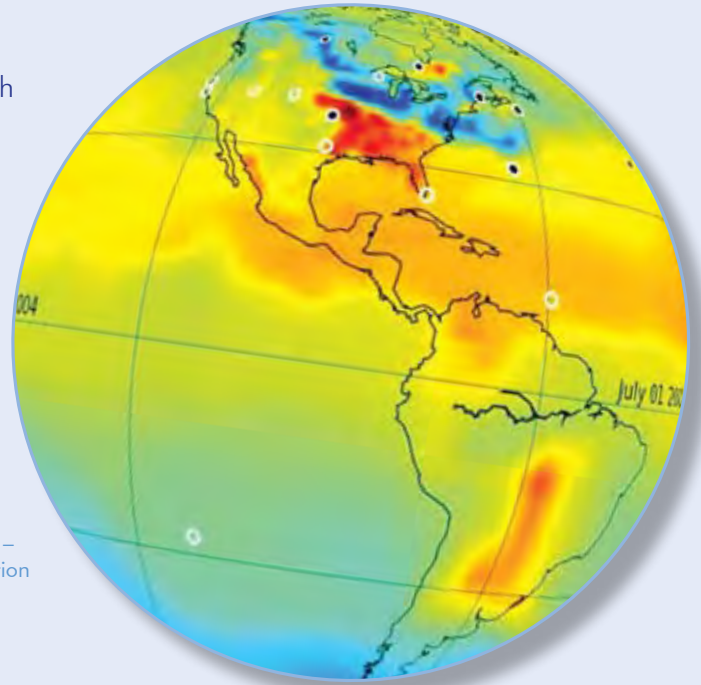
United Nations Headquarters, Manhattan, New York City

CarbonTracker

CarbonTracker, a tool developed by the Earth System Research Laboratory, part of the National Oceanic and Atmospheric Administration, helps scientists monitor carbon sources and sinks. CarbonTracker composes “snapshots” of greenhouse gas flows by using CO₂ concentrations, wind speed, and other atmospheric observations. CarbonTracker can also infer regional emissions and removals of CO₂, consistent with the observed patterns of CO₂ in the atmosphere.

<http://carbontracker.noaa.gov/>

CarbonTracker image –
National Oceanic and Atmospheric Administration



Reducing HFCs

In September, The United States joined Canada and Mexico in formally supporting a proposal to dramatically reduce the emissions of hydrofluorocarbons (HFCs), a potent greenhouse gas, under the Montreal Protocol. Amending the Montreal Protocol to phase-down HFCs in developed and developing countries could prevent about 90 billion metric tons of carbon dioxide equivalent emissions through 2050, representing a significant step toward cutting global greenhouse gas emissions to half their current levels by 2050.



Engaging Developing Country Partners

All countries have an important role to play in addressing climate change. The International Energy Agency estimates that more than 90% of carbon dioxide emissions growth from now until 2030 will come from the developing world. There simply is no way to preserve a safe and livable planet unless major developing countries play a globally responsible role along with developed countries in the climate negotiations.

The United States recognizes that a successful international climate agreement must be not just about limiting carbon emissions but must complement and promote sustainable economic development by moving the world toward a low-carbon economy. The effort to build a sustainable, clean energy global economy can drive investment and job creation around the world, while bringing energy services to hundreds of millions of the world's poor. Reflecting this vision, President Obama proposed the Energy and Climate Partnership for the Americas to deepen cooperation on energy and climate change among the U.S. and our neighbors in the western hemisphere. An early product of this cooperation is Chile's Renewable Energy Center, which receives technical support from the U.S. Department of Energy.

The United States is engaging with partners in the developing world to provide financial and technological support for mitigating and adapting to climate change. Reducing net emissions from land use is one important



Improving water access in Kazakhstan – U.S. Agency for International Development



aspect of mitigation - deforestation, agriculture, and other land uses produce almost one-third of global greenhouse gas emissions. In addition to reducing emissions, forests contribute to economic development, protect ecosystems, and can help communities be more resilient to climate impacts.

Monitoring and Observation Tools

The U.S. Agency for International Development, with interagency partners, supports a number of tools to help developing countries understand and plan for climate variability and changes. For example, the Famine Early Warning System Network monitors 20 highly food insecure countries around the globe (soon to expand to 30 additional countries), using applied research to downscale global patterns of climate change into national and regional zones for adaptation planning. Another tool, SERVIR, a joint project with the National Aeronautics and Space Administration, integrates satellite observations, predictive models, and other geographic information from Central America and Africa to monitor and forecast ecological changes and support response to natural disasters. A new SERVIR application, the Climate Mapper allows users to access historical weather data and projections of climate change through a simple, map-based interface.

Facilitating Adaptation

Many of the poorest and most vulnerable developing countries are already suffering from the effects of climate change. Scaled-up financing from both public and private sources is necessary to help these countries adapt to the effects of climate change and transition to a low-carbon development path. The United States is working to provide a strong contribution to this process. The President's fiscal year 2010 budget request to Congress for international climate financing nearly quadruples the funding provided in fiscal year 2009 and includes a nine-fold increase in adaptation financing for the most vulnerable countries. Domestic climate and energy legislation could provide significant new resources to help developing countries adapt.

In addition to financial support, the United States is committed to building the capacity of developing countries to adapt to climate change by, for instance helping coastal communities plan for anticipated changes, putting tools in place for sharing information on detected and anticipated changes internationally, and facilitating cooperation between and among developing countries.



Barroilome Island, Galapagos

Coastal climate change course

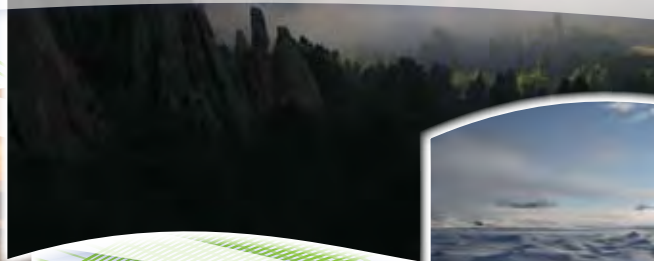
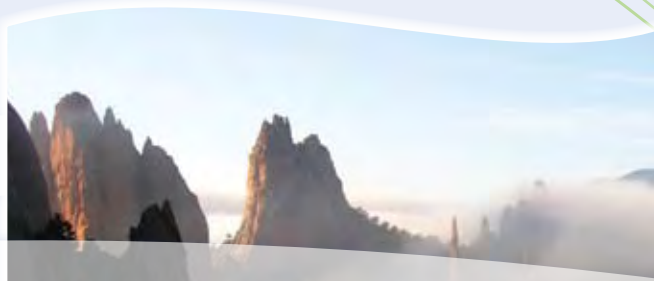
The United States is reaching out to vulnerable coastal communities around the world to help build capacity for climate change adaptation. The National Oceanic and Atmospheric Administration, U.S. Agency for International Development, and partners developed a course entitled "Planning for Climate Change in the Coastal and Marine Environment." The course has provided about 300 coastal managers and planners with the knowledge and tools needed to enhance their understanding of coastal vulnerabilities and to help them prepare adaptation strategies. Courses delivered in the Galapagos Islands of Ecuador, Indonesia, the Philippines, the Marshall Islands and Vietnam have prompted many of these countries to integrate climate change adaptation into their Marine Protected Area Plans and other national coastal management plans. Additional sessions are planned for the continental U.S., American Samoa, Indonesia and India.

Moving Forward

We are optimistic that the world will succeed in our common purpose, but there is much work to do. The issues are complex, and they are substantial. The United States is seeking nothing less than the transformation of the world's energy systems, and it will require a massive effort. In order to move forward, all countries must contribute to this process. An international agreement must be effective and equitable. We must set our sights high, but continue to work pragmatically to achieve the results needed to meet the global challenge of climate change.

"We will move forward with investments to transform our energy economy, while providing incentives to make clean energy the profitable kind of energy. We will press ahead with deep cuts in emissions --. We will continue to promote renewable energy and efficiency, and share new technologies with countries around the world. And we will seize every opportunity for progress to address this threat in a cooperative effort with the entire world."

**– President Barack Obama,
September 23, 2009**



www.cop15.state.gov



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