



IEAGHG Information Paper 2014-23: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation

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President Obama Announces Ambitious 2025 Target to Cut U.S. Climate Pollution by 26-28 Percent from 2005 Levels

Building on strong progress during the first six years of the Administration, today President Obama announced a new target to cut net greenhouse gas emissions 26-28 percent below 2005 levels by 2025. At the same time, President Xi Jinping of China announced targets to peak CO₂ emissions around 2030, with the intention to try to peak early, and to increase the non-fossil fuel share of all energy to around 20 percent by 2030.

Together, the U.S. and China account for over one third of global greenhouse gas emissions. Today's joint announcement, the culmination of months of bilateral dialogue, highlights the critical role the two countries must play in addressing climate change. The actions they announced are part of the longer range effort to achieve the deep decarbonization of the global economy over time. These actions will also inject momentum into the global climate negotiations on the road to reaching a successful new climate agreement next year in Paris.

The new U.S. goal will double the pace of carbon pollution reduction from 1.2 percent per year on average during the 2005-2020 period to 2.3-2.8 percent per year on average between 2020 and 2025. This ambitious target is grounded in intensive analysis of cost-effective carbon pollution reductions achievable under existing law and will keep the United States on the right trajectory to achieve deep economy-wide reductions on the order of 80 percent by 2050.

The Administration's steady efforts to reduce emissions will deliver ever-larger carbon pollution reductions, public health improvements and consumer savings over time and provide a firm foundation to meet the new U.S. target.

The United States will submit its 2025 target to the Framework Convention on Climate Change as an "Intended Nationally Determined Contribution" no later than the first quarter of 2015.

The joint announcement marks the first time China has agreed to peak its CO₂ emissions. The United States expects that China will succeed in peaking its emissions before 2030 based on its broad economic reform program, plans to address air pollution, and implementation of President Xi's call for an energy revolution.

China's target to expand total energy consumption coming from zero-emission sources to around 20 percent by 2030 is notable. It will require China to deploy an additional 800-1,000 gigawatts of nuclear, wind, solar and other zero emission generation capacity by 2030 – more than all the coal-fired power plants that exist in China today and close to total current electricity generation capacity in the United States.

Building on Progress

In 2009, U.S. greenhouse gas emissions were projected to continue increasing indefinitely, but President Obama set an ambitious goal to cut emissions in the range of 17 percent below 2005 levels in 2020. Throughout the first term, the Administration took strong actions to cut carbon pollution,



including investing more than \$80 billion in clean energy technologies under the recovery program, establishing historic fuel economy standards, doubling solar and wind electricity, and implementing ambitious energy efficiency measures.

Early in his second term, President Obama launched an ambitious Climate Action Plan focused on cutting carbon pollution, preparing the nation for climate impacts, and leading internationally. In addition to bolstering first-term efforts to ramp up renewable energy and efficiency, the Plan is cutting carbon pollution through new measures, including:

- *Clean Power Plan:* EPA proposed guidelines for existing power plants in June 2014 that would reduce power sector emissions 30% below 2005 levels by 2030 while delivering \$55-93 billion in net benefits from improved public health and reduced carbon pollution.
- *Standards for Heavy-Duty Engines and Vehicles:* In February 2014, President Obama directed EPA and the Department of Transportation to issue the next phase of fuel efficiency and greenhouse gas standards for medium- and heavy-duty vehicles by March 2016. These will build on the first-ever standards for medium- and heavy-duty vehicles (model years 2014 through 2018), proposed and finalized by this Administration.
- *Energy Efficiency Standards:* The Department of Energy set a goal of reducing carbon pollution by 3 billion metric tons cumulatively by 2030 through energy conservation standards issued during this Administration. These measures will also cut consumers' annual electricity bills by billions of dollars.
- *Economy-wide Measures to reduce other Greenhouse Gases:* The Environmental Protection Agency and other agencies are taking actions to cut methane emissions from landfills, coal mining, agriculture, and oil and gas systems through cost-effective voluntary actions and common-sense standards. At the same time, the State Department is working to slash global emissions of potent industrial greenhouse gases called HFCs through an amendment to the Montreal Protocol; the Environmental Protection Agency is cutting domestic HFC emissions through its Significant New Alternatives Policy (SNAP) program; and, the private sector has stepped up with commitments to cut global HFC emissions equivalent to 700 million metric tons through 2025.

Expanding U.S. and China Climate & Clean Energy Cooperation

To further support the achievement of the ambitious climate goals announced today, the United States and China have pledged to strengthen cooperation on climate and clean energy. The two countries are expanding their ongoing and robust program of cooperation through policy dialogue and technical work on clean energy and low greenhouse gas emissions technologies.

The United States and China agreed to:

- **Expand Joint Clean Energy Research and Development:** A renewed and expanded commitment to the U.S.-China Clean Energy Research Center (CERC). This will include:
 - Extending the CERC mandate for an additional five years from 2016-2020;
 - Renewing funding for the three existing tracks: building efficiency, clean vehicles, and advanced coal technologies with carbon capture, use and sequestration (CCUS); and
 - Launching a new track on the interaction of energy and water (the energy/water 'nexus').
- **Advance Major Carbon Capture, Use and Storage Demonstrations:** Expanding our work under the Climate Change Working Group (CCWG) and under the CERC, and partnering with the private sector, the United States and China will undertake a major carbon capture and storage project in China that



supports a long term, detailed assessment of full-scale sequestration in a suitable, secure underground geologic reservoir. The United States and China will make equal funding commitments to the project and will seek additional funding commitments from other countries and the private sector. In addition, both sides will work to manage climate change by demonstrating a new frontier for CO₂ use through a carbon capture, use, and sequestration (CCUS) project that will capture and store CO₂ while producing fresh water, thus demonstrating power generation as a net producer of water instead of a water consumer. This CCUS project with Enhanced Water Recovery will eventually inject about 1 million tons of CO₂ and create approximately 1.4 million cubic meters of freshwater per year.

- **Enhance Cooperation on Hydrofluorocarbons (HFCs):** Building on the historic Sunnylands agreement between President Xi and President Obama regarding HFCs, the United States and China will enhance bilateral cooperation to begin phasing down the use of high global warming potential HFCs, including through technical cooperation on domestic measures to promote HFC alternatives and to transition government procurement toward climate-friendly refrigerants.
- **Launch a Climate-Smart/Low-Carbon Cities Initiative:** Urbanization is a major trend in the 21st century, and cities worldwide account for a significant percent of global greenhouse gas emissions. In response, the United States and China are establishing a new initiative on Climate-Smart/Low-Carbon Cities under the U.S.-China Climate Change Working Group. Under the initiative, the two countries will share city-level experiences with planning, policies, and use of technologies for sustainable, resilient, low-carbon growth. This initiative will eventually include demonstrations of new technologies for smart infrastructure for urbanization. As a first step, the United States and China will convene a Climate-Smart/Low-Carbon Cities “Summit” where leading cities from both countries will share best practices, set new goals, and celebrate city-level leadership.
- **Promote Trade in Green Goods:** The United States announced that Commerce Secretary Penny Pritzker and Energy Secretary Ernest Moniz will lead a Smart Cities/Smart Growth Business Development Mission to China April 12-17, 2015, focused on green infrastructure, energy efficiency and environmental trade sectors. The mission will highlight the benefits of sustainable urbanization, technologies to support China’s air pollution and climate goals, and green buildings opportunities. In addition, USTDA will conduct three reverse trade missions to bring Chinese delegations to see environmental, smart grid, and CCUS technologies in the United States over the next year.
- **Demonstrate Clean Energy on the Ground:** U.S. DOE, State, and USTDA will undertake a number of additional pilot programs, feasibility studies, and other collaborative efforts to promote China’s energy efficiency and renewable energy goals. These will include expansion of our cooperation on “smart grids” that enable efficient and cost-effective integration of renewable energy technology, as well as the implementation through a U.S. and Chinese private sector commercial agreement of a first-of-its-kind 380 MW concentrating solar plant in China.