

ChinaFAQs

The Network for Climate and Energy Information



Taking Stronger Action on Climate Change: China and the United States

Key Questions:

1. What did the U.S. and China pledge in their November 11, 2014 joint announcement on climate change?
2. Is it true that under its new pledges, China might avoid doing anything to address climate change until 2030?
3. Is China starting from scratch in trying to fulfill its pledges, or has it already taken steps in this direction?
4. Do we have reason to believe that China will follow through on its pledges?
5. Does it make sense for the U.S. to pursue vigorous action on climate change given China's commitments?



On November 11, 2014, the United States and China announced a watershed accord to limit their greenhouse gas emissions.¹ As the two countries together make up over 40% of global greenhouse gas emissions,² this announcement could be a crucial catalyst for a strong international effort to address climate change. As the rest of the world looks to these countries to lead, mutual understanding and robust action are important. ChinaFAQs offers this Q&A as part of an occasional series to help inform the discussion regarding next steps.

Q: What did the U.S. and China pledge in their November 11, 2014 joint announcement on climate change?

The United States pledged to cut greenhouse gas emissions 26-28 percent below 2005 levels by 2025. China announced targets to reach a peak in its carbon dioxide emissions around 2030—with the intention to try to peak sooner—and to increase its non-fossil fuel share of energy use to around 20 percent by 2030.³

Q: Is it true that under its new pledges, China might avoid doing anything to address climate change until 2030?

A: No. China will need to take stronger near-term action to meet its commitments and has begun to do so.

While China has made significant progress in decoupling emissions from economic growth in recent years, a greater level of effort will be required to meet its 2030 targets.

China's current targets seek to limit the energy and carbon intensity (energy consumed or carbon emitted per unit of GDP) of its economy.⁴ In 2009 China committed to reduce the carbon intensity of its economy by 40 to 45 percent from 2005 levels by 2020.⁵ Researchers from MIT and China's Tsinghua University find in their Continued Effort scenario that if China continues this level of effort, emissions will level off between 2030 and 2040 without a subsequent decline. The Accelerated Effort scenario, which shows emissions leveling off between 2025 and 2035 and slowly declining after that, involves stronger policies, including a price on carbon beginning in 2015 which rises significantly.⁶

Expert projections⁷ of a peak in China's carbon emissions and an increased share of non-fossil energy are supported by several major building blocks. China will need to install 800-1,000GW of non-fossil fuel electricity generation capacity to achieve its 2030 non-fossil energy pledge, greater than its current coal-fired capacity and almost the total current capacity of the United States.⁸ In addition, the building blocks include improving energy efficiency, placing a price on carbon, limiting coal use,⁹ and rebalancing the economy from heavy industry toward services.¹⁰ As discussed below, China has taken significant action, announced further measures, and is working on including additional steps in its next Five Year Plan.

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Q: Is China starting from scratch in trying to fulfill its pledges, or has it already taken steps in this direction?

A: China is already taking action on multiple fronts to address the climate problem.

China has been investing heavily in renewable energy. In 2013 China was once again the world's number one investor in renewable energy, investing \$54.2 billion, or 21% of the world's total.¹¹ 2013 saw China install 12 GW of solar photovoltaic projects, 50% more than any country had previously ever installed in a single year.¹² China also has been the world leader in installed wind capacity since 2009.¹³

Along with promoting renewables, China has reported progress toward its energy and carbon intensity targets and slowed the growth of coal. In 2011, China was reported to have nearly met its energy intensity reduction target for the 11th Five Year Plan (2006-2010).¹⁴ In June 2015, China announced further progress on its energy and carbon intensity targets.¹⁵ New installation of coal power in China peaked in 2006 at over 90GW,¹⁶ but since then the number has fallen dramatically to just 36.5GW in 2013.¹⁷

In September 2013, China launched a \$277 billion investment in improving air quality and regional bans on new coal-fired power plants.¹⁸ China also has set up seven pilot cap-and-trade programs for carbon emissions in major cities and provinces in China. In terms of total carbon emissions regulated, the Chinese carbon market pilots already make up the second largest amount of regulated carbon emissions, following only the European Union.¹⁹

One challenge will be to ensure strong action is taken not only regionally, but also nationally, to ensure China meets its national

targets.²⁰ Despite this and other challenges, however, the natural progression of China's economic development and its efforts to control coal give reasons for optimism. In fact, Lawrence Berkeley National Laboratory (LBNL) said that, given current trends and market policies, China's coal use is projected to peak in 2020.^{21, 22}

China and other developing countries are working to shift to a low carbon path while also trying to lift their people out of poverty and provide the basics for a decent living standard achieved decades ago in more affluent countries. For these reasons developing country emissions are not expected to peak immediately, but China and other developing countries are beginning to shift in that direction. Now, having made tremendous economic progress, China is at a point where stronger and sustained measures are needed to cope with climate and other environmental consequences of growth.

China is now moving to fulfill targets under its 12th Five Year Plan and it is beginning to work on its 13th Five Year Plan. Chinese leaders and energy experts are suggesting strong new measures to limit energy use and improve efficiency,²³ just as planning is moving forward in the U.S. and other countries.²⁴

Q: Do we have reason to believe that China will follow through on its pledges?

A: Yes. China has already made progress on the low carbon building blocks and has strong reasons of national interest to build on its current efforts.

Progress and plans regarding the shift to low carbon energy

China has demonstrated its commitment to achieving clean energy targets in the recent past²⁵ and is continuing to work on the

building blocks of the shift to low carbon energy. With respect to the energy efficiency building block to support emissions reductions, China has recognized the importance of improving the energy efficiency of its economy.²⁶ It has set targets for energy intensity reductions and established demand-side regulations to promote energy saving in the electricity sector.²⁷ China's "Top 1,000 Energy-Consuming Enterprises Program", designed to conserve energy among Chinese companies, has been expanded to roughly 17,000 companies during the 12th Five Year Plan.²⁸ Officials and energy experts are also discussing proposals for increased market-oriented measures governing electricity.²⁹

The carbon pricing building block supporting emissions reductions entails either a carbon tax or a national cap-and-trade system.³⁰ China has cap-and-trade pilots in seven cities and provinces,³¹ and is making plans to begin to establish a national cap-and-trade policy in 2016.³² Jiang Kejun, a leading researcher for China's economic planning agency, has said that China is considering launching a carbon tax pilot program.³³ Another economy-wide policy option is a measure to set a stronger limit on coal or energy use.³⁴ China's cabinet, the State Council, has announced a plan to limit coal consumption to around 4.2 billion tons by 2020 and to hold coal to at most 62 percent of primary energy use that year.³⁵ Recently the State Council also approved a national climate change plan for 2014 to 2020 calling for greenhouse gas emissions standards for power plants and energy-intensive industries and a wide range of implementation measures.³⁶

Beyond energy policy reform, changes in China's broader economic landscape could bend the curve of China's emissions growth downward. Expected economic

trends and statements by high-level officials indicate China is seeking to restructure its economy by reducing the share of energy-intensive industry and expanding the share of services.³⁷ China has set a target to increase services as a share of GDP to 47% by 2015.³⁸ In 2013, officials announced principles of market-based fiscal, financial and service sector reforms that could spur this shift.³⁹ As services generally require less energy than the industrial sector, a rebalance toward services should have an emissions reduction benefit.⁴⁰

China has strong reasons of national interest to act.

China's efforts to reach its targets are driven by strong national interests. China is trying hard to control coal to address air pollution, which has significant health impacts and has raised widespread public concern.⁴¹ In July of 2013, China announced an investment of \$277 billion over five years in curbing air pollution.⁴² Then, in September 2013, China announced their Clean Air Action Plan, which included regional bans on new coal plants.⁴³ As China is a net importer of fossil fuels, China's leaders are increasingly concerned with the country's energy security.⁴⁴ The New Climate Economy Report China case study, released November 14, 2014, estimated considerable economic benefit from reduced air pollution and enhanced energy security associated with peaking of CO2 emissions around 2030.⁴⁵

China's national report on climate change projects losses in agricultural productivity, decreased food security, and more frequent flooding, which will pose serious risks to China's economy.⁴⁶ According to Trevor Houser of the Rhodium Group, China's leaders recognize the need to shift away from energy-intensive industry toward services for economic growth to continue at its current pace.⁴⁷ Also, China has already begun to see the economic benefits of clean energy.⁴⁸

Q: Does it make sense for the U.S. to pursue vigorous action on climate change given China's commitments?

A: Yes. China is now at a turning point regarding air quality and climate action, and the two countries can inspire each other and the world to take ambitious steps.

China is at a turning point. The evolving air pollution problems in China have focused the highest level of attention on shifting to low carbon energy, and China's self-interests⁴⁹ now strongly align with ambitious climate action.

As former Secretary of the Treasury Henry Paulson said regarding China's action on climate and air, the Chinese see there is a huge need. "If you look at what they are doing, they are doing important things with resource taxes and experimenting with taxing carbon, they are doing a lot of things. And so there is no doubt they are serious about it."⁵⁰ "If we're a leader here," he says, "I think it's easier to encourage China to do even more."⁵¹

The recent Intergovernmental Panel on Climate Change's report shows that the planet is already experiencing the impacts of climate change,⁵² and the effects are projected to become more severe unless serious action is taken soon.⁵³ It is therefore in the interests of all countries to act to avoid huge costs, but they won't if each country sees everyone else stopping. The fact is that all major emitters are taking some action, but need to do more.⁵⁴ The way to accelerate action is for each country to move forward and develop an understanding internationally that encourages everyone to do the same.

Increasingly it is evident that these steps to address climate change will be beneficial as countries not only reduce climate change impacts, but reap such gains as improved health and the advantages of technological innovation.⁵⁵

The New Dynamic

The recent commitments of the U.S. and China are ambitious yet achievable, and each country will look to the other to follow through. Greater effort is needed to prevent the worst impacts of climate change, but there is now a new dynamic. China is at a pivotal moment where it can be expected to keep doing more. This depends in part on their seeing that the U.S. and other countries are also serious about the problem, as the international climate negotiations move towards their conclusion in Paris in 2015. The recent accord between the U.S. and China is a breakthrough in this global effort and sends a signal to the rest of the world that a solution is possible.

This fact sheet is a product of ChinaFAQs, a joint project of the World Resources Institute and experts from leading American universities, think tanks and government laboratories. Find out more about the ChinaFAQs Project at: <http://www.ChinaFAQs.org/>.

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