



China Still Wary of More Ambitious International Climate Commitments

Melanie Hart December 7, 2012

From many perspectives, China is a global powerhouse. China is the world's second-largest economy in terms of gross domestic product, the world's largest energy consumer, and a global leader in renewable energy investment.¹ China is also the world's biggest greenhouse gas emitter.²

It is no surprise, then, that when it comes to global climate change negotiations, such as the U.N. Framework Convention on Climate Change conference currently wrapping up in Doha, Qatar,³ many nations are looking for China to step up and play a role more in line with its global economic and emissions status.

From a U.S. perspective, that means demanding that China play by the same rules in the climate treaty that will be developed between now and 2015, rather than being treated as a developing country on par with Chad or the Congo. Some parties want that new treaty to require internationally legally binding emission reductions for all—though not the same amount for all parties. Thus far, China has refused to endorse this kind of legal framework and instead is sticking to the interpretation of “common but differentiated responsibilities,” which creates a firewall between the obligations of developed and developing countries.⁴ This puts the United States and other developed nations in one bucket, puts China in a separate bucket along with the poorest countries in the world, and allows the latter to make only voluntary commitments to reduce their emissions—as opposed to the mandatory commitments requested of the developed countries.

The United States has no problem allowing still-developing economies to make less-ambitious emission-reduction commitments. What the United States and other developed nations take issue with is allowing those countries to make commitments that are less binding at the international level than what is expected of developed countries. China—an upper-middle-income country, according to the World Bank—has a standing voluntary climate commitment under the 2009 Copenhagen Accord to reduce carbon intensity by 40 percent to 45 percent (based on 2005 levels) by 2020.⁵ The first phase of that commitment has been incorporated into China's five-year economic plan and ratified by China's National People's Congress, so that commitment is legally binding in a domestic sense.⁶

Unfortunately, those types of commitments from China are not enough to get the rest of the world to sign on to a new global climate treaty. Developed countries in particular want China to upgrade this commitment in two ways:

- Switch from an emission-intensity reduction target—reducing the amount of carbon dioxide emitted per unit of GDP—to an absolute reduction target.
- Commit to that target via the same form of international mechanism that will be expected to bind all countries equally, regardless of development status.

U.S. negotiators have stated that the United States is unlikely to sign on to a new climate treaty until China commits to that treaty in the same way that everyone else does.⁷ But there is plenty keeping China from making a legally binding international commitment if that is what it takes to fulfill this expectation.

Whereas the global community generally views China as an economic powerhouse with plenty of room to maneuver on climate issues, the view from Beijing is vastly different. From China's perspective, the past 30 years of rapid economic growth in no way guarantees that they will be able to make it up into the ranks of higher-income economies and easily traverse the middle-income trap. Chinese leaders have a deep fear that instead of transitioning smoothly from lower-income to upper-income status, their economy could follow the path of Malaysia, Thailand, and the Philippines and fall into a period of economic stagnation.⁸ China's sluggish growth throughout 2012 clearly illustrates that the country is not immune to an economic slowdown, and it is important to remember that any major slump brings with it a very high risk that the Chinese Communist Party will lose public support and be forced to forfeit its authoritarian political power.

Within that context, Chinese leaders are not yet willing to take on international climate commitments that could reduce their flexibility to keep the economy growing. That does not mean there is no room for negotiation. It does mean, however, that in the near term China will continue approaching international climate negotiations with more caution than leadership. The negotiators now meeting in Doha will need to keep this in mind as they spend the next three years hashing out the terms of a new treaty with the ambition that it be equally "applicable to all," in the terms of the Durban Platform.⁹

This issue brief will identify some of the key factors that are still holding Beijing back from taking these steps. These factors include:

- Rising energy demands and consumption due to an emerging middle class
- Market distortions providing few incentives to transition to renewable energy
- Local governments avoiding Beijing's centrally mandated energy and climate agenda

Rising energy demand and consumption in China

Here in the United States, energy consumption is relatively flat due to our sluggish economy and recent roll-outs of policies encouraging companies and consumers to use energy more efficiently—such as the Obama administration’s fuel efficiency standards.¹⁰ The U.S. energy mix is also changing for the better. Coal consumption is declining rapidly due to decreasing natural gas prices and recent Obama administration moves to regulate coal emissions under the Clean Air Act.¹¹ Due to these developments, the U.S. Energy Information Administration reports that coal will account for just 37 percent of U.S. electricity generation in 2012, down from nearly 50 percent in 2008.¹² Overall, energy efficiency is up in the United States, and coal is on its way out, which means it is getting increasingly easier for U.S. policymakers to reduce greenhouse gas emissions and meet global climate targets.

Even without comprehensive climate legislation, U.S. emissions have declined over the past two years and the United States is actually on track to meet its Copenhagen goal of reducing emissions by 17 percent (based on 2005 levels) by 2020, especially if the Environmental Protection Agency goes forward with regulations on existing stationary power sources.¹³

Nearly the opposite trend is occurring in China, however. Whereas U.S. emissions are already on the decline, China’s emissions are projected to keep growing until 2030.¹⁴ That is because the Chinese economy as a whole is growing, and its growth is not climate efficient. China’s electricity demand is expected to double over the next decade and overall energy consumption is projected to grow a whopping 60 percent between now and 2035.¹⁵ Most importantly from a climate perspective is China’s heavy dependency on coal—something not likely to change in the near future. Coal currently accounts for 70 percent of China’s energy mix and coal consumption grew 9.7 percent in 2011—the biggest jump since 2005.¹⁶

China’s steadily rising coal—and overall energy—use translates into steadily rising greenhouse gas emissions, and a large chunk of those emissions will come from Chinese consumers. The first three decades of China’s economic growth focused primarily on industrial production and fixed-asset investments such as high-speed rail and other large infrastructure projects.¹⁷ That has led to a major economic imbalance: Big industry and capital investors have gotten rich, but Chinese consumers have been left behind. Household consumption accounts for around 30 percent of Chinese GDP—less than half the U.S. level (71 percent in 2010) and one of the lowest consumption rates in the world.¹⁸

This means Chinese citizens’ purchasing power is lagging behind the country’s overall economic growth. Chinese citizens have watched industrial and political elites get rich at the public’s expense, and they are demanding change.¹⁹ Going forward, Beijing absolutely must rebalance the economy and provide more benefits for their growing middle class, including an increase in consumer buying power. That will be great for the

global economy because increased Chinese consumption will provide a new market for products from around the world.

From a climate perspective, however, those changes hurt because what most Chinese citizens aspire to is the type of lifestyle we have here in the United States: bigger homes with continuous climate control, more household appliances, and family cars. That type of consumption growth is already underway in China, and it is triggering a surge in household energy consumption and emissions. There is plenty of room for growth: China consumes more energy than the United States at the national level, but China has more than four times as many people, so per capita energy use is just 24 percent of U.S. levels.²⁰

To be sure, the United States has its own energy and climate problems, and the U.S. model is not the model we would like to see China emulate. Ideally China will follow the example of more carbon- and energy-efficient developed countries such as Japan or Germany. That is what Beijing aspires to, but it still entails a major consumption increase because Japanese and German citizens still consume more than two times the energy per capita as the Chinese do.²¹ Regardless of the model China follows, from the Chinese citizens' perspective there still is a lot of room for consumption growth, and as they climb up the energy-consumption scale, the emission impact of that growth could be huge.

Even if Chinese leaders manage to reduce industrial emissions, they therefore still face a continuing emissions boom on the consumer side. That is why China's emissions are projected to keep increasing until 2030 and why China's climate negotiators are so resistant to make commitments involving overall emission output as opposed to emission intensity.²²

Market interference makes the shift from fossil fuels to renewables harder to achieve

Ideally Beijing could keep China's economy growing and satisfy middle-class consumption desires by expanding renewable energy to account for the new growth. That would enable the Chinese economy to keep growing while also moving the country more rapidly toward a peak and eventual decline in annual emissions.

China's clean energy economy is undoubtedly booming. China has the largest amount of renewable energy capacity in the world with 133 gigawatts of installed renewable capacity as of 2011—more than twice the size of Germany's capacity (61 gigawatts) and 35 percent larger than the U.S. market (93 gigawatts).²³ The problem is that although China's renewable energy capacity is expanding, its current capacity is still just a drop in the bucket compared to the country's overall energy use, and fossil fuel consumption—particularly coal—is still expanding to make up that shortfall. In 2011 fossil fuels accounted for more than 90 percent of China's primary energy consumption. Renewables, including nuclear and hydropower, added up to around 8 percent of the

total.²⁴ Beijing is aiming to expand renewable consumption to 11.4 percent of the country's energy mix by 2015 and 15 percent by 2020,²⁵ which will certainly be a substantial improvement. Given China's rapid growth rates, however, that rate of renewable expansion will not be enough to keep overall emissions from climbing in the near term.²⁶

One big problem limiting renewable roll-outs in China is the fact that the country's power sector is stuck at a halfway point between the old, Soviet-style system and a more market-based system like that of the United States. Under the planned economy, government bureaus managed every step in China's power-production process—generation, transmission, and distribution—following top-down production plans. In parallel with China's overall economic reforms, Beijing has gradually reformed its power sectors by corporatizing generation and grid operations—turning government bureaus into state-owned enterprises—breaking up state-owned monopolies into multiple smaller companies, and introducing a degree of market competition among them.²⁷

Marketization is limited, however, by the fact that China still controls utility pricing via government mandate rather than allowing prices to fluctuate based on supply and demand, as they should in a market-based system. Beijing fears that if utility prices were to rise too high or too fast, potential inflation and social discontent could result in mass protests and declining public support for Communist Party rule. To avoid that and keep consumers happy, the state dictates wholesale and retail electricity rates and sets those rates at submarket prices.²⁸ Utility rates differ for commercial versus residential users, with commercial users paying a higher rate to subsidize the residential side and keep prices low for Chinese households. These price controls can make it impossible for electric power generators to stay afloat—particularly when coal prices are high—so to placate these generators, Beijing also sets prices for coal and other inputs, and pegs those prices at below-market rates.²⁹

This market interference has far-reaching side effects for renewable energy. With coal prices set artificially low, power generators have no pricing incentive to invest in renewable power, which is more climate efficient but also more costly. China has feed-in tariffs for wind and solar power to reduce costs, but the preset tariffs are still much higher than the price of coal. On-grid prices for coal-fired power are around 0.3 RMB per kilowatt-hour, but wind runs between 0.51 and 0.61 RMB per kilowatt-hour, and solar runs between 1 and 1.15 RMB per kilowatt-hour.³⁰ In other words, even with the renewable feed-in tariffs, wind energy can cost twice as much as coal-fired power for grid operators to purchase, and solar can cost more than three times as much.

And since the selling prices for electricity are controlled by the state, grid operators cannot raise rates to counteract investment costs for renewable grid connections. This leaves grid operators no strong incentives to invest in the technology upgrades needed to hook up renewable power. As a result, many of the wind and solar farms that account for China's rapidly expanding capacity are struggling to get hooked up to the national

power grid.³¹ For those providers who do manage to get hooked into a local system, that system may not be able to connect with China's overloaded cross-country transmission lines, which allow providers to export their excess power to other regions.³²

These market distortions result in China's power generators sticking with coal, grid companies transmitting and distributing coal-fired power instead of renewable energy, and China's emissions continuing to increase.

The West is currently focused on trying to reform utility pricing systems to incorporate climate impacts—to make, for example, power companies pay a higher premium for heavily polluting energy sources.³³ But China is still struggling to make prices reflect actual production costs—tacking on environmental costs is even farther away.

Beijing is working hard to find solutions to these problems.³⁴ China's National Development and Reform Commission has two new developments in the works: 1) a plan to require China's state-owned grid operators to purchase a certain percentage of the power they distribute from renewable sources; and 2) a plan to potentially scrap state price controls for coal in an effort to make coal prices more market based.³⁵ Policy change is in the wings but it will take time to implement. In the meantime, China's greenhouse gas emissions will continue to increase, and Chinese leaders will continue to do all they can to evade international calls for actions that they believe would constrain their ability to keep their economy growing.

Beijing's reluctance to reform China's problematic utility sectors is certainly not a valid excuse for climate inaction, so the international community should keep up the pressure for Beijing to do more on this front. Such pressure is growing within China as well, which is the driving force behind the upcoming National Development and Reform Commission policy reforms mentioned above.

Local governments are hindering national efforts to improve energy efficiency and reduce emissions

Central leaders in Beijing are devoting a huge amount of political will toward increasing energy efficiency and replacing fossil fuels with renewables. They view this as a survival issue, and not just because of the negative environmental effects of pollution. The Chinese Communist Party cannot maintain enough citizen support to stay in power unless they keep the economy growing. That will require continued access to energy supplies at stable rates, and because Chinese demand is growing so rapidly, the global market simply will not be able to provide enough coal to meet those needs without sending prices skyrocketing.

Environmental pollution is also increasingly becoming a deal breaker for Chinese citizens. They are turning out in droves to protest the construction of new coal plants, and Beijing is taking notice.³⁶

Where things get tricky is converting Beijing's national-level policy mandates into local-level action. Chinese climate officials describe their situation as an inverse version of the U.S. policy landscape.³⁷ The United States struggles to get congressional policymakers to sign on to major federal policies, but there is a huge amount of activity going on at the state level, and that is resulting in major change across the nation. In China, however, Beijing is on board for more ambitious energy and climate policy action, but is struggling to get local officials to actually implement those policies, making real change hard to achieve.

Beijing uses a top-down target system to give local officials an incentive to act. They set energy and climate targets in national five-year plans such as the current goal to reduce carbon output per unit GDP by 17 percent between 2011 and 2015.³⁸ Once Beijing sets this overall national target, it then parses individual targets out to the various local-level governments and routinely evaluates local officials to determine whether those goals are being met.

But those local officials are generally more interested in evading these targets than they are in implementing them, and there is enough slack in this system to allow many officials to do so—and get away with it. In the 11th five-year plan (2006–2010), for example, Beijing set a national-level target of reducing China's energy intensity—the amount of energy consumed to produce one unit of GDP—by 20 percent. Instead of accomplishing that with steady gradual change, however, some localities allowed local businesses to operate as usual for most of the planning period and then cut off residential power near the end of the plan term to ensure they met their overall targets.³⁹

Overall, there are limits to the types of meaningful change Beijing can bring about through top-down policy mandates. What Beijing really needs to do is to use market mechanisms—such as market-based coal and utility pricing—to give power companies an incentive to switch to renewables and consumers an incentive to economize. Unfortunately, that would bring a degree of economic and political risk that Chinese leaders may not be quite ready to face at this point in time. Again, these internal problems certainly do not constitute an excuse for climate inaction, but they are real problems that the international community should be aware of—particularly when attempting to craft a climate treaty that Beijing can sign on to.

Conclusion

In conversations going on between U.S. and Chinese counterparts outside of the official climate negotiation process, some Chinese climate officials and analysts are showing increasing openness toward the idea that “common but differentiated responsibilities”

could be more like a sliding scale than a firewall. This would be more consistent with the way U.S. negotiators look at the concept. Chinese leaders realize that as their country climbs up the development ladder, it will become increasingly difficult to align with the poorest developing countries in climate talks. China is already facing huge pressure to take on more climate responsibilities in line with its increasing economic might, and that pressure will only increase going forward. It is in Beijing's own interests to find a way to start edging toward some sort of middle-of-the-road strategy that recognizes China's changing economic status but does not immediately lump China in with the United States and other already fully developed upper-income countries.

At present, Beijing still does not appear to have come to an internal consensus on what an acceptable middle-of-the-road strategy might look like. China's top decision-making institution for climate policy is the National Leading Small Group on Combating Climate Change—a multiministerial policy coordination group that includes 25 leading officials from more than 20 different government agencies ranging from the Water Ministry to the Ministry of Science and Technology.⁴⁰ Bringing that disparate group to consensus is not an easy matter.

Given the above-mentioned challenges that China is currently facing domestically, it is unlikely that Beijing will agree to make an internationally binding absolute emission-reduction commitment before the 2015 Durban Platform deadline.⁴¹ From Beijing's perspective, that is simply too risky at this point in their economic development trajectory.

Where Beijing likely does have more maneuvering room is on the legal nature of their emission-intensity commitments—commitments to reduce the amount of carbon emitted per unit of gross domestic product. It is important to note that although China's Copenhagen emission intensity commitment is only binding at a domestic level, from the Chinese Communist Party's perspective, failing to meet that domestic target would be a political disaster. The party's ability to meet its five-year plans is a cornerstone of regime legitimacy. Upgrading that internal plan-based commitment to a commitment that includes the international community should not be a major step for them. If China could do that, it would go a long way toward bringing other countries on board and laying the groundwork for a new global treaty.

But China is not going to give the international community what it wants without getting something in return, and what China wants most are clean energy technology transfers from the United States and other developed countries. Basically, China wants the United States and other developed countries to give it free access to cutting-edge clean energy technologies so that it can transition toward a low-carbon economy without having to pay for intellectual property imported from abroad.

Problem is, that would likely give China a competitive edge over the United States in the global clean energy market. That might be acceptable to the United States if China's

clean energy companies were not major U.S. competitors, but at present the opposite is true: Chinese companies are already dominating global markets for wind, solar, and smart-grid technologies.⁴² Since Chinese companies are already dominating these markets without technology assistance, providing that assistance may give China an unfair advantage in those markets and make it impossible for U.S. companies to compete, particularly on price, because U.S. companies would be paying for their clean energy technologies—via research and development costs or intellectual property licensing fees—but their Chinese counterparts would not.

Furthermore, Beijing is already drawing Washington's ire in the clean energy sphere by taking actions that appear to violate global trade rules at the United States' expense. Chinese officials are subsidizing their clean energy companies via programs that appear to be aimed at driving U.S. competitors out of the market, and that is triggering rising trade tensions.⁴³ Some Chinese companies are even stealing proprietary technologies from their U.S. counterparts with what appears to be tacit consent from Beijing. Many in Washington, for example, are closely following an intellectual property dispute between American Semiconductor Corp. and Sinovel, the Chinese wind turbine manufacturer. American Semiconductor Corp. has clear evidence that Sinovel stole its engineering secrets and used that information to manufacture and sell wind turbine equipment based on American Semiconductor Corp.'s proprietary designs.⁴⁴ Sinovel has strong government backers in Beijing, however, and the case keeps getting thrown out of Chinese courts.⁴⁵

Due to these issues, it may be difficult for the global community to provide Chinese negotiators the types of technology transfers they want. Without those technology transfers, though, it may be difficult for Chinese negotiators to get the other bureaucratic agencies represented in China's climate leading group to support the types of legally binding commitments that the United States wants.

One thing we can do to increase the probability of a successful agreement by the end of 2015 is make it a top priority to find a way around these technology concerns. The United States and China are already experimenting with new frameworks for joint intellectual property development under the bilateral Clean Energy Research Centers, which are government-sanctioned projects bringing U.S. and Chinese clean energy companies and university research labs together to work on clean vehicles, advanced coal technology, and energy efficiency solutions for buildings.⁴⁶ This joint technology development could be a model for the types of technology transfer that speed China's access to higher-end clean energy technology without putting U.S. firms at a disadvantage.

Many of the Chinese activities that are currently triggering trade tensions between the United States and China will unfortunately be hard to curtail in the short term. There are limits to what China can do to enforce intellectual property rights without a more independent court system, for example, but releasing the nation's courts from political control would also weaken the Chinese Communist Party's ability to maintain a grip on

its authoritarian power. That does not mean progress cannot be made, but it does mean progress will likely require outside-the-box solutions. One way to address U.S. intellectual property concerns, for example, is to set up a third-party dispute-resolution mechanism to reduce U.S. company reliance on the Chinese court system. The United States and China are currently discussing this option as part of the bilateral investment treaty negotiations that the two countries relaunched this past May.⁴⁷

Luckily, these types of technology solutions that could help the United States and China come to agreement on the climate front would also address trade frictions plaguing the U.S.-Chinese economic relationship more broadly, so there should be plenty of political will both in Washington and in Beijing to pursue these discussions.

Overall, it does look like there is some room for maneuvering, and it does look feasible for the United States and China to come to some sort of agreement between now and the 2015 Durban Platform deadline. The issues blocking that agreement will not be resolved by the time the Doha meeting concludes, but we do have another three years to work these issues out. In the short term, the least we can expect from U.S. and Chinese climate negotiators is that they keep the communication lines open and continue making steady progress toward identifying what a mutually acceptable 2015 climate deal might actually look like. Finalizing a 2015 climate deal will likely require outside-the-box thinking and concessions from both sides. Since the stakes could not be higher, however, that should be something our two nations can accomplish.

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