



CARNEGIE-TSINGHUA
CENTER FOR GLOBAL POLICY

Transcript

CHINA IN THE WORLD PODCAST

Host: **Wang Tao**

Guest: **Yang Fuqiang**

Episode 74: China's Growing Role in Battling
Climate Change

December 20, 2016

Wang: I'm Wang Tao and I am a scholar at the Carnegie–Tsinghua Center where I focus on China's climate and energy policy. I'll be your host. Today we are delighted to welcome Dr. Yang Fuqiang, a senior climate advisor of the National Resource Defense Council, China Program. Dr. Yang has been involved in energy and environmental issues for more than three decades. Prior to that, he served as director of the global climate solutions for the WWF International and as the country's representatives of Energy Foundation China program. He received his bachelor's degree in Physics from China's Jilin University in 1997, and his PhD in industrial engineering from the Western Virginia State in 1991.

He's now based in Beijing. Today, we will be speaking with Dr. Yang about a number of telling environmental issues that make up the core of Dr. Yang's work. We'll be speaking about China's energy transition, especially the reduction of coal demand in the last three years, rebuilding consensus on the carbon market, and China's commitment on climate change. Dr. Yang, thank you for taking the time to join us.

Yang: Glad to be here!

Wang: As we know, China has made great efforts to reduce its coal demand in the last few years. According to a recent report from the *New York Times* earlier this year, Chinese coal consumption dropped 3.7 percent in 2015, the second year in a row. However, the road to any transition is always very hard and complicated because of China's gigantic energy systems and traditional patterns of energy consumption. In your opinion, we would like to hear what is the biggest challenges for China during this process and how could the Chinese overcome those problems without causing too much economic difficulties to the other system?

Yang: Coal is the king in China's energy consumption. But China's coal consumption reached a peak in 2013 and that is almost at 53 percent of energy total coal consumption in the world. So you can imagine that coal consumption creates many problems, particularly for air pollution, water pollution, and also carbon emissions. And so we count coal consumption [as accounting for] 3.7 percent of total GDP losses in 2012. So this is, you know, a big challenge for China. Also, the public concern is about health and also to protect the children for the future. So, we understand the coal consumption drop in 2014, and also continue to drop 2015, and this year we expect it will continue drop. About the drop, it will slow down a little bit. And [Chinese leaders] have many challenges [including] a very heavy resistance from industry, also from coal consumption intensive industry, like iron, steel, cement, building material, and coal-fire power plant. And so this is why we have to work with [them] together and try to convince them [that] the coal consumption is too much or China will have to [carry out an] energy transition and use clean energy. And now [what we try to do is create] more green jobs.

We have calculated [that if we increase the] renewable energy efficiency and reduce the coal consumption overall we can create more great jobs. Second, the challenge is the implementation of the government regulation and policy on the coal cap. Now, we promote [the] coal cap in China, but we understand [that the] Chinese government has established many regulation and policies, but the question is implementation. For instance, in recent days you can see a heavy smog in China in many provinces. The [problem is that] the local government still [haven't paid enough] attention to oversee or implement the regulation, or to impose fines for these polluters. So, this is why the air pollution is bad. And [the] third challenge [is that] we have to use the market mechanism, particularly [what] we call green finance. And if we can reduce the

investment in the coal consumption and other coal-intensive industries, we can also reduce the coal consumption. [The fourth challenge] is [to] also promote public awareness. We know the air quality is a concern—the public [is very] concerned. So, this is about the [smog and it's] quite important. So, we have to combine the top-down government policies and regulations [with] bottom-up market awareness and push the government to adopt a more effective policy and implementation effectively.

Wang: Thank you Dr. Yang. You have laid out quite a few areas that we can work together and also to implement regulations and working with government to help reducing the carbon emissions. So in general are you optimistic about that China's prospect of coal consumption? Do you think that it's going to continue to decline, or maybe the reason for the decline is only [about] the trajectory because we have seen so much investment recently in the coal-fired power plants and people worry about maybe there is another stimulus package to the energy systems. How can we ensure the energy transition towards low carbon technologies, such as renewable and natural gas; maybe more of that in the energy system can be sustained in the future?

Yang: In the long term, coal reduction is for sure. And we have carried out some studies about what the scenario [will be] in the long term. So, as I said before, we have many drivers that push coal reduction. Of course we understand the Paris Agreement has now become effective. Also in the negotiation, we like to promote a high ambitious target by 2020. Also we would like to implement the Paris Agreement. So this is to give pressure to the [government] on coal. So, these things are certain. And the question of course sometimes will be [should] we increase [our consumption], but [in the] long run this [is a] decline that is cannot reversed. Particularly in [terms of] carbon emission, in the long run actually [it is] pretty key [and] in the short run [it can improve] the air quality [and] water issues. Another [key to China's improvement to its environment] is [curbing] coal production now.

Wang: So, we see the government is committed and also there is a huge demand from [the] general public to reduce the coal consumption. But we also understand this as you pointed out rightly, this is not going to be something easy. And there is very strong investment group in China fighting [against a reduction in coal consumption] and there will be also be implications, on employment, on [the] local government, so but the good thing is that we already know this is going to happen and we are prepared to take course and to help to smooth that transition.

Let's now look at the other side of the Pacific. The United States now finds itself with a new presidential administration for the first time in eight years. While a significant amount of uncertainty still remains and around the future policies, in your opinion how has the election impacted U.S.-China relations on the climate policies? We have noticed that before, there has been a lot of progress made between President Obama and President Xi Jinping in building up foundations of international negotiations on climate change and also both countries reached a consensus on energy transitions. So, in your opinion would this be carried forward in the new administration and how [likely is] this to affect these two countries' cooperation in the future?

Yang: There have [been] some uncertainties in these presidential elections in the United States. We [in China] also look back, you know, on Copenhagen [where] you can see China signing the [agreement and with] United States having good cooperation on climate change issues. And both governments have joint issues [and the] joint agreement in Copenhagen. And actually [both

governments made] this announcement before Copenhagen. And so that's why in Copenhagen you can see even though they could not reach a very good result, but however, these two countries [joined the meetings in] Copenhagen and [made an] agreement. The United States and China have done a good job in Copenhagen... After Copenhagen, [both China and the United States] worked together very closely and have jointly have announced many agreements, particularly in the Paris negotiations in the COP21. You know, the United States and China [wished to cooperate on battling climate change] before and after the Paris Agreement. So, this has helped [to get both sides' signatures on] this agreement. In the G-20, [China and the United States] also have signed agreements to further, to implement [the] Paris Agreement.

So, [what] I think these two countries want most [is to have an impact on] developing countries. One is the largest emitter among developing countries. [If these] two countries work together, this [can] make international agreement much easier. And also, these two countries can demonstrate [to each other as well as] developing countries [that] actually, they can work together. For instance, in [terms of] technology transfer and in the many areas such as energy efficiency, renewables and also in the city, [actors can work from] the bottom up to reduce CO2 emissions. For this election, we are concerned [about whether this progress in terms of China-U.S. cooperation on emissions reductions can still move forward]. So, we hopefully and Sino-U.S. cooperation on the climate change will still move forward.

Wang: Thank you. I think as you discussed the United States and China have demonstrated joint leadership in both developed countries and developing countries in the last few years. That has laid the foundation of success in [the] Paris Agreement and also both countries have achieved a lot in terms of the progress in their own policy to tackle climate change.

Under the Paris Agreement, pricing carbon is regarded as a high priority in mitigating climate change through market forces. The carbon market has been piloted in China for a few years and you have already complimented them before in a few years back talking about the prerequisite for success for the carbon market to be running. In your opinion, you said, China could probably not get a matured carbon market by 2020. But we know the Chinese government is very ambitious and they want to [achieve that], and they announced to that they're going to establish a national market—a carbon market—in China by the end of 2017, whether that is only a start in national market. But still this is quite remarkable because this is going to be the largest carbon market in the world and it also very interesting because this is the first one among developing countries, and that could actually be twice of the size of the European Union's Euro trading market scheme, EU carbon trading schemes and larger than all the other carbon trading market combined. So, do you think this is going to be easy for the Chinese government to operate? What could be the biggest barriers and what can we hope for, for this carbon market to bring to China?

Yang: Of course, this is not an easy thing to accomplish, but we believe that [right now] the Chinese government has this kind of momentum they like to adopt the market based mechanism ETS, you know, carbon market trade in China. Because we know [in China], the government is very strong in every issues but sometimes the result is not like people expected. So, we do believe that the market based-tolls, usually is more effective; and [with regards to] carbon markets, China has tried [to run the project in] seven pilot cities and has gotten a good experience and [learnt many] lessons. And so the Chinese government announced these kind of ETS markets, but it's also [has a] written Sino-U.S. joint agreement. So now, the Chinese government is pushing really

hard towards this target. And now, the first step in eight sectors involved in these markets [is for] enterprises, major enterprises [to define a] quota for CO₂ emissions. So, the total emissions... is about 3 billion to 5 billion tons of the CO₂ emissions. Of course this is the biggest carbon market in China...

Wang: In the world as well.

Yang: Yes, based on my observation, that is not an easy task, because first you have to understand the data and [make sure that] the information is accurate. But in some ways, Chinese data and information is not so reliable and so that is a heavy task for the party, for the enterprises, and for the government [because they have the daunting task of] founding out [whether] this data is reliable or accurate or not. [This is especially the case for] those enterprises that are involved in this market.

Secondly, you must have a very strong regulatory body to oversee these carbon markets. So that is quite important, because we do not like to say the government is actually playing a role to oversee the carbon market. We have to have a regulatory body but so far we don't have a strong regulatory body here. So, we have to find a way, anybody, to set up a local [institution] to [oversee the market].

And thirdly, we have to have a third party involved to check all this information and to [oversee this whole process and] this kind of report or these carbon savings or the seller and buyer and [make sure that all the information] is accurate, and so [making sure that] the market can move without the price [being interfered] by something from outside. So, that is not easy. So, we have another kind of complimentary policy absence and that is carbon tax. So, we also discuss when the carbon tax can play any role in the [process], to deal with the CO₂ emissions. By 2020, I think, the carbon market will be established [which] will test and will demonstrate [whether] the carbon market can work or not.

So far, we have many uncertainties. So, we have to work very hard, but we are very confident. It means we can work together with the enterprises, with NGOs, with governments with other international experience and national community, and you know, the consultancy bodies. And so, I think we will [look back] in the next few years and see what is going on in the carbon market.

Wang: Yah. I think that we agree that is going to be a challenging task for the Chinese government to have these carbon markets up and running by 2017. As you just currently mentioned, we need robust detail, we need a good capacity to do the verification of the emissions. We also need a regulatory body that is independent enough and capable enough to receive all these transactions. Maybe as you just suggested, a combination or complimentary system together with the carbon tax, carbon trading and carbon tax could work together somewhere else and help China to achieve [its] goals. But in general, I think you are very optimistic about these systems in China. Do you think this will deliver huge carbon emission reduction benefits to China?

Yang: Yes, I am positive and, and of course, they have many debates and arguments. But for myself, my experience tells me [that at] the beginning you have to be confident. If you don't, you know, [if] you don't trust yourself, how can you make this happen?

Wang: Hmm, Thank you. And we also need to leave some space for them to [make] mistakes and correct them. Let's move [on] to the last topics. We know that it's [been] nearly a year since the agreement made in Paris. Now the delegations of different countries are gathering again in Marrakech, Morocco, in Africa to look for [ways of] implementing this agreement and to set up the regulatory parties and institutions to help that task. I think we would like to know, in your opinion, what is the [gain] that Chinese government is expecting from these meetings in Marrakech? And how do you think this is going to continue to help China in energy transition and also in the battle to tackle climate change?

Yang: Yes, in Marrakech yeah, I think first we have to discuss how to [carry out] implementation of the Paris Agreement and [then put together] a working group [so they can work out the details of the implementation] because the agreement is too general and somehow we still have to go through the details to make [it] work. So we still have a couple years to do so. For instance, every party has to provide their NDC, now this is because the NDC [needs to be submitted to] the UNCCC. [...]. So, we have to review and see [if they] have something inside that we can do better about the improvement of the NDC. And also in the Paris Agreements, for instance, for the step taken in 2023, 2028 and so how can we do it? Which party reviews [the work that we do together as a country and as a new country? So that is not easy. So there are many details, you know, [that] we have to discuss [so that the] Paris Agreement can be implemented, and [so the first step is to make sure every working group can] work together. And secondly, [there are a number of] important issues we have not discussed in the Paris. For instance, [if and how] developed countries will support developing countries in capacity-building, technology transfer, also the...

Wang: ... The financing...

Yang: Yes, the financing issue. But [to] this [we] have [not yet found a] solution. And so we have to start with a discussion of how before 2020 [if] we have 1 billion dollars, developed countries will support developing countries to do mitigation, adaptation, the capacity-building, and so on. But we don't have numbers for the Paris Agreement yet. Even though we know that by 2022, we have to set up these numbers. But if we get there, of course, we understand this is not easy [as a common target] so we have to, you know—this is a big negotiation task. And thirdly, when we are talking about the Paris Agreement, don't forget we have to set up a target by 2020. That [target was set] a couple of years ago. For China for instance, we have 42 to 45 carbon intensity targets. So by 2018, what we can do about it? Can we make more aggressive targets? Will we increase the target or not? So we'll, you know, discuss the list. Also, I think it [there are] major issues still in the air so we have to make this happen. We also understand devil is in the details. So we have to make sure, you know, everything is set [and we have] a great set up.

Wang: Thank you. I think finance is always the hottest topic, right? We never have a climate conference and the countries are arguing about who should pay whom and how much and where the money will be delivered to the different countries.

Yang: Yes, for instance, in Copenhagen we set [a target] that is about 100 billion [by 2020]. But unfortunately, in the Paris Agreement, we didn't discuss what is the target for the financial support by 2030. So, we will use the at least a couple years and hopefully by 2022, we can get [some] agreements. It's [dependent on] how [much] money is available for the developing countries.

Wang: For our audience information, the INDC earlier mentioned earlier, stands for the “intended national determined commitment” and after the Paris Agreement was signed and ratified by the countries, it became the “national determined commitment”. And we knew that in one of the major element of China’s INDC or NDC today is that China wants to pick the carbon emissions by 2030. And given what you just described then, carbon consumption is ready declining in China and you and your colleagues have helped a lot to facilitate the energy transition in China. Are you optimistic that China is going to achieve the 2030 carbon peaking goal or is China still or already on top of that?

Yang: That is for sure. I think China can, you know, reach this kind of commitment and the CO₂ emissions will reach the peak around 2030 or earlier because first, as I said before, the coal consumption reduction very strongly indicates that China can do the better because the coal consumption, you know, reached the peak by 2013. So that means for others, you know, oil and natural gas—all these fossil fuel energy—will reach the peak [by the intended deadline too]. Based on a study [regarding] oil, [it] probably will reach the peak by or before 2025. And also natural gas will reach the peak by 2040. And so in the expert community, most people believe and China public can reach the CO₂ emission peak by 2025. [From] our study [this could] be [even] earlier...

Wang: Five years earlier or even more...

Yang: Yes, even more. Of course this is not easy. And we have to have a more ambitious and effective policy and regulation [for this to work]. And also as I said, we have to see more cities a join [so we can reach] the CO₂ peak earlier. [We call it]...

Wang: ... Early peak cities...

Yang: Yes, early peak cities coalition. So, let’s hope [that] more mayors can join this coalition to make this happen. And also [it is important to make enterprises] understand [that] if they can reduce the CO₂ [emissions], reduce the coal consumption or other fossil fuels they use, [and use] more clean energy and renewables, [China will be able to] develop, you know, the renewables [sector] so fast. And the cost is so cheap, and so the target for renewable become more aggressive, more ambitious, because for the Chinese central government, they always change their targets after a couple of years. So I think that is a positive [light]. So I think in this case, if China can reach the CO₂ emissions earlier than we hope, [the] Chinese government can play the leadership [role] in climate change so that also gives encouragement for the developing countries [to make them] think they can do more.

Wang: So it’s not only just [the] Chinese government, but also the local government and the municipal government, and the enterprises that are all playing role in this transition, and you’re very optimistic, and of course you and the NGO communities are one major part of the transition as well. So, Dr. Yang, thank you very much for your time and we wish you the best [of] luck as you continue to work on the issues.

Thank you very much for spending time with us today. That’s it for this edition of the Carnegie–Tsinghua China in the World podcast. I encourage you to explore our website and to see

the work for all our scholars in the Carnegie–Tsinghua Center. Thanks for listening and be sure to tune in next time.

Yang: Thank you very much.