

Edited by [EnergyChinaForum.com](http://EnergyChinaForum.com)

On October 24, the first coal value chain and sustainable development exchange was held in Beijing in conjunction with the Carnegie Endowment for International Peace and the Tsinghua-BP Energy Research and Education Center. Issues covered during the exchange ranged from the role of coal and US-China collaboration on energy to the issue of environmental protection and climate solutions.

China is now the world's biggest producer and consumer of coal. Furthermore, China has overtaken Japan as the world's top coal importer. Coal dominates China's energy mix, representing 77 percent of China's primary energy production and fueling almost 80 percent of its electricity. Last year, China relied on coal for 70 percent of energy consumption, compared with 22 percent in the US. As a result of China's coal reliance, a number of urgent problems have emerged. The issues of climate change, environmental degradation, mine safety, energy security and new safety standards related to PM 2.5 have all come into sharp contrast as a result of China's coal-fuelled economy.

As Ni Weidou, an academic with the Chinese Academy of Engineering pointed out, "Emissions of CO<sub>2</sub> in China are more than 7.5 billion tons annually, the (highest) in the world, and it is increasing rapidly. On the other hand, the dominant place of coal as a primary energy cannot be changed within several decades." Meanwhile, improving the sustainability of coal and minimizing its negative impacts becomes an even greater topic of importance when one looks at the issue of energy security. Ni explained, "Because oil consumption in China is increasing continuously, import dependence is now 56.3 percent. It has risen 2 percentage points annually. Maybe a few years later, the energy import dependence of oil may be 60 percent; it's very dangerous."

Ultimately, China is not looking to move away from coal but rather increase the benefits it brings while reducing the negative impact that it creates for society and for the environment. Milton Catelin, CEO of the World Coal Association was keen to point out that people should not only view coal through an environmental lens, reminding those in attendance that "China is the only country that has been able to tackle the issue of poverty in its own right, and it's been able to tackle this through a plentiful domestic supply of coal." He went on to explain, "It's not a question of how do you get rid of gas, or how do you get rid of oil, or how do you get rid of coal. It's a question of how do you continue to realize the benefits from these fuels and minimize the negative impacts."

As for why the exchange focused on the situation of the coal industries in the US and China, David Hawkins, director of the Natural Resources Defense Council's (NRDC) climate center summed it up by pointing out that the two countries "will emit 41 percent of (global) emissions in the next 25 years. So, whether the world succeeds in protecting the climate or not depends a lot on what China and the US do." Therefore, the goal of improving energy production efficiency and reducing the level of environmental degradation that energy production creates falls largely at the feet of the US and China. Due to the importance of

China within this equation, therefore, Ni Weidou stated that "The future of clean energy is dirty coal." However, as noted during the exchange, the US and China are not the only countries that need to address this situation but as Robert Marley, the US Director of the US Director of the US-China Clean Energy Research Center (CERC) noted, "There are many opportunities between the US and China to leverage the assets that we have in each country," suggesting that goals could be achieved much quicker through a suitable division of labor between the two countries.

One of the points repeatedly mentioned during the exchange was the continued need for further research into clean coal technology, including that of carbon capture and storage (CCS) and carbon capture and use (CCUS). David Hawkins of the NRDC also spoke of the need for a carbon budget, emphasizing that "unlike economic growth, the carbon budget cannot be expanded indefinitely. Emitting more carbon than your neighbor is not a recipe for success. China and the US have mutual strategic interest in helping each other to minimize carbon emissions." However, the use of clean coal technology, such as CCS, has not been rolled out at the speed desired or required according to the opinion of a number of academics and experts that were in attendance.

On this issue, Milton Catelin, CEO of the World Coal Association, believes that the deployment of CCS, and the poor speed at which it is currently being deployed, is 90 percent an issue of governance; adding that the same can also be said for the general approach to climate change from governments worldwide. Ni Weidou added to Catelin's point, stating that there remains much room for improvement regarding CCS technology, admitting that government inaction has a lot to do with this fact.

With regards to the possibility for policy action, Robert Marley provided an interesting insight into the way policy feeds into sustainable development. Marley admitted that investment in science currently sits at the bottom of the list in terms of effective policies, due to the fact that the effects brought about by investment are not immediate. However, according to Marley, more effective policy choices are simply out of reach for many legislators mainly due to political and economic reasons. As a result, the last option ultimately becomes the first, and as improvements are made in the area of science, innovation helps to bridge the gap when it comes to adopting certain policies which are difficult to pursue from a political perspective.

The progress involving clean coal technology appears to be positive, though the speed at which such progress is being achieved or implemented should be a cause for worry. It was clear from the points made throughout the exchange that the world is at a critical juncture when it comes to issues regarding climate change. Meanwhile, China faces unique problems regarding its uneven distribution of coal resources and the environmental impact that coal mining has created and continues to create. As Robert Marley of CERC made clear, "We must not make the choice between economic development and environmental protection. We must achieve both."

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