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U.S.-China Coal Regions and the Energy Transition Track II Dialogue

1st Dialogue

U.S. – China Coal Economy Overview:
Understanding the Key Challenges

MEETING MINUTES

(For Internal Reference Only)

December 2021



On December 2, Beijing time, December 1, Washington, D.C. time, the Energy Foundation China, the China Coal Society, and the Jackson Hole Center for Global Affairs jointly organized the "China US Coal Regions and Energy Transition Track II Dialogue". The first session of the U.S.-China Coal Regions and Energy Transition Track II Dialogue entitled the U.S.-China Coal Economy Overview: Understanding the Key Challenges, was designed to be an initial, foundation-laying dialogue for all participants to understand the bilateral policymaking and macro themes through a national, regional, and local lens. More than 40 Chinese and American stakeholders, policy makers, and experts attended the meeting.

Introduction and Background

Experts actively exchanged views on the status quo of the coal and energy transition in China and the United States, the challenges of the transition in major coal-producing regions in China and the United States, and the policies, measures and regional dynamics affecting the coal and energy transition. The dialogue has three main objectives:

- Build a common understanding of the similar challenges faced in Chinese and US coal-producing regions, based on a selection of case studies, and to present concrete situations from an on-the-ground perspective.
- Start a conversation between US and China, especially among experts and sub-national actors from coal-producing regions that produces insights and recommendations for policymakers in both countries.
- Create a foundation and link directly between U.S.-China coal regions and policymakers to strengthen information flow, policymaking, measures that can directly assist coal communities, and bilateral climate action

Key Messages

Shared themes identified by U.S. and China speakers and participants throughout included the critical economic role coal has historically in providing baseload energy and supporting local communities, the current necessity to help workers facing the transition, the imperative to reach climate goals, the historic industrial restructuring investments initiated in the U.S. with China industrial parallels, and between the U.S. and China, the shared human destiny and shared future.



A.China and the United States are at different stages of coal transition and are driven by different factors, while major coal producing regions are facing similar challenges.

The shale gas revolution accelerated the American coal transition. The United States is rich in oil and gas resources. The shale gas revolution has greatly increased the oil and gas production of the United States. In 2009, the United States exceeded Russia as the world's largest natural gas producer. In 2020, the United States became a net exporter of oil. The sharp rise in oil and gas production has led to a gradual decline in U.S. coal production and consumption. In 2019, U.S. coal production was 640 million tons, 40% lower than the peak in 2008 (1.06 billion tons). In 2020, coal accounted for only 10% of primary energy consumption in the United States. By the end of 2020, there were only about 43,000 coal workers in the United States. (Most workers, however, are concentrated in few key states, such as Wyoming and West Virginia, where coal remains a major component of the socio-economic and political environment).

Phasing out coal use, transforming energy structure, and accelerating clean energy and electric power alternatives are crucial to achieving China's multiple goals, including peaking its carbon emissions by 2030, reaching carbon neutrality by 2060, building a green, "beautiful China," and promoting high-quality socio-economic development. In 2020, China's coal production will be approximately 3.8 billion tons, coal will account for 56.8% of primary energy consumption, power generation will account for more than 70%, and coal employees in industrial enterprises above designated size will be approximately 2.85 million. China will strictly control coal-fired power generation projects, and strictly limit the increase in coal consumption over the 14th Five-Year Plan period and phase it down in the 15th Five-Year Plan period. Experts believe this will bring transition challenges for the sector, regions, and workers

B.Major coal regions in China and the United States are facing problems such as the loss of jobs, the decline of fiscal revenue, and insufficient investment in public services

In major coal regions of the United States, the transition has severely impacted the local labor market, public finances, education, and other government and public services. Take West Virginia and Wyoming as examples. The numbers of workers employed in the coal industry, in central West Virginia dropped from 32,000 in 2005 to 11,000 in 2020. At the same time, a large number of coal mining companies went bankrupt, seriously affecting local residents' income and public finances through coal severance and property taxes. In Boone County, whose economy is highly dependent on coal, 21% of jobs and 17% of residents' income are directly dependent on the coal economy; from 2012 to 2017, fiscal revenue fell by 38%.

Wyoming is the largest coal-producing state in the United States. The coal industry accounts for 9% of the state's GDP. In the past decade, Wyoming's coal production has fallen by 48%. During the same period, Wyoming's fiscal revenue has fallen by 43%. The loss of jobs and the decline in public fiscal revenues have forced the coal-producing regions of the United States to reduce expenditures on education and disaster relief public services on a large scale and in some instances, efforts to mount opposition to affronts on coal due to the legacy importance that the industry has played in providing public revenues, economic stability, and jobs.



China has made some progress. The proportion of coal in the primary energy consumption fell from 70% in the early 21st century to 56.8% in 2020. In the past five years, China has closed more than 5,500 coal mines and created 1 million jobs for coal miners' resettlement. **China's coal-producing regions, however, with large number of coal employees and economies that are highly dependent on coal, are facing huge transition challenges.** Taking Shanxi as an example, in 2018, the province's coal industry employs more than 1 million people, meaning about 10% of families of Shanxi are directly dependent on the coal economy. In Shuozhou, Shanxi, this number is as large as 30%. In 2020, the coal industry accounts for 14% of Shanxi's GDP and 35% of the industrial added value. The tax contribution of the coal industry exceeds 46% in the first three quarters of 2021. If we count metallurgy, coking and other industries, The tax contribution exceeds 50%. In some counties whose economies are highly dependent on coal, coal industry contributes more than 80% of their tax revenue.

C. Determining the transformation path and building supporting policies are key for coal transition and for solving problems such as energy supply, local economy diversification and employment.

First, consider the energy transition plan in advance to ensure the security of energy supply. Ensure the new non-fossil energy installed capacity, mainly solar and wind is larger than or equal to the combination of the growth of energy demand and the replaced fossil energy installed capacity. In the past decade, China has maintained a relatively stable coal consumption amount, though the energy demands have been increasingly growing. Renewable energy is playing an ever-larger role. Recently, the purchase price of electric coal surged, and there was a shortage of electricity in many provinces. Experts pointed out that China's shortage of coal supply is regional and minimal. The quantitative easing adopted by major economies may be an important reason for the substantial increase of the price of commodities based on US dollars in the international market. After the executive meeting of the State Council on October 20, coal prices dropped sharply. By November 1, the spot price of 5,500 kcal thermal coal dropped from more than □2,500 per ton to about 1,300, and is getting closer to the usual range, proving that China domestic coal production capacity is sufficient.

It is important to build policies to support the transition, set clear goals, clear the blockage of transition policies, and strengthen policy coordination among departments, national and local governments. In China, forward planning and macro-objectives and development scale planning based on the five-year plan strengthen policy certainty and enhance market expectations. In the implementation of specific policies, it is necessary to strengthen inter-departmental policy coordination and establish an incentive-compatible transition policy support system. Such as reform of the carbon market and the electricity market, establishing a price transmission mechanism, and encouraging coal plants to carry out flexible transformations.

In the United States, the Biden Administration has taken proactive steps to support affected coal-producing communities through Build Back Better legislation, the recently passed infrastructure bill, and establishing an Inter-agency Working Group (IWG) on Coal and Power Plant Communities and Economic Rejuvenation to mobilize 11 departments to co-ordinate the challenges of coal transition. Taken in tandem, this focus on the revitalization opportunities of the transition and the industrial restructuring commitments being taken by the Biden Administration are on the scale of investments made during WWII.



At the same time, experts pointed out that **the current coal transition policy system from the national, state, to local levels remain influenced by sometimes differing priorities**. Due to the economic dependence on coal, in some instances, coal-producing regions are reducing taxes on the coal industry, relaxing coal production MRV, expanding investment in existing coal-fired power generation, and lobbying the policy makers.

Multiple strategies should be adopted to promote economic diversification in coal producing areas and help employees in the coal industry. Coal workers' reemployment is hard. Coal industry employees tend to be older, single-skilled. Coal industries tend to have limited internal resources for employees' resettlement. The local cities are frequently lacking new industries to rehire coal workers.

Experts at the dialogue pointed out that **considerable economic diversification opportunities through the reuse of coal assets**, such as utilizing abandoned mines for CCUS, energy storage, hydrogen storage, cold chain refrigeration, etc.; and the opportunity to **take advantages of the infrastructure of coal production areas**, combined with specific location factors and business environment background, to achieve local economic diversification, such as the development of warehousing and logistics centers, new industrial parks, tourism services and other industries; and the **combination of the coal industry with emerging strategic industries**, especially those related to new energy and energy efficiency, minimize the coal industry's sunken assets, and identify opportunities for value transfer.

Improve the re-employment placement mechanism for coal employees, including strengthening the construction of re-employment training institutions, especially cross-regional re-employment service platforms; focus on supporting employees who are particularly vulnerable, and ensure that social security, medical, pension and other insurance mechanisms are available for them. Provide vulnerable groups with accessible employment opportunities such as e-commerce and community services. Consider using the tax and profits of the coal industry and combining it with central transfer payments to establish a special aid fund for reemployment.

Next steps

China and the United States share common challenges in the energy transition of the coal regions. In the future, under the guidance of the Sino-U.S. Glasgow Joint Declaration, on the basis of existing cooperation, both countries can further carry out the Track II dialogue, deepen the cooperation among experts and non-state entities (provincial and state level, Inter-enterprise). The Energy Foundation China, Jackson Hole Center for Global Affairs and the China Coal Society will continue to promote the Track II Dialogue and bilateral cooperation on the coal and energy transition and other climate issues.