

China's Growing Presence in the World in a Journey Toward Decarbonization

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As Japan, the United States, European countries, China and other major countries enhance carbon neutrality initiatives, energy transition towards global decarbonization is accelerating. Through the energy transition, the world will reform the current energy supply and demand system that structurally depends heavily on fossil fuels. The difficult challenge would trigger structural energy supply and demand changes in the world and each country and subsequent changes in the power balance for energy geopolitics and in major players' presence in international energy markets.

China is the world's largest energy consumer and CO₂ emitter. While depending on coal for nearly 60% of its primary energy supply, China plans to substantially transform its energy supply and demand towards reaching carbon neutrality in 2060. According to an outlook released by an analytical team including Tsinghua University, China plans to keep greenhouse gas emissions at the current levels until 2030 before reducing them rapidly. Energy scenarios for carbon neutrality in the world commonly envisage attaining a zero-emission power generation sector while enhancing energy savings and promoting electrification, introducing hydrogen and other innovative technologies to the maximum extent and using forest sinks, DACCS (direct air carbon capture and storage) and other negative emission technologies to offset residual CO₂ emissions. The Chinese scenario, though similar to the others, features an electrification rate of more than 70% for 2050, far higher than in other scenarios, indicating that realization of a zero-emission power generation sector depending heavily on renewable energy and the promotion of electrification are the key to reaching carbon neutrality in China.

Given China's position as the world's largest energy market and CO₂ emitter, how China would innovate or restructure its energy market is attracting global attention. Whether and how Chinese initiatives would be successful or not has thus become a matter of global interest, indicating China's great presence in the world towards decarbonization. Separately from the abovementioned point, there are key points demonstrating China's growing presence in or influence on the world where decarbonization initiatives are promoted. We cannot ignore these key points.

First, China's presence in international energy markets has increased as a consumer and importer of fossil fuels. At a time when decarbonization initiatives are about to be enhanced, this indicates that China's presence is already great and will become even greater. China, which recovered from the impact of COVID-19 ahead of other countries, has robustly increased demand for oil, gas, liquefied natural gas and coal. Its import expansion has driven global demand expansion in markets for these fossil fuels. Typically, China has substantially expanded its LNG imports. It is expected to replace Japan as the world's largest LNG importer in 2021. LNG market stakeholders have no choice but to closely watch the Chinese trend. If China's GHG emissions are kept almost unchanged until 2030 in line with the Chinese scenario, its fossil fuel demand would remain firm, with its natural gas and LNG demand growth sustained. If other major countries hold down their oil, gas and coal demand to reduce GHG emissions in line with their policy targets, China's presence in

oil, gas and coal markets would increase even further. In this sense, China's presence in and influence on the Middle East, Russia and other major resource exporters will increase further.

Second, major countries in the world give priority to the dramatic expansion of non-fossil energy consumption including renewable energy, indicating that China as a major renewable energy consumer will increase its presence in the non-fossil energy field. China has become one of the largest manufacturers of solar photovoltaics and wind power generation equipment. It has also captured more than 70% of the global solar PV panel market. As renewable energy is planned to play a central role in China's decarbonization, its domestic renewable energy market is expected to expand substantially. In line with the expansion, China may increase production capacity for renewable energy equipment and infrastructure and enhance its international competitiveness. As a result, China's renewable energy industry may enhance its international expansion to increase its international presence as renewables globally spread. As a matter of course, there are some problems that must be watched in this respect. For instance, international sanctions on China over a human rights issue in the Xinjiang Uyghur autonomous region, known as one of leading producers of silicon for solar PV panels, have become one of the background factors for silicon and solar PV panel prices to rise rapidly. Generally, however, the global spread of renewable energy will lead to China's growing presence as a major renewable energy consumer. In regard to nuclear energy as another non-fossil energy source as well, China's presence is increasing dramatically. It is expected to replace the United States as the world's largest nuclear power generator by continuing to expand its domestic nuclear power generation. At the same time, China is proactively promoting its expansion into the international nuclear power plant market along with Russia. It may thus increase its international presence regarding nuclear and renewable energy as non-fossil energy is promoted amid global decarbonization.

Third, China's presence is also great in regard to key minerals such as lithium, cobalt and rare earths that play key roles in promoting electrification and renewable energy diffusion, which will hold the key to decarbonization. China now accounts for 40% of the processing of these key minerals. The International Energy Agency forecasts that demand for these key minerals would increase six-fold from the current level by 2040, indicating the growing importance of China that has proactively expanded investment in domestic and international supply chains for these minerals, covering from upstream development to processing. As the world promotes electrification and renewable energy, the strategic importance of these key minerals will increase, leading to the greater presence of China securing their supply.

Fourth, there is a viewpoint regarding China's influence on the potential intensification of north-south confrontation over climate change. Developing and emerging market economies have claimed that advanced economies have taken advantage of massive fossil fuel consumption to achieve economic development since the industrial revolution and are responsible for climate change. The bottom-up approach in which voluntary national GHG emission reduction targets were accumulated to achieve the Paris Agreement was devised to avoid the north-south confrontation and secure international cooperation in climate change countermeasures. However, the strong pressure from US and Europe for developing and emerging market economies to achieve carbon neutrality as early as possible may become a source of the intensification of north-south confrontation, with rekindling south-side argument that advanced economies held responsible for climate change. China, which has offered a 2060 carbon neutrality target, could understand the stance of developing and emerging market economies and make arguments representing the south side, increasing its presence in international climate negotiations.

As the world goes in the direction of decarbonization, China is thus expected to increase its international presence in various areas. Naturally, China may strategically exploit its growing presence for international politics and geopolitics. This is the reality. As the U.S.-China confrontation escalates, the United States indicates that it would enhance alliances and strategic cooperation with other major countries to compete with China. However, the current strong U.S. climate change policy, including diplomatic pressure, could lead China to increase its influence on and presence in the world as noted above, contradicting the China strategy as top U.S. foreign policy priority. The United States may need to review its climate change policy from the viewpoint of its comprehensive foreign policy strategy.

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