China's Climate Diplomacy and Energy Security

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Abstract

As China continues to assert itself on the global stage, its energy policies are increasingly intertwined with its broader Geopolitical ambitions. The country's investments in renewable energy are not just about reducing carbon emissions; they also serve as a strategic tool for enhancing energy security and reducing dependency on foreign energy imports. Moreover, China's approach to climate change diplomacy is shaping its relationships with other major powers, particularly the United States, influencing the dynamics of international cooperation on environmental issues. While China's progress in renewable energy is commendable, significant challenges remain, including the need to increase the domestic utilisation of renewable sources and afresh the logistical and infrastructural barriers that impede further development. Ultimately, China's journey toward becoming a renewable energy superpower will be a critical factor in global effort to combat climate Change and redefine the future of international relations

Key words: China, Renewable Energy, Climate Change Diplomacy, Energy Security

In the last two years, China has become the leading destination for energy investment. A significant portion of this investment lies in the renewable energy sector of China that has undergone rapid development, accounting for about 45% of global investment(126.6 billion)[1] in 2017. The country overtook Germany in the production of solar panels and solar energy generation in 2014 and in 2015 China's production of wind energy accounted for one third of global wind energy capacity and needless to say, China has always dominated the market in the production of hydro energy. This has led to widespread speculation of the country being a "renewable energy superpower" following a report by the Global Commission on the Geopolitics of Energy. It has also taken active steps to combat climate change in the form of revamping its energy policies. However, these positive shifts are not without issues. China still remains a net importer of coal and highest emitter of greenhouse gases. This article attempts to understand China's climate change diplomacy against the backdrop of its energy security concerns and if there is any truth to China becoming a renewableenergy superpower.

[1] Global Trends in Renewable Energy Investment 2018 | Capacity4dev. (n.d.). Retrieved from capacity4dev.europa.eu website: https://capacity4dev.europa.eu/library/global-trends-renewable-energy-investment-2018_en

The 2018 UN Intergovernmental Panel on Climate Change (IPCC) report highlighted that there was only 12 years to control global warming temperatures to 1.5 °C following [2] which even a half degree rise would prove catastrophic in the form of unprecedented floods, droughts and millions being pushed towards poverty. Even maintaining the 1.5 °C would require a complete overhaul in the energy,[3] transportation, infrastructure and industrial sectors and global carbon emissions would need to reach net zero by 2050. The Paris Climate Accord was instrumentalized with the intention of capping carbon emissions and containing global warming temperatures below 2 °C. Since the Paris Agreement in 2015, perceptions toward climate change have seen massive shifts following extreme weather patterns in several countries. For one, the US has been strong in their intention to withdraw from the Paris Agreement while several others have taken steps to address climate change by decisive shifts in environmental and energy policies. Chief among them has been China's actions to counter the climate crisis by investing in renewable energy.

With a population of more than 1.4 billion and a boom in growth since the 2000s, China has been experiencing rising living standards and industrialization. As a consequence, China's energy consumption has seen a surge as well. Historically, China's major sources of energy have been its vast domestic coal reserves and imports of crude oil and natural gas from Russia and Middle East. This has resulted in China competing with the US for the position of being the largest emitter of carbon dioxide. In acknowledgment of this, the Chinese have been the first to invest billions in renewable energy.

China's Energy Landscape

China's investment in renewable energy began as early as 1949 with the construction of the world's largest hydroelectric plant, the Three Gorges Dam[4] over the Yangtze River. The reason the Chinese shifted towards hydroelectric energy was the rising dependency on imports and harmful effects to the environment due to the usage of coal. Prior to the Sino-Soviet split in 1960, China had been importing close to 50% of its oil from the Soviet Union. However, a combination of losing the Soviet's support, economic collapse and a shift from being a net

[2] Watts, J. (2018, October 13). We have 12 years to limit climate change catastrophe, warns UN. Retrieved from the Guardian website: https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report

[3] Irfan, U. (2018, October 8). UN climate change report: only 12 years left to cut fossil fuels and avert wide-ranging damage. Retrieved from Vox website: https://www.vox.com/2018/10/8/17948832/climate-change-global-warming-un-ipcc-report

[4] Qing, D., & Sullivan, L. R. (1999). The Three Gorges Dam and China's Energy Dilemma. Journal of International Affairs, 53(1), 53–71. Retrieved from https://www.jstor.org/stable/24357784

exporter of oil to being a net importer in 1993 accelerated China's desire for energy self-sufficiency. Since the 2000s the country's oil and natural gas imports from Russia and Middle East have exhibited a dramatic increase. In 2016 China's imports of crude oil reached a record high of 68% [5]while natural gas imports hit 33% in 2017.

Concern regarding the emission of greenhouse gases and inefficient use of coal for power generation prompted a shift in the subsequent energy policies that China released. The Chinese established several economic and technological policies to promote energy conservation. An energy saving branch consisting of a three-tier system was set up within the central and local governments and enterprises in the 1980s. Under the 1988 Energy Conservation Law numerous policies were implemented beginning with the 'Energy Conservation Propaganda Week'[6] in an attempt to increase energy efficiency and energy conservation. The government also began providing loans and tax incentives to entrepreneurs who developed small hydropower and wind power plants.

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Even the 13th Five Year Plan by the Energy Bureau of China revieal ed its plans to restrict coal to 58%[7] of its energy mix by 2020 as opposed to previous levels of more than 60%. The country's shift to renewable energy has garnered itself the title of being the world's renewable energy superpower"; a title that has increasingly found its way into academic and policy circles.

China's Climate Diplomacy

Climate change or rather, the climate crisis has metaphorically lit a fire under the member states signed on to the Paris Agreement to combat the greatest threat posed to mankind. Germany has rallied several EU member states to achieve "climate neutrality" by 2050[8] with net zero carbon emissions. Amidst mounting public pressure and weekly climate protests by students (Fridays for Future), several governments have convened in Bonnin Germany9 from June 17th to 27th of this year for a climate summit to address the carbon emissions. China has been proactive in

[5] China's Overall Energy Balance. (n.d.). Retrieved April 25, 2024, from www.planete-energies.com website: https://www.planete-energies.com/en/media/article/chinas-overall-energy-balance

[6] Jiang, K., & Hu, X. (2008). Energy and environment in China (L. Song & W. T. Woo, Eds.). Retrieved April 25, 2024, from JSTOR website: https://www.jstor.org/stable/j.ctt24h83c.23

[7] ;i,ffij tfi {/t:"+=.n."j!\]JtU> $,:_*Jrr&l tfi_Cfl i&Jtt'DJJ. (n.d.). Retrieved April 25, 2024, fm www.gov.cn website: https://www.gov.cn/xinwen/2017-01/05/content_5156795.btm?allContent#allContent

[8] Germany to support EU climate neutrality by 2050 - leaked documents. (2019, June 17). Retrieved April 25, 2024, from Clean Energy Wire website: https://www.cleanenergywire.org/news/germany-support-eu-climate-neutrality-20SO-leaked-documents

[9] Archive, F. *our* online. (n.d.). Climate change: Diplomats and climate experts meet in Gennany as Arctic ice melts. The New Indian Express. Retrieved from https://www.newindianexpress.com/world/2019/Jun/17/climate-change-diplomats-and-climate-experts-meet-in-gennany-as-arctic-ice-melts-1991478.html

that regard; having already shifted to electric vehicles and invested in technologies of carbon capture and storage among other initiatives. China's share of electricity generation from renewable energy accounted for 26.4%in 2017.[10] The country has also made large investments in the power sector in Africa, specifically for electricity generation in the last 20 years. They contributed up to 30% of capacities of which 56%of the total capacity comprised of renewable sources in 2016.

Given these numbers regarding renewable energy and its position on climate change, it might be reasonable to speculate that China's behavior in the international system — its dispute over the South China Sea (SCS) with the Southeast Asian countries, challenging the established status quo of the US as a superpower, the Belt and Road Initiative (BRI) and increasing energy diversification in Russia, Central Asia, Latin America and Africa — is an attempt at addressing its current energy insecurity.

China claims the entirety of the SCS on the basis of historicity, what they refer to as the nine dash line; a claim that is contested by several countries in Southeast Asia. According to reports by the World Bank the SCS has proven reserves of natural gas and oil. China's rising energy security concerns over the Malacca Strait, Strait of Lombok, Sunda and Ombai Weitar and the Persian Gulf compound its behavior regarding the SCS as more than 50% of China's trade travels these waters. Another issue that arises is US's presence and influence it wields in the region. In the last 10 years China's imports of crude oil from the Middle East has been on the deadline. Russia, Angola, Brazil and Venezuela have increasingly taken up a major portion in China's energy mix (14%, 12%, 5.1% and 4% respectively). The influence that the US wields in the Middle East and the general instability pose a very credible threat to China's imports. Recently, with the US unilaterally leaving the Iran nuclear deal and the return of sanctions on the country, any state continuing to trade with Iran has been under economic fire from the US(China, India, Turkey etc.). In such a scenario China's focus on renewable energy would provean alternative as well as a challenge to the US's power in the international system.

Addressing the climate crisis has been on the agenda of energy policies of several countries. That China has taken a massive step towards that end impacts US's credibility on that front. The Trump administration has made their position on climate change explicitly clear with their decision to withdraw from the Paris Climate Accord.

[10] China's Overall Energy Balance. (n.d.). Retrieved April 25, 2024, from www.planete-energies.com website: https://www.planete-energies.com/en/media/article/chinas-overall-energy-balance

China's renewable energy generation will damage US's optics. Barring this, investment in renewable energy could have an effect on the economies of oil rich countries in the Middle East. China's ambitions to challenge the existing global order by strengthening their military and economy depend upon its strategies to combat their energy insecurity. Hence, the strategic value in investing in renewable energy.

However, China's energy shifts do not come without its own set of logistical issues. In spite of leading most of the world in the production of wind, solar and hydro energy, the percent of these in domestic electricity generation remains low. Only 19.2%, 3.8% and 1.2% of hydro, wind and solar power was utilized for domestic electricity generation in spite of a net installed capacity of 344 GW, 148.6 GW and 77.5 GW respectively in 2016. Though there has been incremental rises in these numbers, China still has a long way to go before attaining energy self-sufficiency. China still relies on heavy imports of coal from its neighbours such as Australia, Mongolia, Indonesia and Russia. The country's usage of coal rose by 1% in 2018 though its share in the energy mix decreased to 59%, a 1.4% decrease from 2017.

Conclusion

The blame and burden for finding a solution to the climate crisis cannot solely rest on the shoulders of developing economies contrary to frequent statements made by the US President who blames Russia, China and India[11] for climate change while ignoring the US's emission of greenhouse gases. The bottom line is that the US and most of the West had almost 200 years to industrialize and develop their economies. Countries such as India and China have only experienced industrialization and a developing economy in the last 50 or so years. In such a situation, the scale to measure with whom the blame for climate change lays is skewed. Specifically in the case of China, a burgeoning population drove the need for rapid growth. Therefore, it is still a commendable fact that China has been environmentally conscious in the development of its economy. It remains one of the few countries on track to meet the Paris Climate Agreement targets for carbon emissions.

All this aside, it is *rather* premature to refer to China as a "renewable energy superpower" at this point in time. The numbers regarding the use of renewables in domestic electricity generation do not paint a picture of a country poised to change its energy dependency from fossil fuels to renewable energy. China's goal of becoming a global superpower by 2049 does not just include powering up economically and militarily.

[11] Reilly, K. (2019, June 5). President Trump Discusses Climate Change With Prince Charles and Blames Other Countries for Inaction, Despite U.S. Emissions Surge. Retrieved from Time website: https://time.com/5601169/donald-trump-prince-charles-climate-change/

Even a developed economy implies growth across the entire country and not just in certain provinces, as is the present situation in China. But it is increasingly becoming evident that any country that reaches their target to combat climate change along with being an economic and military powerhouse stand to become a global influencer and dictate the terms of the international system. If recent developments are any indication, China needs to continue its sustained efforts at decarbonization to attain the influence and recognition it seeks from the international community.

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Archive, F. our online. (n.d.). Climate change: Diplomats and climate experts meet in Germany as Arctic ice melts. *The New Indian Express*. Retrieved from https://www.newindianexpress.com/world/2019/Jun/17/climate-change-diplomats-and-climate-experts-meet-in-germany-as-arctic-ice-melts-1991478.html

China's Overall Energy Balance. (n.d.). Retrieved April 25, 2024, from www.planete-energies.com website: https://www.planete-energies.com/en/media/article/chinas-overall-energy-balance

Germany to support EU climate neutrality by 2050 – leaked documents. (2019, June 17). Retrieved April 25, 2024, from Clean Energy Wire website: https://www.cleanenergywire.org/news/germany-support-eu-climate-neutrality-2050-leaked-documents

Global Trends in Renewable Energy Investment 2018 | Capacity4dev. (n.d.). Retrieved from capacity4dev.europa.eu website: https://capacity4dev.europa.eu/library/global-trends-renewable-energy-investment-2018_en

Irfan, U. (2018, October 8). UN climate change report: only 12 years left to cut fossil fuels and avert wide-ranging damage. Retrieved from Vox website: https://www.vox.com/2018/10/8/17948832/climate-change-global-warming-un-ipcc-report

Jiang, K., & Hu, X. (2008). Energy and environment in China (L. Song & W. T. Woo, Eds.). Retrieved April 25, 2024, from JSTOR website: https://www.jstor.org/stable/j.ctt24h83c.23

能源局发布《能源发展"**十三五**"规划》等_**新**闻发布_**中国政府网**. (n.d.). Retrieved April 25, 2024, from www.gov.cn website: https://www.gov.cn/xinwen/2017-01/05/content_5156795.htm?allContent#allContent

Qing, D., & Sullivan, L. R. (1999). The Three Gorges Dam and China's Energy Dilemma. *Journal of International Affairs*, *53*(1), 53–71. Retrieved from

https://www.jstor.org/stable/24357784

Reilly, K. (2019, June 5). President Trump Discusses Climate Change With Prince Charles and Blames Other Countries for Inaction, Despite U.S. Emissions Surge. Retrieved from Time website: https://time.com/5601169/donald-trump-prince-charles-climate-change/

Watts, J. (2018, October 13). We have 12 years to limit climate change catastrophe, warns UN. Retrieved from the Guardian website: https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report

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