China's dominance in clean technologies (solar, wind, electric vehicles, batteries) has been in the news recently (*see, e.g.*, here and here). China accounts for more than 80% of global manufacturing capacity for solar products and batteries. Chinese companies produce 65% of EVs globally. The US has responded to this both with measures to improve US competitiveness, such as the Inflation Reduction Act and the Bipartisan Infrastructure Law, as well as through efforts to push back against the use of Chinese clean technologies, including tariffs on Chinese solar products, EVs, and batteries; a proposed ban on Chinese software in vehicles; and local moves to block Chinese clean tech investments in the US.

The Western discourse on Chinese clean technology dominance is surprisingly short on references to Chinese policy, however. What do we know about Chinese motivations and likely future directions?

A New Article on National Energy Security

Last week, the People's Daily, the most official of Chinese state newspapers, offered some insight into these questions. China's decarbonization efforts are discussed in the context of energy security in a nearly 9,000-word article, entitled "Providing Safe and Reliable Energy Security for the Construction of Chinese Modernization." The article is an analysis of recently published writings from Xi Jinping on energy security. I provide excerpts below with annotated commentary (h/t to Bill Bishop and his Sinocism newsletter for translations).

> "Energy security is crucial to the overall development of the economy and society. Since the 18th National Congress of the Communist Party of China, the Party Central Committee with Comrade Xi Jinping at its core has proposed a new energy security strategy from the strategic height of national development and security. It has promoted revolutions in energy consumption, energy supply, energy technology, and energy systems, while comprehensively strengthening international cooperation. China's new energy system is being constructed at an accelerated pace, and the foundation for energy security is continuously being reinforced, providing strong support for economic and social development."

Comment: This strategy is pitched at a high level of political priority – coming from the Central Committee of the Chinese Communist Party (CCP) and reflecting the words of Xi himself. Energy security is linked with foundational Chinese state objectives of development and security. The strategy speaks about "revolutions" in energy and the language suggests that the full force of China's bureaucratic mobilization will be trained on this effort,

including for better or worse China’s campaign-style implementation and tournament-like competition among local bureaucrats.

Contrast the Chinese approach to the ambivalence we see in American energy policy as evinced by the competing Democratic and Republic platforms. The Democratic platform shows a logic similar to the Chinese strategy. Low-carbon energy transformation is treated as a source of jobs and a driver of future economic growth. The Republican platform is a throwback that relies entirely on fossil fuel as the driver of American energy policy. Its fundamental denial of climate change enables such a carbon-intensive approach. The Democratic platform hopes to compete with China for the energy technologies of the future. The Republican platform relies entirely on energy technologies of the past.

> “General Secretary Xi Jinping pointed out that energy security and guarantee are related to national economy and people’s livelihood, and are “matters of national importance” that cannot be ignored for a moment. The energy bowl must be held in our own hands.”

Comment: China is now a net importer of oil (since 1993), natural gas, and even coal (since 2009). China became the largest net importer of petroleum in the world in 2013 and Chinese leaders are well-aware of the political and economic risks and liabilities such reliance on foreign oil has created for the US, including wars in Iraq and defense obligations in the Middle East in general. China’s push for EVs and renewable energy directly support this energy self-reliance, though it creates other risks, such as those related to maintaining supply chains for critical mineral mining and processing in Global South countries.

> “General Secretary Xi Jinping emphasized that achieving the “dual carbon” goals is a complex systematic project and a long-term task that cannot be achieved overnight and should not be divorced from reality. We should base ourselves on China’s energy resource endowment, adhere to the principle of establishing before breaking, and implement carbon peaking actions in a planned and step-by-step manner. Improve the control of total energy consumption and intensity, focus on controlling fossil energy consumption, and gradually transition to a “dual control” system of total carbon emissions and intensity. Promote clean, low-carbon, and efficient use of energy, and promote clean and low-carbon transformation in industries, buildings, transportation, and other fields. Deeply promote the energy revolution, strengthen the clean and efficient use of coal,

> increase efforts in oil and gas resource exploration, development, and reserve increase and production, accelerate the planning and construction of a new energy system, coordinate hydropower development and ecological protection, actively and safely develop nuclear power in an orderly manner, strengthen the construction of energy production, supply, storage, and sales systems to ensure energy security…"

Comment: This passage talks about China's "dual carbon" goals – that is, the 2030 carbon peaking and 2060 carbon neutrality goals. But these are described as long-term tasks that "cannot be achieved overnight." The entire passage warns its audience to proceed with caution with actions that are not "divorced from reality." Hence reference to the "principle of establishing before breaking" (*xianli houpo*), which Xi announced several years ago in conjunction with a revival of coal mining and electricity production (i.e., "China's energy resource endowment"). The reference to "implement[ing] carbon peaking actions in a planned and step-by-step manner" recognizes the possibility of "overzealous" local implementation in China's target-driven, campaign-oriented implementation system. The passage makes clear that China is not reliant solely on clean energy, but is going "all in" on all forms of energy, including coal, oil, gas, hydropower, and nuclear.

> "The revolution in energy production and consumption is a foundational project for building an ecological civilization."

Comment: The concept of "ecological civilization" (*shengtai wenming*) has become a core component of Chinese Communist Party ideology in the Xi Jinping era. To outsiders, it comes across as perhaps a meaningless political slogan, but it has served as a framing device and ideological justification for China's broader domestic and global attempts to achieve "high-quality growth" (*gao zhiliang fazhan*), which includes among other things aggressively pushing Chinese industry and companies up the value chain towards advanced manufacturing and services industries that developed nations also view as central to their economic well-being.

> "Education, science and technology, and talent are the foundational and strategic supports for comprehensively building a modern socialist country."

Comment: China's advances are built on extraordinary investment in science and technology

education and research. While US attention has focused on programs like China's 1000 Talents Program that seek to recruit Western research talent, the country has also invested in building raw scientific talent in an unprecedented way for decades. These investments are beginning to bear fruit for China in the green development space in a major way.

> "Contributing Chinese wisdom and strength to world energy security and energy development transformation. Climate change and energy issues are prominent global challenges, and low-carbon energy development concerns the future of humanity. China has comprehensively and effectively promoted resource conservation, significantly reducing resource consumption intensity, and is the world's largest country in energy conservation and the utilization of new and renewable energy. General Secretary Xi Jinping pointed out that China attaches great importance to low-carbon energy development and is willing to work with the international community to strengthen energy cooperation in all aspects, maintain energy security, address climate change, protect the ecological environment, promote sustainable development, and better benefit people of all countries. China adheres to a green, low-carbon, and sustainable development path, vigorously develops clean energy, optimizes industrial structure, builds a low-carbon energy system, develops green buildings and low-carbon transportation, and establishes a national carbon emissions trading market, making important contributions to world energy security. China strongly supports the green and low-carbon energy development of developing countries and no longer builds new coal-fired power projects overseas. China's new energy industry has honed its real skills in open competition, representing advanced production capacity, not only enriching global supply and easing global inflationary pressures but also making enormous contributions to global climate change response and green transformation."

Comment: This passage expounds on the virtues of what I call in a forthcoming book "Chinese global environmentalism." This is the use of environmental diplomacy, green development cooperation, and green economic statecraft to promote development, security, and the construction of Chinese legitimacy and soft power. This involves telling the story of China's approach to environmental governance to the world as a positive contribution. Globally, this means mitigating the environmental risks of Chinese outbound investments (through "small but beautiful" projects, better risk management, and the like), building better ties with Global South countries that are sources of raw materials, and taking advantage of ever-expanding markets for the renewable energy and EV technologies that

China has come to dominate.

Implications for the US Presidential Election

How do the US Republican and Democratic presidential platforms stack up as responses to China's strategic plans on green development? In the current US presidential election, we are presented with two starkly different visions of an American energy future. The Democratic Party platform calls climate change "an existential threat to future generations who deserve better" and makes an economic case (green jobs, industries of the future) for climate policy. Under Harris, we are likely to see a deepening of the green industrial policy begun under Biden, further efforts to electrify transportation, and funding of government and research work on climate change. This is a vision for seeking to outcompete China on green development.

Trump denies the reality of climate change and is promoting a "drill baby drill" fossil energy policy and rollbacks on Biden green development policy. The Republican platform not only continues to ignore the climate crisis, but also has nothing to say about the global competition with China on green development. Whereas China was once accused of ignoring the environment, Republicans now see China's forays into green development as a trap, using climate goals to enable Chinese hegemony. The Republican platform essentially cedes these green development opportunities, which made up 40% of China's GDP growth in 2023, to China.

The outcome of the upcoming US presidential election will thus have critical implications for the US' ability to compete with China on the clean technology industries of the future. Given ever increasing impacts of climate change, the pressure to accelerate low-carbon transitions globally will only increase. The US is already substantially behind China in green industrial development. If Trump wins, this will mean at least four years of a decidedly backward-looking vision for American energy policy and China's opportunity to extend its lead. If Harris becomes president, the US will still have quite a lot of work to do to make up for lost time, but it will at least have a chance.