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President Biden's Executive Order on Climate Change: Implications for the US Industrial Base

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By David Gattie

In an October 24, 2020 [interview](#), then-Presidential candidate Joe Biden was asked about climate change. His response: *"It's the number one issue facing humanity. And it's the number one issue for me. Look, climate change is the existential threat to humanity."* Upon taking office, President Biden acted on this position by [Executive Order](#) (EO), *"putting the climate crisis at the center of United States foreign policy and national security."*

Past US foreign policy has centered around national security threats such as the Cold War and global terrorism—existential threats that were confrontational in various ways and driven by geopolitical and ideological undercurrents. By *"putting the climate crisis at the center of United States foreign policy and national security,"* the President has taken an aggressive posture toward climate change and an unprecedented approach to foreign policy and national security. As such, it is a fair question to ask: Will climate change be one element within President Biden's foreign policy and national security strategy or will climate change drive foreign policy and national security?

Unintended Consequences of the President's Policy

The EO aspires to *"...put the United States on a path to achieve net-zero emissions, economy-wide, by not later than 2050"* and achieve *"a carbon pollution-free electricity sector no later than 2035."* All of which will be done with the intention of *"implementing and building upon the Paris Agreement's three overarching objectives,"* one of which is *"a safe global temperature."*

The emphasis is domestic carbon reduction, which might seem reasonable for a climate policy. However, carbon reduction is only a first-order property of this climate-centric foreign policy. The second-order implications, unintended as they may be, are what raise concerns and warrant

attention—those being, the impact on the US industrial base and America’s technological capabilities relative to great power competitors.

Since WWII, the central role of the [US industrial base](#) in America’s 20th century national security strategy has been recognized, particularly as to its capacity to manufacture equipment for the defense sector. While these military demands remain, 21st century great power competition has extended the military battlefield to include, among other things, energy resources and energy technologies as instruments of geopolitical power.

As such, the technological capacity of the US industrial base must be accounted for in any US policy that could potentially impact it. This includes US climate policy, which inherently impacts the US energy portfolio and, in turn, impacts US energy technology and innovation. This translates to a direct impact on America’s industrial base, which was established and continues to operate largely on fossil fuels, which, [in 2019](#), accounted for about 83% of total US energy consumption and 63% of energy consumed for power generation.

While US fossil fuel consumption and CO₂ emissions are trending downward, both are trending upward in emerging economies, particularly the Asia-Pacific region. This is [most acute in China](#), which leads the world in both fossil fuel consumption and carbon emissions. Consequently, [America’s capacity to impact this global trend](#) and achieve a safe global temperature through domestic reductions alone is limited, if not negligible. Moreover, [Russia continues to leverage its oil and natural gas resources](#) to achieve its disruptive geopolitical objectives. Both countries, then, loom large in global energy production and consumption, and that carries with it influence in global energy and energy technology relationships.

On this extended field of 21st century great power competition, if the US unilaterally dials back the energy resources on which its industrial base was established or, in the extreme case of total decarbonization, disengages from the global fossil fuel network, US influence in global energy issues will diminish. Moreover, it will put the US industrial base at a comparative disadvantage with China and Russia, both of which continue unabated in their exploitation of these resources and associated technologies to meet domestic and geopolitical objectives.

In a world where all countries are submitting their respective industrial bases to carbon reduction policies with commensurate shifts in energy technologies, the President’s EO on tackling the climate crisis might seem reasonable. But that world does not exist as the climate crisis is not at the center of every country’s foreign policy and national security. It certainly is not for great power competitors China and Russia, neither of which is showing any indication of retreating from fossil fuel production and consumption, and both of which are pursuing primacy in various energy and energy technology domains—particularly civilian nuclear power.

While Russia presents an imminent disruptive threat, China is a long-term strategic threat as evidenced by its Belt and Road Initiative and through its [Made in China 2025](#) industrial policy objectives to achieve technology primacy in key sectors, including energy and power generation. Through its pursuit of all energy resources and associated technologies, China is deepening and expanding the technological capacity of its industrial base. If the President’s EO reduces the diversity of America’s energy portfolio and the US industrial base becomes less diverse in energy

technologies relative to China, America is at risk of being at a technological disadvantage with its greatest geopolitical rival.

The President's Executive Order doesn't consider impacts on the industrial base, but it does include directives that can be expanded upon and leveraged to address them.

The Opportunity in the President's Policy

The EO references the wide range of international fora, including the G7, G20 and the Major Economies Forum on Energy and Climate Change, that need to be leveraged to address *"clean energy, aviation, shipping, the Arctic, the ocean, sustainable development, migration, and other relevant topics."* The EO further contends that in cooperation through these fora, *"...the United States will pursue green recovery efforts, initiatives to advance the clean energy transition, sectoral decarbonization, and alignment of financial flows with the objectives of the Paris Agreement, including with respect to coal financing, nature-based solutions, and solutions to other climate-related challenges."*

Collaboration through economic alliances and clean energy fora reflects the President's emphasis on carbon reduction. While perhaps necessary in a climate-centric foreign policy, this is not sufficient for national security policy as it does not account for impacts on the US industrial base within the context of 21st century great power competition. Here, the security alliances of organizations such as NATO, Five Eyes, the Quadrilateral Security Dialogue and the Three Seas Initiative not only should be included, they should be leveraged to meet strategic geopolitical outcomes for the US. It is within this context that the role of the Department of Defense (DoD) and the intelligence community should be elevated to one of leadership in the President's climate policy.

In his EO, the President directs the Secretary of Defense, in coordination with other departments, agencies and offices, to develop *"an analysis of the security implications of climate change (Climate Risk Analysis) that can be incorporated into modeling, simulation, wargaming, and other analyses."* He further directs the Secretary of Defense and the Chairman of the Joint Chiefs as well as the Secretary of Homeland Security to *"consider the security of implications of climate change... in developing the National Defense Strategy, Defense Planning Guidance, Chairman's Risk Assessment, and other relevant strategy, planning, and programming documents and processes."*

This presents an opportunity to capitalize on DoD and its expansive network of global relationships in the security space as well as its institutional capacity to coordinate activities and evaluations across a broad range of government agencies. The President should empower DoD with a stronger leadership role in US climate policy than is given to it in this EO, and direct DoD, in coordination with the intelligence community, to conduct industrial base reviews of all US energy technologies, with a particular focus on the US civilian nuclear power sector—the sole energy technology that can stand up to [the challenges of both climate change and national security](#). Such reviews would entail a full supply chain evaluation to assess risk, identify impacts, and propose recommendations to ensure a resilient US industrial base that can meet carbon reduction objectives within the context of ever-increasing global carbon emissions and national security objectives within the context of 21st century great power competition—concurrently. And this should begin with the US nuclear power sector.

The US civilian nuclear power sector is struggling domestically and underachieving internationally. It is struggling to keep domestic plants in operation and underachieving in efforts to compete with great power rivals, China and Russia, in civilian nuclear partnerships. The [national security implications](#) of America falling behind China and Russia in the civilian nuclear technology space in both technology and partnerships are well-reported. As such, the President should charge DoD to conduct a nuclear industrial base review to evaluate not only supply chain issues, but also the underlying causes for US underachievement in global collaborations. This should include diplomatic discussions with US allies with a view toward [structuring a 21st century US-Allied civilian nuclear coalition](#) capable of doing what a vendor-oriented approach is not doing—compete with the state-owned nuclear enterprises of China and Russia. As such, [an industrial base review of the US nuclear power sector](#) should be done around America's security alliances in addition to its economic alliances.

Conclusion

Considering the exigency of the global climate crisis, elevating climate change as a national security issue is an eminently justifiable policy position. However, positioning it at the center of foreign policy and national security as a carbon reduction activity without accounting for the second-order implications regarding the US industrial base is a critical shortcoming of the President's EO. This needs to be corrected, and a first step should be to elevate the role of DoD and charge it with the responsibility of conducting an industrial base review of all US energy technologies, beginning with the nuclear power sector.

This is not an argument for the US to dismiss climate change or carbon reduction strategies. It is an argument for the US to embed great power competition in its climate policy and account for the impacts of that climate policy on the US industrial base, which is central to US national security.

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