



Foreign Policy Dimensions of Biden's Energy and Climate Agenda

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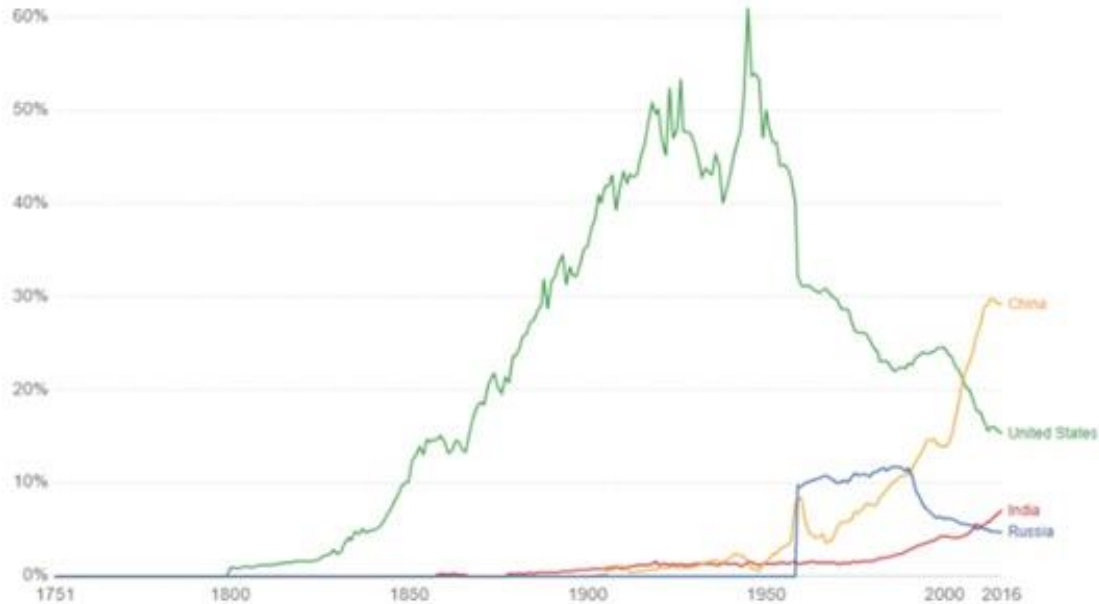
By Alan Ahn

President-Elect Biden rightly emphasizes the importance of international collective action in combating climate change. Although using diplomatic and trade leverage will be helpful in developing international consensus and encouraging the implementation of climate-friendly policies, innovation will be fundamental to the global adoption and deployment of low-carbon technologies. Investments in R&D programs will be needed to enable lynchpin climate technologies, enhance U.S. export competitiveness, and develop a broad spectrum of clean energy solutions that work in a variety of geographic and geopolitical contexts. Congressional barriers to R&D funding proposals may necessitate the cultivation of prudent international R&D partnerships and collaborations, as well as seizing upon opportunities of bipartisan agreement, such as nuclear energy.

Another Inconvenient Truth

An oft stated criticism of U.S. climate policy proposals is that they have tended to overemphasize the sufficiency of domestic action. According to historical data from the Global Carbon Project in 2017 (see figure below), the U.S. share of total global carbon emissions peaked at over 60% in the 1950s. Since that time, this percentage has diminished significantly—in recent years, U.S. carbon emissions have hovered around 15% of the world's total. This trend is projected to continue, in part from domestic developments and efforts contributing to carbon mitigation in the U.S., but largely driven by exogenous factors, including exponential energy demand growth in the developing world.

Figure - Annual Share of Global Carbon Emissions



Source: Our World in Data based on Global Carbon Project

Based on data and projections alone, it is increasingly apparent that, as Dr. David Gattie of the University of Georgia [argues](#), “[t]he U.S. cannot unilaterally solve the climate crisis.” Yet, U.S. discourse on climate change remains disproportionately focused on the U.S. domestic economy and energy mix. The Green New Deal (GND), a congressional [resolution](#) introduced by Representative Alexandria Ocasio-Cortez (D-NY) in February 2019 and one of the most visible rallying points for the country’s environmentalists and climate change advocates, *describes a challenge that is global in scope and yet principally offers solutions that are inwardly focused*. The text of the GND dedicates a single line towards “making the United States the international leader on climate change” through “promoting the international exchange of technology, expertise, products, funding, and services...” The remainder of the resolution is almost entirely devoted to domestic initiatives: infrastructure investments, job creation, overhauling power generation and other economic sectors, etc.

The International Aspects of Biden’s Climate Agenda

Current circumstances highlight the need to fundamentally integrate U.S. climate action with foreign policy. Although there are significant domestic components to [President-Elect Biden’s climate and energy agenda](#)—most notably his objectives of achieving a 100% clean energy economy and net-zero emissions by 2050 and building climate-resilient infrastructure—the Biden plan does contain significant internationally-oriented measures and fully concedes that “we cannot solve [the climate] emergency on our own.” The plan further acknowledges that climate change “is a global challenge that requires decisive action from every country around the world.”

One of the strategic pillars of Biden’s climate and energy plan is rallying the rest of the world to address the climate threat—much of this entails using U.S. diplomatic and trade leverage to positively change global climate norms and encouraging other countries to go above and beyond

with respect to their decarbonization commitments. In essence, the U.S. would lead by example and use political and economic inducements when necessary. For example, the plan includes:

- **A sustained diplomatic campaign to elevate the commitment of other countries to their decarbonization pledges**, most notably through re-entry into the Paris Agreement on day one, but also through convening a climate world summit, forging international agreements on shipping and aviation emissions, etc.
- **Preventing backsliding on climate commitments**, primarily via trade levers such as carbon tariffs and quotas, prioritizing carbon mitigation as a condition for trade agreements, etc.
- **Demanding a global ban on fossil fuel subsidies**, using the power of example by cutting domestic subsidies
- **Recommitting to low-carbon financing**, not only by barring federal financial organs (OPIC, DFC, EXIM) from investing in carbon intensive projects, but also returning to the Green Climate Fund, working with international development banks to provide debt relief to states using funding for green development, etc.
- **Instituting a Global Climate Change Report** that ranks countries based on their respective climate actions, records, etc.
- **Prioritizing climate change within the Arctic Council**, as well as seeking a global moratorium on offshore drilling in the Arctic by committing the U.S. to withdraw consideration of arctic waters for oil and gas leasing
- **Strengthening climate cooperation in the Americas**, including developing more ambitious standards on GHG emissions across various sectors, building more grid interconnections, and focusing on specific regions, such as the Caribbean—where small island states are vulnerable to rising sea levels and severe weather phenomena

The Significance of Innovation

Biden's climate plan pays special attention to China, which is recognized as "far and away the largest emitter of carbon in the world..." The plan also mentions Beijing's financing of coal and fossil fuel projects abroad, in large part through its Belt and Road Initiative (BRI).

Biden's approach to China on climate change is two-pronged. First, the Biden plan discusses the pursuit of bilateral agreements with China on carbon mitigation, approximately patterned after previous accords, such as the [2014 U.S.-China Joint Announcement on Climate Change](#). Second, Biden will also seek to set an example for China through fostering international consensus on climate-friendly export and development financing—he plans on working with other countries and international development banks to end support of high-carbon intensity projects.

It is reasonable to question how China will respond to such measures. Biden's China climate policy perhaps highlights the limitations of U.S. leadership by example and the use of diplomatic/economic sticks and carrots, particularly in light of ever-increasing economic multipolarity and the availability of alternatives for energy solutions and financing. It is this reality that brings into sharper focus the remaining elements of Biden's climate foreign policy, specifically:

1. **Creating a Clean Energy Export and Climate Investment Initiative**, which the Biden plan details as a “government-wide effort to promote American clean energy exports and investments around the world to advance climate mitigation, adaptation, and resilience.” This initiative seeks to spur U.S. clean energy exports by incentivizing developers and suppliers of low-carbon technologies, as well as provide low-cost financing for countries taking ambitious climate actions, with an initial focus on Small Island Developing States (SIDS) in the Pacific and Caribbean.
2. **Catalyzing global clean energy research**, including deeper engagement with international initiatives such as [Mission Innovation](#), increasing funding for joint international R&D work, and establishing concrete R&D goals and outcomes.

The backbone of these aforementioned policies is innovation. Generally speaking, it is well established that [technological breakthroughs will be needed to fight climate change](#), including in negative emissions technologies and the development of cost-effective, scalable energy storage solutions. While policy support and diplomatic overtures will be helpful, clean energy technologies must reach a certain level of viability, scalability, and cost-competitiveness to be widely and globally adopted—ultimately, there is no substitute for innovation in achieving this outcome.

As it pertains to Biden’s climate plan, innovation will be essential for the administration to achieve its clean energy export objectives—considerable R&D investments will be needed to significantly improve the cost-competitiveness of U.S. low-carbon technologies and solutions. Considering that many energy suppliers offer low-cost state financing and are not bound by OECD export financing standards and practices, the imperative to innovate becomes even greater. For the U.S. to offer viable, low-carbon energy alternatives to the international market, primacy in innovation will be vital.

Furthermore, there will be gaps that exports may not be able to directly address—innovation will be required in order to adapt clean energy solutions to local and regional conditions. There is no one-size-fits-all decarbonization pathway—the choice of energy technologies deployed in a country can vary considerably according to a number of factors: water scarcity, resource endowment (including potential for solar and wind power), international grid connections, regional stability, etc. Accordingly, *many countries will likely require tailored technological solutions based on their geographical, climate, and geopolitical situations*. Thus, President-Elect Biden’s calls to increase funding support for international R&D efforts and to “help other countries build their institutional R&D capabilities to ensure increased funding is spent most effectively” are appropriate in light of these challenges.

Navigating Challenges in Congress

President-Elect Biden’s plans to invigorate the global clean energy R&D ecosystem become more apt when considering the likely challenges his administration will face in Congress in achieving the full extent of his budget proposals. Biden’s pledge to devote significant investments into clean energy development and infrastructure, including “the largest-ever investment in clean energy research and innovation” of \$400 billion over ten years, will likely face congressional opposition.

Scarce R&D budgets are a reality throughout the world and are not limited to the U.S. Engaging in smart partnerships and joint R&D collaborations will prevent redundancy and maximize efficiency

in R&D efforts and spending. Leveraging international initiatives and cooperation will be even more important should the Biden administration receive less than its desired funding amounts for clean energy innovation and R&D.

Although there would appear to be sufficient support in the House assuming full Democrat buy-in, support in the Senate is less certain and may hinge on the outcome of the Georgia run-off elections in January. Although there are pockets of bipartisan agreement on clean energy technology development, wholesale congressional approval of Biden's R&D budget requests is unlikely.

One of the rare areas of present bipartisan consensus is nuclear energy. The Biden-Harris campaign represented the first time that a Democratic presidential ticket explicitly supported nuclear energy—this is consistent with current trends and an emerging consensus within the climate science community that climate mitigation objectives cannot be feasibly achieved without contributions from nuclear power. The [new economic stimulus bill](#) approved by Congress contains \$35 billion for energy R&D through the Energy Act of 2020—of that amount, \$6.6 billion is dedicated to nuclear energy research, one of the larger allocations.

In spite of the roadblocks in Congress that Biden may encounter in pursuing his broader climate agenda, the Biden administration must nevertheless push forward on climate action given the fundamental importance of this issue to the Democratic Party and its political base. Considering the congressional environment in which the administration must operate early on, it would appear that nuclear energy may be the “path of least resistance” of all the technologies within the clean energy toolbox.

Small modular reactors (SMRs) and advanced reactors are ideal platforms for many developing economies considering their size, cost, and safety characteristics. Given that these reactors can reliably operate even under severe weather and water scarcity conditions, the obstacles to widespread global deployment are less geographic and more institutional. Thus, efforts such as regulatory harmonization and assisting nuclear newcomer states with establishing institutional foundations for civil nuclear programs will be crucial. Concrete actions, such as building upon the NRC-CNSC Memorandum of Cooperation, encouraging Department of State in early engagement efforts with aspiring entrants and signing NCMOUs, and expanding the NRC Office of International Programs, could likely be achieved with modest budgetary resources and would therefore more likely be supported by Congress.

Like many other clean energy technologies, some advanced nuclear designs will need additional R&D to bring into full commercialization. Many of these advanced reactors will require demonstrations and test facilities, which can be costly. For these more resource intensive endeavors, both Congress and the administration could support efforts to leverage international partnerships through joint R&D programs, cost sharing arrangements, etc. For instance, international cooperation could be [one means of enhancing the prospects of DOE's Versatile Test Reactor program](#).

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