ENSURING CONTINUITY IN THE U.S.-INDIA ENERGY RELATIONSHIP THROUGH COOPERATION ON CLIMATE

June 2024
Background Paper No. 24

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1. INTRODUCTION

As the world’s second and third largest emitters and consumers of energy, the bilateral energy and climate relationship between the United States and India is critical. Given their importance to the global energy economy and geopolitical influence, how ambitiously the United States and India seek to accelerate their energy transitions and whether they are aligned in doing so will influence whether global emissions fall at the speed scientific consensus has identified as necessary to avoid the most catastrophic impacts of climate change. From unlivable temperatures in India to worsening wildfires in North America, both countries are increasingly impacted. While the broader U.S.-India energy and climate relationship has progressed quite steadily over time, the priority issues have varied depending on the party holding the presidency in the United States. During the last three decades, changes in the U.S. administration have had dramatic impacts on U.S. energy policy. Under Democratic party administrations, clean energy and climate change are elevated for cooperation while under Republican party administrations, they are deprioritized in favor of fossil fuel dominated cooperation. Accordingly, such shifts have a strong bearing on the salience of clean energy and climate change in the bilateral relationship. In India, by contrast, there is much more political continuity on climate policy. Each Indian prime minister, despite multiple changes in the party in power, has been willing to work with the United States on clean energy and climate change.

This paper’s succinct history and analysis of the energy and climate initiatives pursued between the United States and India since the Clinton administration shed light on what sorts of policy initiatives future U.S. administrations should pursue to enhance consistency in the energy and climate relationship. Administrations seeking lasting policies to accelerate the energy transition should consider four aspects of policy design. The first is to identify areas of bipartisan agreement, like nuclear energy, which Republicans and Democrats alike are keen to sustain. The second is to embed and institutionalize initiatives at the working level within ministries or agencies. Initiatives that do not depend on the preferences of high-level political appointees tend to have had more staying power. The third is to use political capital within the bilateral relationship to pursue multilateral initiatives which can continue without U.S. government leadership. While bilateral structures can fall apart due to leadership transitions, multilateral structures with distributed leadership like the Paris Agreement have often continued without U.S. leadership. The final aspect of policy design to consider is for U.S. and Indian leaders to foster deeper private sector clean energy ties between the countries’ business communities which are less impacted by policy reversals. These recommendations are particularly relevant now as the Biden administration pursues significant climate and clean energy policy collaboration with India.

2. U.S.-INDIA ENERGY AND CLIMATE RELATIONSHIP FROM CLINTON TO BIDEN

Over the last thirty years, U.S.-India energy and climate collaboration has expanded, with greater engagement at the leader and ministerial levels leading to more joint initiatives at lower levels and outside government. The intensification of the energy and climate relationship was driven and enabled by four larger dynamics. First, overall U.S.-India relations have deepened as strategic objectives aligned and outstanding issues, such as India’s nuclear program, were resolved. Second, energy technology has advanced. The clean
energy industry has matured with declining costs enabling accelerating energy transitions in each country while fracking increased U.S. oil and gas production, turning the United States into a large energy exporter which could export to India. Third, international climate politics have shifted with developing countries like India becoming more willing to pursue and impose limits on their emissions. Finally, the urgency of the climate crisis has increased climate ambition across the world. Based principally on White House, Department of State, and Department of Energy (DoE) documents concerning U.S.-India relations since the Clinton administration, this section describes the bilateral energy and climate relationship under each U.S. administration and examines how changes of political leadership affected the relationship.

The Clinton Administration:
During the Clinton administration, clean energy and climate policy were an international priority. Though the U.S. Senate would refuse to ratify the Kyoto protocol, President Clinton negotiated and supported it. At the time, India was not prepared to adopt limits on its emissions. Nonetheless, India and the United States had a high-level energy and climate dialogue and pursued concrete clean energy initiatives. In 1999, amid tumult in the relationship following India's nuclear tests and subsequent U.S. sanctions against India, the leaders nonetheless issued an energy and environment dedicated joint statement, demonstrating their commitment to energy and climate issues at an otherwise unfavorable point in relations. The same year, they created the Joint Consultative Group on Clean Energy and Environment to facilitate collaboration on "clean energy technologies, private and public sector investment and cooperation, climate change and other environmental issues." In 2000, as in 1994, despite the clean energy industry’s then relative immaturity and limited commercial viability, the two countries signed multiple clean technology memorandums of understanding (MOUs) increasing collaboration on cleaner coal, energy information sharing, energy efficiency, and renewable energy, in particular solar.

The Bush Administration:
The U.S.-India energy and climate relationship changed following the election of President George W. Bush whose administration deprioritized energy and climate overall and also reduced U.S. climate ambition, adopting an all-of-the-above energy strategy that emphasized fossil fuels and shifted the government’s relative focus towards them. President Bush’s initial de-prioritization of energy and climate was exacerbated by the terrorist attacks on September 11, 2001, and subsequent overwhelming focus on counterterrorism and security cooperation with India in the years immediately thereafter. Remaining tensions within the larger relationship over the unresolved nuclear issue further hindered cooperation at the outset. Internationally, though Global North-South tensions plagued negotiations, there was room to make progress through the United Nations Framework
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Convention on Climate Change (UNFCCC) Conferences of Parties (COP) process and to leverage the U.S.-India relationship to do so. President Bush, however, pulled U.S. support of the Kyoto Protocol and bilaterally, ceased regular, top-level energy and climate engagement with India which blunted momentum.

2005 marked both significant improvement in U.S.-India relations and increased bilateral focus on energy and climate. Leader-level joint statements from 2005 and 2006 elevated energy and were accompanied by the launch of the ministerial-level U.S.-India Energy Dialogue. Reflecting the Bush administration's fossil fuel forward all-of-the-above approach, the dialogue's five working groups were oil and gas, coal, energy efficiency, new and renewable technologies, and civil nuclear energy. This time period also brought the signing of the U.S.-India Science and Technology Agreement which included energy as well as a breakthrough framework for the eventual 2007 agreement to resolve the nuclear issue and enable civilian nuclear energy cooperation. Despite the administration touting the nuclear deal's clean energy benefits, the deal was in reality driven by geopolitics. During the Bush administration, prior clean energy initiatives were not renewed and agreements between DoE and Indian counterparts focused on fossil fuels, though clean coal was an area of continuity with the Clinton administration. While the environment, clean energy, and climate change received some attention, the Bush administration never pursued an ambitious climate agenda with India. In a 2008 joint appearance between the leaders, Prime Minister Manmohan Singh mentioned climate change and President Bush did not, showing appetite on the Indian side that was not reciprocated by the U.S.

The Obama Administration:
President Barack Obama's administration immediately engaged with the Singh government on energy and climate, benefiting from improved relations and continuing existing engagement on energy issues. The Obama administration, however, focused much more on climate change and clean energy internationally. Obama engaged in the COP process and within a year, played a key role in negotiations with countries including India to salvage an important yet modest agreement in Copenhagen. In the U.S.-India relationship, Prime Minister Singh's government was eager and willing to reorient the energy and climate relationship towards climate and clean energy. In 2009, the two countries launched

3 The first United Nations Framework Convention on Climate Change Conference of the Parties (COP) was held in March 1995 in Bonn, Germany, and has been held annually to coordinate international efforts on climate change.
4 Following the Energy and Environment focused joint statement at the head of state level in 1999, between 2001-2004 there were no meetings between the Indian and U.S. heads of state or foreign ministers which focused significantly on energy and climate.
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the Partnership to Advance Clean Energy (PACE) which served as an overarching framework for engagement that encompassed numerous initiatives across government from the Indo-U.S. Clean Energy Research and Deployment Initiative to over $500 million for renewable energy finance and risk insurance through the former Overseas Private Investment Corporation (now U.S. Development Finance Corporation).9

U.S.-India climate and clean energy engagement continued to produce new initiatives and deepened further in 2014. The new measures included a smart grid and grid storage track under PACE, new clean energy MOUs, increased funding for existing initiatives, and greater emphasis on climate finance, exemplified by the creation of the U.S.-India Clean Energy Finance Task Force.10 On the international stage, Indian and U.S. diplomacy was instrumental to the Paris Agreement and the Kigali Amendment on hydrofluorocarbons which the U.S. Senate would ratify in 2022. The reasons climate and clean energy engagement intensified appear to be twofold. First, in India, Narendra Modi was elected prime minister in 2014. Having called climate change a “moral issue,” he further prioritized climate and accelerated India’s increasing willingness to limit its emissions, despite opposition in his own Bharatiya Janata Party.11 It appears that he also drove the increased focus on climate finance in the bilateral relationship. Although Prime Minister Modi’s election did not fundamentally alter India’s desire to engage on climate, it demonstrates the influence that changes in Indian leadership can have in the relationship. The new prime minister’s stronger political position also enabled him to better implement a policy vision, including on climate and clean energy.12 Second, in the United States, after his reelection and in the leadup to COP 21 in Paris, President Obama elevated climate as a foreign policy priority, raising it in nearly all his meetings with foreign leaders.

By the end of the Obama administration, U.S. energy and climate policy was oriented around accelerating the energy transition. Despite major differences between the Bush and Obama administrations on the urgency of climate change, nuclear energy remained a priority and the U.S.-India Energy Dialogue continued with the same working groups. Under Obama, the DoE kept existing fossil fuel collaboration on track, continuing work to lower emissions from fossil fuels and renewing a Bush-era gas MOU.13

The Trump Administration:
Whereas the bilateral energy and climate relationship under Obama and Modi saw the greatest climate and clean energy cooperation to date, the Trump administration marked a stark shift in direction. Both internationally and domestically, the Trump administration pursued policy centered around promoting fossil fuels instead of emissions reduc-

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12 Tellis, “Narendra Modi and US–India Relations.”
tions. The announcement to withdraw from the Paris Agreement is the most prominent manifestation of this approach.

Climate and clean energy engagement in the bilateral relationship plummeted accordingly, especially at the leader and ministerial levels. Not until April 2018 did the Trump administration launch its signature energy and climate framework, the Strategic Energy Partnership. In joint appearances, Prime Minister Modi sometimes mentioned clean energy while President Trump did not, indicating Indian appetite to pursue climate policy and U.S. disinclination. Reflecting the Trump administration’s focus on bolstering fossil fuels, particularly U.S. fossil fuel exports to India, the DoE under Trump worked more closely with the Ministry of Petroleum and Natural Gas, created the U.S.-India Natural Gas Task Force, signed new fossil fuel MOUs with India, and oversaw increases in U.S. oil and gas exports to India. At the working level, Trump’s energy team continued modest and reduced clean energy collaboration and launched no new major clean energy initiatives.

Despite the magnitude of the Obama-Trump shift, areas of continuity remained, with nuclear energy the most notable. The bilateral Civil Nuclear Energy Working Group continued, and the Trump administration negotiated a second add-on to the Bush-era civilian nuclear deal to which Obama negotiated the first add-on. Trump and Modi also pursued a deal between Westinghouse and the Nuclear Power Corporation of India to build six nuclear reactors. Power grid and transmission improvements as well as cleaner fossil fuels were two other areas where the Trump and Obama administrations pursued similar policies.

The Biden Administration:

The Trump-Biden shift mirrored the Bush-Obama shift in that the new Democratic administration immediately forged climate and clean energy focused domestic and international policy agendas. President Biden’s day-one announcement rescinding the U.S. exit from the Paris agreement and hosting the Leader’s Climate Summit four months into his administration are indicative of his administration’s approach and desire to re-establish U.S. leadership on climate and clean energy policy. In the bilateral relationship, Biden and Modi were eager to rekindle the level of collaboration that existed from 2014-2016. Nine months into the Biden administration, they launched the U.S.-India Climate and Clean Energy Agenda 2030 Partnership with two tracks, the U.S.-India Strategic Clean Energy Partnership (SCEP) and the Climate Action and Finance Mobilization Dialogue. SCEP was a reorganization of Trump’s Strategic Energy Partnership to focus more on clean energy and less on fossil fuels. Agenda 2030 is a Biden-Modi equivalent of PACE,

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namely a broad framework for a host of specific initiatives. Under the framework, many specific initiatives have launched including an MOU between USAID and the Ministry of Railways to work together on Indian Railways’ 2030 “net-zero” target.\(^{18}\) India was also pleased that the Biden administration joined the India-founded International Solar Alliance in 2021.\(^ {19}\) Despite little climate continuity between the Trump and Biden administrations, nuclear energy was once again the exception with Biden and Modi also pursuing the Westinghouse project.

The Trump-Biden shift on energy and climate policy was the largest between administrations of the last thirty years. This is because former president Trump was even more fossil fuel focused than his Republican predecessor Bush, India’s willingness to limit its emissions has increased over time increasing the upper bound for joint initiatives, and collaboration during the Obama administration raised the starting point for Biden and Modi on clean energy. These dynamics will continue to hold and thus, the bilateral energy and climate relationship will likely continue to experience significant shifts on climate and clean energy policy with changes in the president’s party.

3. POLICY RECOMMENDATIONS INFORMED BY HISTORY

Currently, within the bilateral relationship, President Biden and Prime Minister Modi are pursuing a suite of policies to accelerate the energy transition. Appetite for a climate and clean energy focused relationship on energy policy is almost certain to remain consistent on the Indian side as Prime Minister Modi secured a third term in June 2024, regardless of the outcome of the U.S. presidential election in November 2024. In the United States, the last thirty years suggest that if a Republican wins the 2024 presidential election, climate and clean energy engagement will slow and emphasis on fossil fuels will increase. In that context, there is a set of approaches to energy and climate policy that can maximize U.S. continuity on climate and clean energy in U.S.-India relations beyond 2024. The four approaches an administration could take are: to use agreement in the bilateral relationship to further major multilateral climate initiatives, pursue areas of bipartisan continuity, institutionalize and embed initiatives at lower levels of government, and support commercial and other non-governmental initiatives.

**Multilateral Initiatives and Fora:**
Exclusively bilateral initiatives are vulnerable to major policy shifts. If one of the two countries, in this case the United States, pulls out or disengages, the initiative collapses. In contrast, multilateral structures with distributed leadership are less affected by the inclination of a single member. Three examples from the Obama administration and the Obama/Trump shift demonstrate this. On the one hand is PACE. Though it was not officially terminated, it lost most of its importance as U.S. engagement under Trump shifted elsewhere. On the other hand, there are the Paris Agreement and Kigali Amendment. The ambitiousness of the Paris Agreement was enabled by preparatory, bilateral negoti-
ations in the leadup to COP21, most importantly between the United States and India and the United States and China. According to Ashley Tellis, “There is little doubt that the United States and India played pivotal roles in the discussions leading up to the Paris Agreement.” Despite the Trump administration’s intent to withdraw the United States, the Paris Agreement was still there in 2021, ready for Biden to immediately rejoin. During the Trump administration, what was lost was the United States not pushing to ratchet up global ambition in addition to not trying to meet its nationally determined contributions (NDC) commitments. Almost all other countries stuck by their NDC commitments. The negotiation of the Kigali Amendment to the Montreal protocol, which alone could prevent up to 0.5 °C of global temperature rise by 2100 through limiting hydrofluorocarbon emissions, was similarly enabled by intensive negotiations between the United States and India. It entered into force in 2018 and was eventually ratified by the U.S. Senate in 2022. In the Paris Agreement and Kigali Amendment cases, time and political capital expended in the bilateral relationship during the Obama administration yielded critical agreements that did not collapse under the Trump administration.

The importance of U.S.-India alignment in global negotiations and the greater durability of global agreements means that U.S.-India cooperation on achieving major global accords is a very good use of some of the bilateral relationship’s political capital. Using the bilateral relationship to advance global agreements is one way to ensure that initiatives have lasting impact. The COP process remains a promising forum. There are also smaller groupings that are promising for the U.S. and India to multilateralize energy and climate collaboration. One is the Quad, between the United States, India, Australia, and Japan, where the Quad Clean Energy Innovation and Deployment program and first ever meeting of the Quad countries’ energy ministers in 2022 were important first steps. In short, the United States and India should find mutual agreement on issues before multilateral fora to create momentum and structures that will be sustained by other countries if U.S. or Indian commitment wanes.

**Areas of Bipartisan Continuity for the United States:**

Despite significant differences between Democratic and Republican U.S. administrations on energy and climate policy, there are areas of continuity. One of the simplest and most effective ways to make durable clean energy and climate policy is to pursue initiatives that any successive administration is likely to continue. Based on the bilateral relationship during three Democratic and two Republican administrations, four principal areas of continuity emerge: nuclear energy, making fossil fuels cleaner, science and technology collaboration, and grid and transmission infrastructure. Nuclear energy is zero emission energy which the Indian government has embraced and which provides commercial opportunities for the United States. It provides a clean source of firm generation and an alternative to coal. For efforts to reduce emissions from fossil fuels, including carbon capture, utilization, and storage (CCUS), to be effective climate policy, they need to apply to existing fossil fuel infrastructure that cannot be immediately retired rather than to provide a rationale to increase fossil fuel use. Many of India’s new coal plants will

20 Tellis, “Narendra Modi and US–India Relations.”
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run for decades and thus energy efficiency and other measures to reduce their emissions are important. Cooperation on science and technology is an innovation agenda that will help both countries develop clean technologies and does not implicate differences over fuel sources. Finally, improved electric grid and transmission infrastructure is necessary for increasing renewable capacity but is a commonsense, no-regret measure that also does not implicate fuel sources.

**Institutionalize Initiatives at Lower Levels:**
Throughout the last three decades of the U.S.-India energy and climate relationship, the most durable climate and clean energy policies have been the most institutionalized and those at the working level. MOUs between the United States (typically DoE) and Indian institutions, usually lasting five years and establishing initiatives like the Joint Clean Energy Research and Development Center, have never been rescinded by subsequent administrations. The U.S.-India Climate Fellowship Program, launched in 2014, was similarly durable. Higher level initiatives at the leader and ministerial level, like PACE, have been much more likely to be deprioritized or discontinued. The notable exception is the U.S.-India Energy Dialogue launched in 2005. Its staying power is likely due to its tracks which span renewable and fossil energy and thus correspond institutionally to DoE’s divisions. While structures for high level engagement are necessary to guide policy, they are insufficient on their own. To most effectively further durable climate and clean energy cooperation, administrations should create permanent, lower-level structures and programs which do not rely on high-level officials.

**Private Sector and Other Non-governmental Initiatives:**
While it is relatively easy for an administration to withdraw from or deprioritize a government-to-government initiative, private sector and other non-governmental initiatives are much more likely to remain in place at the same level of intensity. Thus, leveraging government to create climate and clean energy initiatives outside of government is an effective strategy to ensure durable policy. Examples already exist. The Clean Energy Finance Forum, created during the Obama administration to promote clean energy investment and trade, is now housed at Yale and impervious to any policy reversal.23 The Energy Transition Accelerator, created by the Biden administration in conjunction with foundations and foreign governments, will eventually be an independent organization working on climate finance.24 The First Movers Coalition, co-founded by the U.S. government and the World Economic Forum and now led by the Forum, is a group of major multinationals with low-emission procurement commitments. India is on the steering committee and companies like Mahindra are members.

Though American concerns about the business environment in India remain, U.S.-India trade has expanded and bilateral cooperation on commercial affairs has deepened with

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greater economic dialogue and increased government support for U.S.-India commerce. The potential for clean energy business between the countries has expanded accordingly and U.S. private sector investment in India can be a valuable source of finance for India’s energy transition. First Solar’s new module production facility in Chennai is a prime example of the type of commercial ties that undergird clean energy cooperation.

Furthermore, supporting business generally, the U.S.-India CEO Forum, and working with business organizations like the U.S.-India Business Council and U.S.-India Strategic Partnership Forum has been bipartisan. The more established bilateral clean energy commerce becomes, the more general business efforts will advance clean energy. U.S. administrations should take all possible actions to promote private sector clean energy ties including improving trade rules, de-risking investments, public-private partnerships, and grants to mobilize private sector investment through entities like the Development Finance Corporation, which invested in the First Solar factory. To do this effectively, administrations should both make clean energy a central plank of larger commercial structures like the U.S.-India Commercial Dialogue and also create initiatives dedicated to clean energy like the Clean Energy Investment Roundtable in 2016.25

Policy continuity is good for the U.S.-India relationship overall and consistent collaboration on clean energy between the two countries is essential for meeting global climate targets. The history of the U.S.-India energy and climate relationship indicates what types of policies U.S. administrations can embrace to maximize both.

ACKNOWLEDGEMENTS

The author would like to thank Sagatom Saha, Shayak Sengupta, and Jeffrey Bean for their review, comments, and suggestions on an earlier draft of this paper. The paper is part of ORF America’s Climate and Energy Program work. This background paper reflects the personal research, analysis, and views of the author, and does not represent the position of the institution, its affiliates, or partners.

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