

April 21, 2016

## **India and U.S. Joint Statement**

### *Sixth Meeting of the India-U.S. Track II Dialogue on Climate Change and Energy*

On March 9-11, 2016, in Washington, DC, the *India-U.S. Track II Dialogue on Climate Change and Energy* held its sixth meeting. Convened by the Aspen Institute, U.S., and the Ananta Aspen Centre, India, this dialogue, since its inception in 2010, has brought together a balanced array of thought leaders from India and the United States to discuss opportunities to enhance bilateral and multilateral partnership on climate change and energy.

Against the backdrop of the successful cooperation between the United States and India that helped to make possible the Paris Agreement on climate change in December, 2015, the members of the India-U.S. Track II Dialogue believe it is important to continue to push forward on a number of important topics in order to create a virtuous cycle. To that end, in the following joint statement, we propose the following high-level recommendations on topics we discussed:

- **It is urgent for the U.S. and India to sign and join the Paris Agreement not later than the end of 2016.**

Negotiation of the Paris Agreement was a historical breakthrough in the global response to climate change. The India-U.S. Track II Dialogue believes the U.S. and India should act quickly to carry the momentum from Paris forward and ensure the agreement enters into force and is fully implemented. To do this, each country must now sign and deposit their instruments of ratification with the U.N. The U.S. and India should both pledge to do this early, thereby sending a powerful domestic signal in both countries of having entered a new era of international cooperation on climate change that respects each parties' domestic circumstances.

- **Early engagement between the U.S. and India is needed on transparency, stock-take and compliance, as well as on financing and other issues left to finalize after Paris.**

The Paris Agreement sends a powerful signal that the world is fully committed to a low-carbon future, but to fulfill the agreement will require additional work. In this regard, there remain differences to bridge on how to operationalize important elements of the agreement, particularly transparency, the global stock-take, related compliance, and increasing ambition of and delivery on financial commitments. Beginning to work together now on resolving our differences on these issues will build a virtuous cycle of international trust and confidence that action is continuing to take place.

- **The U.S. and India must continue to work together towards amendment of the Montreal Protocol to include a phase down of hydrofluorocarbons (HFCs).**

Presently there is no international mechanism to reduce or eliminate the production or consumption of HFCs. A phase down of HFCs could avoid up to half a degree Celsius of warming by the end of the century. India and the U.S. should chart a path to reconciling any differences between the parties on our respective amendment proposals to phase down HFCs through the Montreal Protocol, and approve an amendment this fall.

###

### **Limit Locking-In High-Carbon Futures**

The participants in the India-U.S. Track II Dialogue recognized a mutual interest of India and the U.S. in collaborating on practical approaches to deal with national energy requirements and meet shared climate goals. These include limiting lock-in to high carbon futures in India as India seeks to meet its energy needs, and maintaining and accelerating progress in the U.S. on moving toward a lower carbon future as described in each country's nationally determined contribution.

It is particularly important that domestic actions in both countries signal the long-term certainty of their policy commitments. The participants in the India-U.S. Track II Dialogue believe that, in light of recent developments in the U.S. Supreme Court, there remains value in finding a long-term legislative solution to domestic action, rather than relying on executive action. The participants encourage the United States to set out a clear, long-term, and ambitious path to decarbonization, and encourage India to make continued and expanded efforts to quickly shift to a lower carbon development pathway.

The participants believe the U.S. experience in regulating air quality provides India lessons to avoid the self-perpetuating inertia that inhibits efforts to introduce cleaner energy technologies. In 1970, when the Clean Air Act (CAA) – the most significant U.S. environmental law regulating power plants – was signed into law, older existing coal-fired power plants were grandfathered out of having to comply with the new law unless they had been “significantly modified.” The regulations became more stringent over time, and by 1978 all newly built coal-fired power plants had to install pollution controls. As a result of the grandfathering provision, an economic incentive to keep older, existing coal-fired power plants that did not require CAA controls operating increased dramatically and emissions from these plants were essentially locked-in. The grandfathering loophole thus created a perverse unintended consequence inhibiting innovation. India has recently announced new stringent emissions guidelines for thermal power plants with stricter standards for particulate emissions and first time norms for emissions from mercury, sulfur dioxide and oxides of nitrogen. Recognizing the evolution of technology, differential standards have been stipulated for plants established before 2003, those set up in 2004-2016, and those that will be set up after 2017. Existing plants have been given two years within which to comply with applicable standards.

In this context, India's Perform, Achieve, and Trade (PAT) scheme could serve as the platform for bilateral cooperation on improving emissions standards and developing and deploying the most cost effective mitigation technologies. Taking lessons from the U.S. experience, and using the additional lever of fuel efficiency norms under the PAT scheme, India should seek to encourage retirement of its older, higher emission, lower efficiency thermal power plants.

India also has pressing problems of providing electricity to its population. Approximately 240 million people in India do not have access to electricity.<sup>1</sup> In order to meet its basic energy needs, India will continue to rely on coal to varying extents for the foreseeable future, even as it puts forward aggressive targets to shift towards renewable energy. Improving the efficiency and emission standards of its coal-based power plants is an Indian priority. Towards this end, India has launched a National Mission on Clean Coal Technologies (as part of its National Action Plan on Climate Change) to foster work on integrated gasification combined cycle (IGCC), advanced ultra-supercritical, and other related power technologies. Since 2014, the cess on coal has increased eight-fold to INR 400 per ton of domestic and imported coal. The collected sums are dedicated to a National Environment Fund to provide viability gap funding (and other financial assistance) to clean energy and related infrastructure.

It is also often the case that remote communities will seek to be connected to grid electricity, even though its reliability is low, so helping India further undertake grid and broader energy sector reform is critical. In the U.S., moreover, places served by centralized grid power are gaining valuable lessons with demand side management and net-metering tools that could offer India extremely useful lessons on how to manage peaks in energy demand and improve the economics of both on and off-grid power.

Useful examples also abound in the U.S. where off-grid decentralized sources of electricity consistently provide adequate resources that minimize or even eliminate the need for connection to a traditional centralized grid. In India, too, several business models for decentralized energy have been tried out and the country's renewable energy targets have a large component of rooftop-based systems. These experiences should be compared from the point of view of technology, costs, long-term regulatory viability, and their ability to provide electricity not just for lighting and clean cooking but also for livelihood activities.

### **Minimize Trade Disputes over Clean Energy**

Two ongoing trade disputes between the United States and India over local content requirements in the latter's renewable energy policies have threatened to mar the potential for cooperation on clean energy between the two countries. The rising risk of trade disputes over clean energy restricts flexibility and freedom to design national policy and increases investment uncertainty for both Indian and American firms. Continuing trade disputes could, in fact, reduce market opportunities for both countries, to the detriment of both commercial interests as well as the environmental imperative of deploying clean energy infrastructure rapidly.

The participants in the India-U.S. Track II Dialogue believe that the governments of India and the United States should quickly find a mutually acceptable solution to maintain open markets in clean energy trade and investment, while retaining freedom of policymaking at home. Options raised by Track II participants include: (1) recognition of the value of policies that support development of high-quality renewable energy manufacturing and do not result in *significant* distortion of domestic or global markets for renewable energy goods, services, or technologies; (2) the practice of early bilateral consultation between governments on national policies affecting renewable energy trade as one means of avoiding trade disputes; and (3) outlining circumstances under which the two governments would agree to exercise restraint before initiating WTO disputes affecting trade in renewable energy.

---

<sup>1</sup> India Energy Outlook, International Energy Agency [2015 report].

### **Use Technology to Identify and Prioritize Point Sources of Air Pollution**

Traditionally, pollution data -- particularly air pollution data -- has been collected and measured by large, stationary, complex, and expensive monitoring technology. As a result, only a few entities collected such data, limiting the amount of data available for exposure and health assessments. To meet the need for more data, the commercial sensor industry, academic institutions, think-tanks and others, are now developing, evaluating and applying a variety of new innovative small, mobile, low-cost monitoring technologies. These sensors range anywhere from smartphone apps to devices that give by-the-minute, real-time data while interacting with the public.

The participants in the India-U.S. Track II Dialogue believe that such devices could contribute to increasing awareness about air quality, but there is both the need to ensure that they meet minimum technical parameters as well as to continue efforts to expand the network of systematic, high precision air quality monitors. Today, U.S. policymakers and air quality managers rely on a broad network of air quality monitors to establish regulations and make management decisions to reduce and control air pollution with cost-effective approaches. India, too, should aspire to such a network rather than solely rely on low-cost monitors.

### **Coordinate Mission Innovation with the International Solar Alliance**

At the recent Paris climate summit, the United States, India, and others announced “Mission Innovation,” an initiative to accelerate public and private global clean energy innovation to address global climate change. On the same day, Prime Minister Modi and President Hollande announced the creation of the “International Solar Alliance,” a new global network of nations and industry to enable large-scale expansion of solar energy use. As Mission Innovation drives member countries to increase expenditures on their domestic clean energy R&D investments, the International Solar Alliance will create cross-country programs with the aim of facilitating access to lower-cost finance for solar, scaling of solar applications to serve underserved communities, and investing in collaborative R&D partnerships. The participants in the India-U.S. Track II Dialogue believe these two efforts are complementary and that a “docking” station or mechanism should be created to link the two initiatives as another way to effectively meet the commitments coming out of Paris and ensure sustained investment in practical and efficient ways to reduce the greenhouse gas emissions. Further discussion between the initiatives might uncover how the individual domestic R&D efforts in different countries can accelerate the technology cycle - both with regard to R&D as well as eventual commercial deployment. Ultimately, the two countries should aspire to make solar a mainstream energy source.

### **Continue Work Together on IP Disputes and Technology Scale-Up**

Many of the main economic policies of the Government of India make clear the importance of intellectual property to the country’s development. Citing the immediate need for affordable access to the technologies necessary to produce renewable energy, many of the new policies are commendable and help bolster local industry. However, in the long run, some of these policies may undercut the incentive to develop (and scale) newer and, perhaps, even more effective technologies. The India-U.S. Track II Dialogue participants encourage continued work at all levels to help resolve intellectual property disputes to better enable technology scale-up.

In order to increase access to licensed intellectual property on favorable terms, the U.S. and India should explore the use of patent pools as appropriate. Further, to better enable technology scale-up, the U.S.-Israel BIRD Foundation, which funds joint industry-industry collaborative projects that are close to

commercialization, is an existing bilateral model that could be adapted to the U.S.-India context for climate-friendly technology collaboration. Other existing successful programs, such as the Joint Clean Energy Research and Development Center (JCERDC) and the Partnership to Advance Clean Energy (PACE) could be expanded as well.

**Identify Roadblocks to the Quantity and Terms of Capital for Clean Energy Projects in India**

India has ambitious targets for renewable energy development and the participants in the India-U.S. Track II Dialogue applaud this ambition. But they also recognize that to meet their goals will require India to overcome significant financing challenges. To address these challenges, the participants encourage representatives from each nation to meet to discuss the availability and cost of financing for clean energy projects in India. The goal of this meeting would be to bring forward findings and specific de-risking fixes to better enable capital to flow to projects in India in time for presentation to the Clean Energy Ministerial in June.

It is clearly necessary to better understand the financial, regulatory, and technological risks faced by clean energy projects in India – and the steps being undertaken by the government to mitigate them. In addition, international institutional structures to help better manage the risks are needed as well. For example, the World Bank and other international financial institutions must help to meet the urgent need of increasing and accelerating investment in renewable energy and energy efficiency worldwide – not just in India. The Overseas Private Investment Corporation (OPIC), the U.S. government's development finance institution, could also be strengthened to mobilize increased amounts of private capital to help solve clean energy challenges.

The participants in the India-U.S. Track II Dialogue stand ready to assist both of our governments in any way possible.

## India-U.S. Track II Delegation

*The participants in the India-U.S. Track II Dialogue listed below took part in their individual, not organizational, capacities. The joint statement captures the ideas and thoughts expressed during the dialogue. Not all views were unanimous nor were unanimity and consensus sought on all expressed recommendations contained in the joint statement.*

### Indian Participants

**Jamshyd Godrej (Co-Chair)**

Chairman, Ananta Centre  
Chairman, Godrej and Boyce Manufacturing  
Company Limited

**Seema Arora**

Executive Director  
CII-ITC Centre of Excellence for Sustainable  
Development

**Tarun Das**

Founding Trustee  
Ananta Centre

**Nitin Desai**

Former Under Secretary General  
United Nations

**Krishan Dhawan**

CEO  
Shakti Sustainable Energy Foundation

**Navroz K Dubash**

Senior Fellow  
Centre for Policy Research

**Govind Ethiraj**

Founding Editor and Managing Trustee  
IndiaSpend

**Arunabha Ghosh**

CEO  
Council on Energy, Environment and Water

**Harish Hande**

Co-Founder and Managing Director  
Selco Solar Private Limited

**Ajay Mathur**

Director General  
The Energy and Resources Institute

**Kirit Parikh**

Chairman, Integrated Research and Action for  
Development (IRADe) and Former Member,  
Planning Commission, Government of India

**Kiran Pasricha**

Executive Director and CEO  
Ananta Centre

**Anand Patwardhan**

Professor, School of Public Policy  
University of Maryland (U.S.)

**Shyam Saran**

Chairman  
Research and Information Systems for  
Developing Countries

**Ravi Singh**

Secretary General and CEO  
WWF-India

## U.S. Participants

### **Carol M. Browner (Co-Chair)**

Distinguished Senior Fellow  
Center for American Progress

### **Ken Alex**

Senior Policy Advisor  
Office of Governor Edmund G. Brown, Jr.

### **Rohit “Rit” Argharwala**

Chief Policy Officer  
Sidewalk Labs

### **Manish Bapna**

EVP and Managing Director  
World Resources Institute

### **Richard Kauffman**

Chairman, Energy and Finance for New York  
Office of Governor Andrew M. Cuomo

### **Alex Laskey**

President and Founder  
Opower

### **Andrew Light**

University Professor of Public Policy  
George Mason University and  
Distinguished Senior Fellow  
World Resources Institute

### **David Monsma**

Executive Director  
Energy and Environment Program  
The Aspen Institute

### **Michael Northrop**

Program Director, Sustainable Development  
Rockefeller Brothers Fund

### **Pete Ogden**

Senior Fellow  
Center for American Progress

### **Carl Pope**

Principal, Inside Straight Strategies  
Former CEO and Chairman, The Sierra Club

### **David Sandalow**

Inaugural Fellow, Center on Global Energy  
Policy  
Columbia University

### **Robert Stoner**

Deputy Director, Science and Technology  
MIT Energy Initiative and  
Director, Tata Center for Technology and Design  
Massachusetts Institute of Technology

### **Manik “Nikki” Roy**

Director, Political Assessment  
ClimateWorks Foundation

### **Cathy Zoi**

CEO  
SunEdison Frontier Power