



US-India Energy Partnership Summit 2010

Technologies and Policies
for Energy Security

29 September 2010, Washington D.C.

Convened by



The Energy and Resources Institute



Yale University

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Setting the Context

U.S.-India Collaboration for Enhancing Energy Security

In these times of economic uncertainty, the pursuit of energy security remains high on the political agendas of both the U.S. and India. The U.S. is the largest consumer of energy in the world, accounting for over 22% of world primary energy consumption, while India is currently ranked fifth. This is when more than 400 million Indians do not have access to any source of electricity. Rapid economic growth and efforts towards meeting the country's legitimate development needs are set to increase India's appetite for energy. According to projections of the International Energy Agency (IEA), India's primary energy demand will more than double from 537 Mtoe (million tonnes of oil equivalent) in 2005 to 1299 Mtoe in 2030, with an average annual growth rate of 6.3%. This will make India the third largest energy consumer in the world by 2030, after China and the U.S. The continuing dominance of fossil fuels in the energy baskets of both the U.S. and India further exacerbates energy risks. Closely tied is the issue of climate change which has emerged as the centrepiece of the interface between development and environment.

Both energy and climate are areas that inherently demand international collaboration. Being growing economies and large energy consumers, the U.S. and India are at the forefront of this effort. They face unique yet related challenges, and there are clear areas of synergy for bilateral cooperation. As India strives to meet the energy needs of its large population while minimizing emissions, it stands to gain from its technology engagement with the U.S. . This interaction offers vast business potential for energy industries in both countries. In the same vein, India and the U.S. – both technology hubs in their own right, have available opportunities for cooperation on technology development.

Levels of collaboration have already reached new heights. In November of 2009, soon after the first U.S. -India Energy Partnership Summit, President Obama and Prime Minister Singh signed a Memorandum of Understanding, which included the U.S. -India Green Partnership. In June of this year, the inaugural session of the U.S. -India Strategic Dialogue, amongst other issues, focused on clean energy development, deployment of clean energy technologies, and implementation of the Civilian Nuclear Cooperation Agreement. Necessary initiatives to develop alternative energy sources, and increase penetration of renewable energy, call for further increased technology collaboration between the two countries. As fossil fuels will continue to play an important role in meeting the countries' energy demands, the U.S. and India also face similar challenges in ensuring security of oil and gas supply. Additionally, India's near future reliance on coal will necessitate the deployment of clean coal technologies, where the U.S. could emerge as an important knowledge and technology provider and partner.

It is in recognition of these exciting new possibilities that TERI and Yale University co-convene the second U.S.-India Energy Partnership Summit in Washington, D.C in October 2010. The Summit will precede President Obama's first state visit to India, in November, where energy and climate change will be priorities in the conversation. This high level Summit will be an important precursor to his visit.

While the opportunities for cooperation are many, operationalizing them requires political will, and a conducive policy and regulatory environment. The Summit will highlight this gap and seek to inject creative yet pragmatic ideas into the U.S. -India partnership. It will focus on the role of business as a 'game changer' in foregrounding the sustainable development agenda in policymaking and in the public consciousness. Immense scope exists also for U.S. -India corporate partnerships in technology development and energy efficiency enhancement. The CEO Dialogue will, in particular, provide insights on these issues. The summit will facilitate an exchange on the role the governments in the two countries need to play in promoting collaborative initiatives.

U.S. -India Partnership Summit 2009

Attended by key policymakers, business persons, academicians, researchers and media persons, the first U.S. -India Partnership Summit, highlighted the existing barriers to U.S. -India cooperation on clean energy. It delineated India's energy technology needs and the business potential created by the country's National Action Plan on Climate Change (NAPCC) which puts forth a framework for paving a low carbon future. The Summit noted that realizing the vision of the NAPCC will call for substantial clean energy investment, technological advancements and establishment of effective institutional arrangements. This provides an opportunity for the U.S. government,

'The time has now come and we have to somehow break down the barriers between north and south, between developed and developing countries and establish partnerships, collaborative arrangements whereby we can work together.'

R K Pachauri

Director-General, TERI;
Chairman, IPCC;
Director, Yale Climate and
Energy Institute

industry and leading research institutions to engage with India across a wide portfolio of common interests.



Steven Chu, U.S. Energy Secretary, speaking at the Summit as RK Pachauri, DG-TERI and Chairman, IPCC; Jairam Ramesh, India's Minister of State for Environment and Forests; and Farooq Abdullah, India's Minister of New and Renewable Energy, look on.

The U.S. Energy Secretary, **Steven Chu**, said that the U.S. is willing to help India in its effort to meet the developmental needs of its people and at the same time address the crucial need to reduce carbon emissions. A well attended Summit, it had amongst the speakers and participants, some of the most influential names from the energy sectors of both countries. The speakers included **Todd Stern**, Special Envoy for Climate Change, U.S. ; **John P. Holdren**, Assistant to the President for Science and Technology and Director of the White House Office of Science and Technology Policy; **Pramod Deo**, Chairperson, Central Electricity Regulatory Commission; and **Jeff Seabright**, Vice President, The Coca Cola Company, amongst others.

'The collaboration between Yale and TERI is a significant example of a flourishing U.S. – India partnership.'

Richard C Levin

President, Yale University

The Summit culminated with a special reception and dinner hosted by Dr. R K Pachauri to support TERI's Lighting a Billion Lives (LaBL) campaign. One table at a time (with each table representing a village in India), the entire room was beautifully lit up with LED based high efficiency 3-watt solar lanterns built by MIC Electronics of India in partnership with TERI. Key dignitaries at the event including **Al Gore**, former Vice President and Nobel laureate; Senator



Richard Levin, President, Yale University addressing the Summit participants

John Kerry; Congressman **Steve Israel**; **Jairam Ramesh**, India's Minister of State for Environment and Forests; and **Farooq Abdullah**, India's Minister of New and Renewable Energy, endorsed the LaBL campaign. The event raised funds for provision of solar lanterns to light up 24 villages in India.



L-R: David Jhirad, Special Advisor, Energy & Climate Change, Rockefeller Foundation; Meera Shankar, Ambassador Extraordinary and Plenipotentiary of the Republic of India to the United States of America; Timothy Roemer, U.S. Ambassador to India; R K Pachauri, DG, TERI and Chairman, IPCC; and Nitin Desai, Former Under Secretary General, United Nations, at the Summit.

Glimpses from U.S. -India Partnership Summit 2009



U.S. -India Energy Partnership Summit 2010: The Objectives

The Summit this year seeks to:

- Bring together representatives from government, business, research and academia, in order to facilitate a meaningful dialogue on energy security that identifies key areas for U.S. -India cooperation and foregrounds concrete action-plans
- Assess energy vulnerabilities particularly with regard to oil supply
- Highlight the climate imperative and the need to devise energy policies with co-benefits for climate change mitigation
- Identify areas of intervention where India and U.S. can work together in technology research, development and dissemination
- Promote public-private partnerships for clean energy innovation
- Identify India's clean energy investment needs and emerging business opportunities for U.S. investors
- Facilitate thinking on enabling regulatory and legal frameworks that encourage domestic uptake of renewable energy technologies, and cross-country movement of ideas, technology and expertise
- Engage U.S. stakeholders in TERI's Lighting a Billion Lives Campaign, both in India and Haiti