

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
THE GOVERNMENT OF UNITED STATES OF AMERICA  
AND  
THE GOVERNMENT OF INDIA  
TO ENHANCE COOPERATION ON ENERGY SECURITY,  
ENERGY EFFICIENCY, CLEAN ENERGY  
AND CLIMATE CHANGE**

**Whereas** the Government of the United States of America and the Government of the Republic of India (the “Participants”) have pledged to intensify collaboration on energy security, clean energy and climate change, focusing efforts on increasing energy efficiency, renewable energy, and clean energy technologies having co-benefit for climate change through the U.S.–India Energy Dialogue and the U.S.–India Bilateral Dialogue on Global Climate Change;

**Whereas** both Participants seek to launch a process of bilateral collaboration to support their respective efforts to achieve sustainable, climate-friendly growth through the development, deployment and, as appropriate, transfer of transformative and innovative technologies in areas of mutual interest;

**Having** committed to work together for energy conservation and sustainable development - to achieve energy security, mitigate the effects of climate change and safeguard the environment through both national as well as multilateral initiatives;

**Recognizing** that transitioning to a low-carbon economy is an opportunity to promote continued economic growth and sustainable development in all countries;

**Noting** the dialogue in multilateral processes such as the Major Economies Forum on Energy and Climate and its Global Partnership on climate-friendly technologies which help in understanding respective positions and advancing clean energy and collaboration in the mitigation and adaptation to climate change;

**Reaffirming** that both countries intend to promote the full, effective and sustained implementation of the United Nations Framework Convention on Climate Change (UNFCCC) in accordance with the Bali Action Plan. Recognizing their special role in promoting a successful and substantive outcome at the UNFCCC 15<sup>th</sup> Conference of Parties at Copenhagen in December 2009, they reaffirmed their intention to work together bilaterally and with all other countries for an agreed outcome at that meeting;

**Affirming** that the Copenhagen outcome must be comprehensive and cover mitigation, adaptation, finance and technology, and in accordance with the principle of common but differentiated responsibilities and respective capabilities, it should reflect emission reduction targets of developed countries and nationally appropriate mitigation actions of developing countries. There should be full transparency through appropriate processes as to the implementation of aforesaid mitigation actions. The outcome should further reflect the need for substantially scaled-up financial resources to support mitigation and adaptation in developing countries, in particular, for the poorest and most vulnerable. It should also include measures for promoting technology development, diffusion, and transfer and capacity building, including consideration of a center or a network of centers to support and stimulate climate innovation. The United States and India, consistent with their national circumstances, resolved to take significant national mitigation actions that will strengthen the world's ability to combat climate change. They resolve to stand by these commitments.

**Therefore**, both countries, to effectively address climate change have come to the following understanding:

## **OBJECTIVES**

The Participants, through this Memorandum of Understanding (“MOU”), intend to expand current partnerships through increased bilateral engagement and further joint initiatives for promoting sustainable growth and increasing incentives for innovation and application of alternative fuels and clean energy as well as capacity building for deployment of adaptable, affordable and climate-friendly technologies in both countries.

The co-operation described under this MOU prioritizes, but is not limited to, the following areas for new initiatives — building on the joint projects currently under implementation — and bilateral collaborations to achieve the common goals of clean energy, energy efficiency, low-carbon growth in the pursuit of sustainable development:

## **PRIORITY INITIATIVES**

- a. A U.S.–India Clean Energy Research and Deployment Initiative, including a Joint Research Center to foster innovation and joint efforts to accelerate deployment of clean energy technologies. Priority areas of focus for this initiative should include solar energy, energy efficiency, smart grid, unconventional natural gas, second-generation bio-fuels, and clean coal technologies including carbon capture and storage and integrated gasification and combined cycle. Other areas may include sustainable transportation, wind energy, and micro-hydro power.
- b. Increased cooperation on scaling up solar energy and energy efficient buildings and advanced battery technologies.
- c. Increased cooperation on unconventional natural gas including cooperation on coal bed methane, natural gas hydrates, and shale gas.
- d. Reducing emissions from land use, including deforestation: cooperation on forests and land use, including reducing emissions from deforestation and forest degradation and enhanced sequestration, through afforestation , conservation and sustainable management of forests.
- e. Strengthening cooperation on adaptation and climate science, including through improved ocean, weather and climate observation and prediction

capabilities, enhanced monsoon forecasts for the agricultural community, flood control, and water supply monitoring.

### **IMPLEMENTATION**

The Participants intend to implement and monitor the provisions of this MOU through the mechanism of the existing Working Groups of the U.S.–India Energy Dialogue and the U.S.–India Global Climate Change Dialogue. The Participants may monitor implementation of this MOU in joint meetings of the Co-chairs of the Energy, Climate Change, and Economic Dialogues.

### **FORMS OF CO-OPERATION**

In addition to identifying resources to implement this MOU, the Participants intend to encourage mobilization of public and private resources to support a fund or funds that would invest in clean energy projects in India. This represents a major step forward in U.S.–India partnerships to strengthen economic growth and energy security, while also addressing the threat of global climate change. Wherever possible, the Participants should cooperate to utilize expertise from all sectors of society including the business and academic sectors and non-governmental organizations for achieving the objectives of this MOU.

Each Participant should carry out the cooperative activities under this MOU should be carried out in accordance with its applicable laws and regulations.

Subject to their respective applicable legislation, the Participants intend to implement this MOU to ensure that they conduct Cooperative Activities in a manner consistent with this MOU.

Cooperative Activities may include the following forms:

- a. Facilitating joint research, and exchange of scientists through development, demonstration, deployment, and commercialization activities, under an appropriate written agreement;
- b. Facilitating access to financing, leveraging bilateral, multilateral and private sector funding;

- c. Facilitating policy dialogue including through scientific seminars, symposia, conferences and workshops as well as participation of experts in those activities;
- d. Public Private Partnerships (PPP); and
- e. Any other mode of cooperation jointly determined in writing by the Participants.

### **INTELLECTUAL PROPERTY**

The treatment of intellectual property created or furnished in the course of cooperative activities in furtherance of the objectives of this MOU is to be in accordance with Annex I of the Agreement on Science and Technology Cooperation between the Government of the United States of America and the Government of the Republic of India signed October 17, 2005.

### **INTERPRETATION AND DISPUTE RESOLUTION**

It is the intention of the Participants that this MOU not create any legally binding rights or obligations. Nothing in this MOU is intended to modify any arrangement or any other bilateral or reciprocal arrangement that the Participants may have.

### **COMMENCEMENT, REVISION, AND DURATION**

Cooperation under this MOU is intended to commence on the date of signature and continue for a period of five years. It may be extended by mutual written consent of the Participants.

This MOU may be revised at any time by mutual written consent of the Participants.

A Participant that wishes to discontinue its participation in this MOU should endeavor to provide written notice ninety days in advance of its decision to discontinue partnership in the MOU. Discontinuation should not affect activities already underway at the time of the discontinuation.

Signed at Washington in duplicate in the English language on the twenty-fourth day of November 2009. A text in the Hindi language will be prepared and accepted at a later date.

FOR THE GOVERNMENT OF  
THE UNITED STATES OF AMERICA:

*Hillary Rodham Clinton*

FOR THE GOVERNMENT OF  
THE REPUBLIC OF INDIA:

*Ankur Kohli*

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