

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO-4497
TO BE ANSWERED ON-22.03.2018
COOPERATION IN FIELD OF RENEWABLE ENERGY

4497. DR. J. JAYAVARDHAN
DR. HEENA VIJAYKUMAR GAVIT
SHRI P.R. SUNDARAM

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:-

- (a) whether the country has signed any Memorandum of Understanding (MoU) with Fiji for enhanced cooperation in the field of renewable energy between the two countries;
- (b) if so, the details thereof;
- (c) the aims and objectives and the key areas identified for cooperation as per this MoU;
- (d) the benefit likely to be accrued to the country as a result of this MoU;
- (e) whether the Government has also signed MoUs with other countries to enhance cooperation in the field of renewable energy sector;
- (f) if so, the details thereof including the names of those countries and the major areas of cooperation with them; and
- (g) the time by which the said MoUs are likely to be implemented along with the present status thereof?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER (I/C)
(SHRI R.K. SINGH)

(a) to (d) A Memorandum of Understanding (MoU) between the Ministry of New and Renewable Energy of the Government of the Republic of India and the Ministry of Infrastructure and Transport of the Government of the Republic of Fiji was signed on 24th May, 2017 with the aim to develop cooperation in the New and Renewable Energy Sector. A copy of MoU is placed at Annexure I.

(e) to (g) The Ministry of New and Renewable Energy has also signed MoUs/Agreements with 55 countries and/or their institutions to enhance cooperation in the field of renewable energy sector. A list of these MoUs/Agreements is placed at Annexure II. These MoUs/Agreements become effective from the date of signing between the parties unless otherwise stated in the MoUs/Agreements.

ANNEXURE I for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE MINISTRY OF NEW AND RENEWABLE ENERGY

OF THE GOVERNMENT OF THE REPUBLIC OF INDIA

AND

THE MINISTRY OF INFRASTRUCTURE AND TRANSPORT

OF THE GOVERNMENT OF THE

REPUBLIC OF FIJI

ON

CO-OPERATION IN THE FIELD OF RENEWABLE ENERGY

The Ministry of New and Renewable Energy of the Government of the Republic of India and the Ministry of Infrastructure and Transport, Government of the Republic of Fiji

(herein after referred to as the "Parties" and individually as the "Party").

Having identified New and Renewable Energy as a common area of interest; and

Desiring to establish Cooperation between the organizations working in the area of new and renewable energy in both India and Fiji with the aim of developing New and Renewable Energy Technologies.

HAVE REACHED THE FOLLOWING UNDERSTANDING:

**ARTICLE I
OBJECTIVE**

The objective of this Memorandum of Understanding (MoU) is to establish the basis for a cooperative institutional relationship to encourage and promote bilateral technical cooperation on new and renewable energy on the basis of mutual benefit, equality and reciprocity between the Parties.

**ARTICLE II
AREAS OF COOPERATION**

The Parties will, subject to the laws, rules, regulations and national policies from time to time in force, governing the subject matter in their respective countries, endeavour to take necessary steps and promote cooperation in renewable energy. The areas of cooperation will focus on development of new and renewable energy technologies and institutions in:-

- a) Capacity building
- b) Solar Energy
- c) Biomass/Bio-energy
- d) Small Hydro Energy

ARTICLE III

MODALITIES OF COOPERATION

Cooperation under this Memorandum of Understanding may take the following modalities:

- a) Exchange and training of scientific and technical personnel;
- b) Exchange of scientific and technological information and data;
- c) Organization of workshops, seminars and working groups;
- d) Transfer of equipment, know-how and technology on non-commercial basis;
- e) Development of joint research or technical projects on subjects of mutual interest; and
- f) Other modalities as may be decided upon by the Parties.

ARTICLE IV

JOINT WORKING GROUP

In order to coordinate the above mentioned activities and decide upon project proposals related to design and development of various new and renewable energy technologies, the Parties will establish a "Joint Working Group"(JWG) with the following functions:-

- a) Identifying areas of mutual interest and cooperation for development of new and renewable energy technologies, systems sub-systems, devices, components etc.;
- b) Monitoring and evaluating cooperation activities; and
- c) Any other activity as may be agreed upon by the Parties in writing.

The Parties will designate one main representative each to the Joint Working Group for the aforesaid activities. The Joint Working Group will to the extent possible conduct the work through electronic communication, but meet alternately in India and Fiji whenever considered necessary.

The Joint Working Group can co-opt other members from scientific institutions, research centres, universities or any other entity and when considered essential.

ARTICLE V

FINANCING

Each Party will bear all the costs of its own in all programmes of cooperation and in the meetings of implementing agencies of Joint Working Group contemplated under this MoU.

**ARTICLE VI
SETTLEMENT OF DISPUTES**

Any dispute concerning the interpretation or application of this MoU shall be settled amicably through mutual consultation and/or negotiations between the Parties.

**ARTICLE VII
AMENDMENTS**

The Memorandum of Understanding can be amended, revised or modified by mutual decision of the Parties through exchange of letters between the Parties.

**ARTICLE VIII
COOPERATION UNDER ISA**

Recalling the promotion of clean energy and enhancing energy access common goals of both the countries and support the International Solar Alliance (ISA) launched on 30th November, 2015 on the sidelines of 20th Conference of Parties to the United Nations Framework Conference on Climate Change held in Paris, France.

Both Fiji and India will together to achieve ISA objectives for accelerated development and deployment of solar energy by facilitating availability of technologies, finance, research and development and capacity building, and also put joint efforts to make ISA a strong intergovernmental organization.

**ARTICLE IX
ENTRY INTO FORCE, DURATION AND TERMINATION**

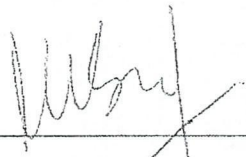
This MoU shall enter into force on the date of its signing and shall remain in force for a period of five (5) years. Thereafter this Memorandum of Understanding will be renewable by the mutual written consent of the Parties, unless either of the Parties decides to terminate the same. Such decisions will be communicated in writing to the other Party at least three (3) months prior its intended date of termination. The termination of this MoU will not affect the validity and duration of any on-going programme and projects under this MoU.

IN WITNESS THEREOF, the undersigned being duly authorized thereto by their respective Governments, have signed this Memorandum of Understanding.

This Memorandum of Understanding is not legally binding and does not create any rights or obligations for the Parties under international law.

Signed at Suva, Fiji on this day 24th May of the year 2017 in two (2) originals, each in Hindi and English languages, all texts being equally authentic. In case of any divergence in interpretation, the English text shall prevail.

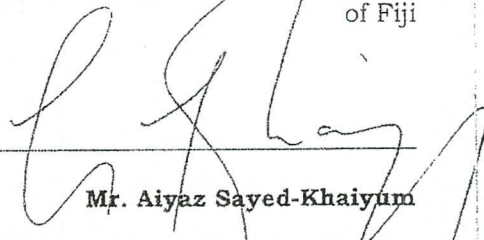
For the Government of the Republic
of India



Gen. (Dr.) V.K. Singh (Retd.)

Minister of State for
External Affairs

For the Government of the Republic
of Fiji



Mr. Aiyaz Sayed-Khaiyum

Acting Prime Minister and Attorney-
General and Minister for Economy,
Public Enterprises, Civil Service &
Communications

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding “Cooperation in the Field of Renewable Energy” due for 22.03.2018.

**STATUS OF IMPLEMENTATION OF
MEMORANDUM OF UNDERSTANDINGS (MoUs)/PROGRAMME/
AGREEMENTS
SIGNED WITH FOREIGN COUNTRIES/INSTITUTES/ORGANISATIONS**

Sl no	Country	Ministry/department involved	Brief objective(s)	Year of signing and location
1.	Australia	MoU between MNRE and The Department of Resources, Energy and Tourism, Government of Australia	To identify areas of mutual interest cooperation for development of new and renewable energy technologies, systems, sub systems, devices, components, etc. and monitoring and evaluating cooperation activities with the indicative scope of areas of cooperation like Solar, Hydrogen/Fuel Cells, Geo thermal, Small Hydro, Clean Energy related services and any other area as mutually agreed.	Signed On 5 th February, 2010, At New Delhi
2.	Bangladesh	MoU between MNRE and Power Division, Ministry of Power, Energy and Mineral Resources, Government of People's Republic of Bangladesh	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy (NRE) issues on the basis of mutual benefit, equality and reciprocity.	Signed On 6 th September, 2011, At Dhaka
3.	Belarus	MoU between MNRE and The State Committee on Science and Technology of the Republic of Belarus	To develop NRE technologies and decide upon project proposal related to design and development of various NRE technologies such as but not restricted to Solar Energy, Wind	Signed On 14 th November, 2012, At New Delhi

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

			Energy, Bio Energy and Small Hydro Power.	
4.	Belgium	MoU between MNRE and The Competent Belgian Authorities at Federal and Regional Level for Energy	To establish the basis for cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the mutual benefit, equality and reciprocity	Signed On 29 th September, 2015, At New Delhi
5.	Brazil; South Africa	MoU amongst Governments of India, Brazil and South Africa.	To establish the basis for cooperation in Wind Resources	Signed On 17 th October, 2007, At Pretoria
6.	Brazil; South Africa	MoU amongst Governments of India, Brazil and South Africa.	To establish trilateral task team on biofuel	Signed On 13 th September 2006, At Brasilia
7.	Brazil; South Africa	MoU amongst Governments of India, Brazil and South Africa.	To establish the basis for cooperation in the area of solar energy	Signed On 15 th April, 2010, At Brasilia
8.	Canada	MoU between MNRE and The University of Saskatchewan, Canada	To establish the basis of cooperation in research, design and development of new and renewable energy technologies	Signed On 28 th March, 2008, At New Delhi
9.	Chile	MoU between MNRE and The National Energy Commission of the Republic of Chile	To establish the basis of cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity	Signed On 17 th March, 2009, At New Delhi
10.	Denmark	MoU between MNRE and The Ministry of Climate and Energy , Government of Kingdom of Denmark	To establish New and Renewable Energy Cooperation between Danish and Indian entities with aim of developing new and renewable energy technologies	Signed On 6 th February, 2008, At New Delhi
11.	Denmark	Agreement between Government of the Republic of India and Government of the Kingdom of Denmark	To cooperate in political field, Economic and Commercial field, science and technology, environment, energy, education and culture.	Signed On 6 th February, 2008, At New Delhi

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

12.	Dominican Republic	MoU between MNRE and The Ministry of Energy and Mines Government of the Dominican Republic	To establish Cooperation between the Indian and the Dominican Republic entities with the aim of developing new and renewable energy technologies in the field of Solar Energy, Wind Energy and Biomass Energy.	Signed On 17 th February, 2015, At Santo Domingo, Dominican Republic
13.	Egypt	MoU between MNRE and Ministry of Electricity and Energy of the Arab Republic of Egypt	To collaborate in efforts in the field of renewable energy pursued on the basis of equality and joint benefit as mutually agreed upon by the Parties, taking into account their expertise and their development needs	Signed On 20 th January, 2011, At Cairo
14.	Fiji	MoU between MoU between MNRE and the Ministry of Infrastructure and Transport, Fiji	MoU is to establish the basis for a cooperative institutional relationship to encourage and promote bilateral technical cooperation on new and renewable energy specially in the field of Capacity building, Solar Energy, Biomass/Bio Energy and Small Hydro Energy, on the basis of mutual benefit, equality and reciprocity between the Parties.	Signed On 24 th May, 2017, At Suva
15.	Finland	MoU between MNRE and The Ministry of Employment and the Economy of the Government of the Republic of Finland	To establish the basis for a institutional cooperation to encourage and promote bilateral cooperation on new & renewable energy issues on basis of mutual benefit, equality and reciprocity	Signed On 15 th October, 2014, At Helsinki, Finland
16.	France	MoU between MNRE and The Ministry of Ecology, Sustainable Development and Energy of the French Republic	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and	Signed on 10 th April, 2015, At Paris

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

			renewable energy issues on the basis of mutual benefit, equality and reciprocity	
17.	Germany	MoU between MNRE and The Federal Ministry of Economic Cooperation & Development of Federal Republic of Germany	To establish the cooperation in the field of Solar Rooftop, Development of Solar parks and Solar Zones and Solar Off grid application to improve the access to clean and sustainable energy	Signed On 5 th October, 2015, At New Delhi
18.	Germany	Implementation Agreement between MNRE and Deutsche Gesellschaft Fur Internationale Zusammenarbeit (GIZ)	Implementation Agreement concerning the project Indo-German Energy Programme-Green Energy Corridors (IGEN-GEC)	Signed on 28 th August, 2017 At New Delhi
19.	Germany	Implementation Agreement between MNRE and Deutsche Gesellschaft Fur Internationale Zusammenarbeit (GIZ)	Implementation Agreement concerning the project Indo-German Energy Programme-Access to Energy in Rural Areas (IGEN-ACCESS)	Signed on 21 st November, 2017 At New Delhi
20.	Germany	MoU between NISE and Fraunhofer Institute Fur Solare Energiesysteme (ISE)	To implement, research/ demonstration / pilot projects between NISE and ISE in solar energy	Signed On 11 th April, 2013, At Berlin
21.	Greece	MoU between MNRE and the Ministry of Environment and Energy of Hellenic Republic	To establish the basis for a cooperative institutional relationship to encourage and promote bilateral technical cooperation on new and renewable energy especially in the field of Capacity Building, Solar Energy, Wind Energy, Biomass/Bio Energy and Small Hydro Energy, on the basis of mutual benefit, equality and reciprocity between the Parties.	Signed On 27 th November, 2017, At New Delhi
22.	Guyana	MoU between MNRE and Ministry of Public Infrastructure of Guyana	To establish Cooperation between Indian and Guyanese entities with the aim of developing New and Renewable Energy Technologies	Signed On: 30 th January, 2018 At New Delhi

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

23.	Iceland	MoU between MNRE and Ministry of Industry of the Republic of Iceland	To cooperate in the field of Geothermal Energy	Signed On 9 th October, 2007 At New Delhi
24.	Indonesia	MoU between MNRE and Ministry of Energy and Mineral Resources of the Republic of Indonesia	To encourage and promote bilateral technical cooperation on new and renewable energy on the basis of mutual benefit, equality and reciprocity	Signed On 2 nd November, 2015, At Jakarta
25.	Iran	MoU between MNRE and Ministry of Power of the Islamic Republic of Iran	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation on NRE issues	Signed On 9 th July, 2010, At New Delhi
26.	Italy	MoU between MNRE and The Ministry of Environment, Land and sea of the Republic of Italy	To establish new and renewable energy cooperation between Italian and Indian entities with the Aim of Developing new and renewable energy technologies	Signed On 24 th May, 2007, At Havana
27.	Italy	MoU between MNRE and the Ministry of Environment of the Italian Republic	To confirm the commitment of the Parties to collaborate in the field of new and renewable energy with special attention to technologies and/or resources based on wind energy, solar energy, small hydropower and biomass, innovation in the field of energy (i.e. storage) and their promotion and use.	Signed On 30 th October, 2017, At New Delhi
28.	Japan	MoU amongst DEA, NEDO, VIOM, MeITY, MNRE, GTL Infrastructure	To contribute to the efficient use of energy and the protection of environment in India by installing PV Power.	Signed On 6 th August, 2014, At New Delhi
29.	Japan	MoU between MNRE and Japan Bank for International Cooperation (JBIC)	Development of Renewable Energy Projects, Including Canal Top Solar Power projects on pan India basis, in	Signed On 1 st September, 2014, At Tokyo

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

			general and in Gujarat in particular.	
30.	Malaysia	MoU between MNRE and The Ministry of Energy, Green Technology and Water of the Government of Malaysia.	To encourage and promote cooperation in renewable energy but not limited to Biomass and Biogas; Micro and Pico Hydropower, solar Energy including thermal and photovoltaic; Energy from domestic and agriculture waste; and Wind Power.	7 th November, 2012, At New Delhi
31.	Mauritius	MoU between MNRE and Ministry of Public Utilities Government of Republic of Mauritius	To Develop and promote the economic and scientific technical cooperation in the field of non conventional energy sources	Signed On 21 st November, 2003, At New Delhi
32.	Mexico	MoU between MNRE and Secretariat of Energy of the United Mexican States	To establish the basis of cooperative institutional relationship to encourage and promote technical bilateral cooperation in the field of New and Renewable Energy	Signed On 17 th April, 2008, At Mexico City
33.	Mongolia	MoU between MNRE and Ministry of Energy of the Government of Mongolia	To encourage and promote bilateral technical cooperation on new and renewable energy on the basis of mutual benefit, equality and reciprocity.	Signed On 17th May, 2015, At Ulaanbaatar
34.	Mozambique	MoU between MNRE and THE REPUBLIC OF MOZAMBIQUE	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation, investment promotion and partnership on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity	Signed On 5 th August, 2015, At New Delhi
35.	Myanmar	MoU between MNRE and The Ministry of Education of the	To encourage and promote bilateral cooperation on new and renewable	Signed On 29 th August, 2016, At New Delhi

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding “Cooperation in the Field of Renewable Energy” due for 22.03.2018.

		Government of the Republic of the Union of Myanmar	energy on the basis of mutual benefit, equality and reciprocity.	
36.	The Netherlands	MoU between MNRE and Ministry of Economic Affairs, Agriculture and Innovation of The Netherlands	To establish the basis for cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity	Signed On 11 th February, 2014, At New Delhi
37.	Philippines	MoU between MNRE and The Department of Energy, Republic of Philippines	To establish cooperation in research, design and demonstration of renewable energy technologies; Solar Photovoltaic, Solar Heating, Biogas, Biomass, Geo thermal, Small Hydro, Wind, Waste to Energy, Tidal Ocean and other Renewable Sources as identified through mutual discussions and also to undertake collective efforts for the preparation and effective implementation of a “Programme for Cooperation”	Signed On 5 th October, 2007, At New Delhi
38.	Portugal	MoU between Ministry of New and Renewable Energy and The Ministry of Economy of the Portuguese Republic on Renewable Energy	To promote the establishment of the basis for a cooperative institutional relationship and to encourage programmes and activities between the signatories in the field of renewable energy.	Signed On 6 th January, 2017, At New Delhi
39.	Russia	MoU between Solar Energy Cooperation of India and Russian Energy Agency, Regarding construction of Solar power Plants in Republic of	To cooperate in good faith to realize the potential projects in of construction of large stage photovoltaic power plants (PVP) during year 2016 22.	Signed On 24 th December, 2015, At Moscow

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

			To Setup the 500 MW in the year 2016 17 (Pilot Project as per Government Scheme Norms)	
40.	Rwanda	MoU between MNRE And Ministry of Infrastructure, Government of the Republic of Rwanda	To promote bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity.	Signed On 15 th February, 2012, At Kigali
41.	Scotland	MoU between MNRE and The Government of Scotland	To establish New and Renewable Energy Corporation Between Ministry of New and Renewable Energy, Government of India and the Government of Scotland	Signed On 14 th October, 2009, At New Delhi
42.	Seychelles	MoU between MNRE and The Government of the Republic of Seychelles	To Strengthen, promote and develop renewable energy cooperation between two countries on the basis of equality and mutual benefit	Signed on 11 th March, 2015, At Victoria, SEYCHELLES
43.	Spain	MoU between MNRE and Ministry of Energy, Tourism and Digital Agenda of the Kingdom of Spain	To confirm the commitment of both parties to collaborate in the field of New and Renewable Energy	Signed On 30 th May, 2017, At Madrid
44.	Spain	MoU between MNRE and Centre for the Development of Industrial Technology, Spain	To establish the basis for a programme for Industrial R&D Cooperation in the field of Renewable Energy	Programme Signed On 23 rd November, 2011, At New Delhi
45.	Sweden	MoU between MNRE and Ministry of Enterprise, Energy and Communications of Sweden	Bilateral cooperation between the participants on new and renewable energy	Signed On 19 th April, 2010, At New Delhi

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

46.	Thailand	MoU between MNRE and The Ministry of Energy Government of Kingdom of Thailand	To Collaborate research and development in field of renewable energy specifically in the field of Photovoltaic, Solar Thermal, Biogas, Biomass, Small Hydro, Wind Energy & Other Technological Application	Signed On 26 th June, 2007, At New Delhi
47.	UAE	MoU between MNRE and Ministry of Foreign Affairs of the United Arab Emirates on Renewable Energy Corporation	To collaborate in efforts to establish the basis for a framework through which extensive projects, investments, other forms of commercial endeavors, cooperation in R&D in Renewable and Clean Energy and knowledge Sharing platforms.	Signed On 11 th February, 2016, At New Delhi
48.	UAE	MoU between MNRE and Ministry of foreign affairs, DECC of the UAE	To establish the basis for Institutional relationship to encourage and promote RE cooperation	Signed On 18 th January, 2014, At Abu Dhabi
49.	United Kingdom	MoU between Government of India and Government of United Kingdom of Great Britain and Northern Ireland	Establish a framework for strategic cooperation covering technical, policy, research and commercial aspects of development of energy sector	Signed On 11 th November, 2015, At London
50.	Uruguay	MoU between MNRE and the Government of Uruguay	To establish the basis for a cooperative institutional relationship to encourage and promote bilateral cooperation on NRE issues	Signed On 25 th February, 2011, At New Delhi
51.	USA	MoU between MNRE and USA	To foster cooperation between India and USA in the area of renewable energy to Facilitate a new track known as "Promoting Energy Access through Clean Energy" (PEACE)	Signed On 27 th September, 2013, At Washington, USA And 29 th January, 2014, At New Delhi
52.	USA	MOU between MNRE and The Department of Energy, USA on Cooperation in the field of Biofuel.	To encourage a framework of cooperation covering scientific, policy, technical aspects of production	Signed On 3 rd February, 2009 At New Delhi

ANNEXURE II for Lok Sabha Unstarred Question No. 4497 regarding "Cooperation in the Field of Renewable Energy" due for 22.03.2018.

			conversion, utilization, distribution and marketing of biofuels in sustainable and environment friendly manner in accordance with national priorities and socio economic development strategic and goals.	
53.	USA	MoU between MNRE and USA	To establish a fund to support the Promoting Energy Access Through Clean Energy (PEACE) track of the US India partnership to advance clean energy (PACE)	Signed On 30 th June, 2015
54.	USA	MoU between NISE and NREL	To establish the basis for Collaboration on Solar Energy Research and development	Signed On: 23 rd November, 2009 At Golden Colorado
55.	USA	MoU between NIWE and NREL	To establish the basis for Cooperation in the Area of Wind Energy	Signed On 23 rd November, 2009, At Golden Colorado
