

MEMORANDUM OF UNDERSTANDING

between

**National Institute of Solar Energy
Ministry of New and Renewable Energy, Government of India**

and

**International Solar Energy Institute
Uzbekistan**

Whereas,

The Ministry of New and Renewable Energy (MNRE) is the nodal Ministry of the Government of India for all matters relating to new and renewable energy. The National Institute of Solar Energy (NISE) is a premier organization under the MNRE and is primarily responsible for Research & Development (R&D) in Solar Technologies, Testing of Solar equipment's and in general facilitating deployment of Solar Energy.

Whereas,

The International Solar Energy Institute (abbreviated name "ISEI") was established on the initiative of the President of the Republic of Uzbekistan, which was reflected in Decree No. PD-4512 on 01.03.2013. "On measures for the further development of alternative energy sources" and Resolution No. RP-1929 on 01.03. 2013 "On creation of the International Solar Energy Institute".

hereinafter NISE and ISEI referred to individually as 'Party' and jointly as 'Parties',

have reached the following understanding:

ARTICLE 1 OBJECTIVE

The main area of work under this MOU would be to identify research/ demonstration/ pilot projects between NISE and ISEI in the mutually identified areas. Based on mutual agreement, both parties would work for implementation & deployment of pilot project in ISA member countries.

Both Parties agree to work in various areas of Solar Energy as detailed below:

1.1 Solar Photovoltaic (PV)

- High efficiency Solar PV Cell.
- Co-operation in testing, evaluation, characterization of PV modules and calibration of Reference modules and cells.
- Testing, Monitoring, performance evaluation and analysis of Solar PV Systems including stand-alone (lighting, telecom applications), CPV and Large Capacity PV Power plants.
- Testing of large capacity inverters.



- Long term outdoor performance studies of different technology PV Modules and Degradation analysis of the EVA/Polymers on different aging PV modules.
- Joint studies on design and analysis of distributed generation and smart mini-grids.
- Technical assistance to prepare and undertake Feasibility Study, DPR, Economic Assessment system, design etc.
- Implement demonstration and pilot project in the areas of Solar Irrigation, Solar rooftop, Solar Grid-connected, Solar Parks and Concentrated Solar Technology (CST), Solar Cold Storage.

1.2 Storage Technologies

- Collaboration on Testing, performance evaluation and analysis of different technologies of batteries
- Establishment of state of the art facilities for testing and certification of batteries
- Evaluation of hydrogen technologies for storage

1.3 Transfer of Technology

Both sides agree to collaborate in finding technological solutions and to undertake transfer of technology as mutually agreed upon. They will cooperate on projects involving Scientists, Engineers and personnel from user communities associated with each party.

1.4 Collaborative Activities:

- 1.4.1** Invite Indian Scientists to Uzbekistan and Uzbek Scientists to India for Workshops and Research & Study Tours.
- 1.4.2** Provide advice and technical information exchange regarding NISE and ISEI its plans for development and any related plans for support of both parties solar and storage industry.
- 1.4.3** Undertake employee exchange with aim of sharing and furthering the scientific and technical know-how of both parties.
- 1.4.4** Collaboration may occur through several means, including joint research projects, joint R&D, joint workshops, Research and Technology exchange including exchange of domain experts.
- 1.4.5** Encourage exchange of Faculty, Scientists, Staff & Students between the two parties.
- 1.4.6** Exchange of Scientific and Technical material between the two parties.
- 1.4.7** Joint hosting of Conferences, Workshops, short-term courses and to undertake joint sponsored solar research & development projects.
- 1.4.8** Accreditation of Solar Lab Testing and bilateral acceptance of testing standards
- 1.4.9** Capacity building and specialized training.
- 1.4.10** Construction of pilot projects and innovative demonstrators in India and Uzbekistan.

1.4.11 Common R&D programs and technical assistance for the setting up of new facilities (R&D - testing - commissioning) in India and Uzbekistan.

1.4.12 The bilateral cooperation could, for certain topics, be linked with ISA programs and worldwide activities while including ISA member countries.

ARTICLE 2 TERMS OF COOPERATION & COST SHARING

All terms and conditions relating to joint projects under this MOU shall be agreed upon separately on case to case basis.

Although the parties wish to cooperate on future projects this Memorandum of Understanding does not impose any duty on one of the Parties to disclose any information to the other party nor to enter into any individual agreement or obligation.

Each party will be responsible for its own costs in connection with all matters relating to collaboration under this MOU. Whenever possible and appropriate, the parties may provide funding opportunities for collaboration, from other donors.

ARTICLE 3 CONFIDENTIALITY

NISE and ISEI shall, for the duration of the Agreement not make accessible to any third party, information of a technical or commercial nature received from the other party and declared to be confidential. This however, shall not apply to information:

- Which is known or generally accessible to the public
Or
- Which becomes known or generally accessible to the public after disclosure without any involvement or fault on the part of the other party,
Or
- Which corresponds to information disclosed or made accessible to the other party by an entitled third party, or
- Which is independently developed by an employee of the other party not in possession of the information disclosed, or
- Which is required, by the action of a legal counsel, to be provided to any government, judicial, regulatory or administrative body or to a listing authority, self-regulatory body or any entity similar to the foregoing.
- Each Participant intends to collaborate in a manner that will facilitate exchange of non-proprietary information, subject to applicable laws and regulations. The Parties intend that information, data and reports of collaborative activities carried out under this MOU may be released by either Party with the written concurrence of the other Participants.
- Activities that may involve sharing of proprietary information and transfer of rights and interest in intellectual property are excluded from the purview of this MOU. In the event where it becomes necessary to share proprietary information, a separate written non-disclosure understanding should be put in place.

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ARTICLE 4
SOURCE OF FUNDING

- 4.1 The conduct of any collaboration activities mutually determined is subject to the availability of funds and staff available to the Parties. In the event that special funding is available for selected activities, the Parties may develop a separate written understanding for such activities. In such cases, the terms of funding should be mutually determined by both Parties before the commencement of activities and should be described in a separate written note.
- 4.2 Each Party is responsible for its own expenses for collaboration activities under this agreement, including all administrative costs, overhead expenses, labor costs, insurance costs, travel expenses and similar costs, unless a separate written-understanding between the Parties so provides. No exchange of fund is permitted under this agreement.

ARTICLE 5
REVIEW OF ACTIVITIES

The Parties intend to undertake a review of collaborative activities conducted under this MOU as a means to ascertain their effectiveness, document achievements and lessons, recognize technical personnel, and identify and plan areas for future collaboration. This review should take the form of annual, mutually determined meeting of key technical persons and management from each Party to discuss ongoing and future cooperation. Specific commitments developed pursuant to this MOU should be reflected in a separate written note.

ARTICLE 6
DURATION

This Memorandum of Understanding (MoU) shall enter into force on date of its signature, initially for five (5) years and shall remain in force until either Party gives notice of termination of the MoU 90 days in advance.

ARTICLE 7
DISPUTE SETTLEMENT

Any dispute arising out of the interpretation of the MoU shall be mutually settled through negotiations between the Parties. In case of failure to settle the dispute through negotiations, either Party may submit the dispute to superior in their respective Ministries/Authorities for a cordial resolution at a diplomatic level.

ARTICLE 8
RESULTS

Arrangement regarding intellectual property shall be formally agreed under terms and conditions for the individual contracts on a case to case basis. However, it is anticipated that each party shall lay claim to intellectual property arising out of research conducted by its employees. In the event that intellectual property is developed jointly by employees of the both the parties, joint ownership shall apply and the Parties will agree on a strategy for the protection and use of the intellectual property.



**ARTICLE 9
MISCELLANEOUS**

9.1 Each Party should conduct the activities contemplated by this MOU in accordance with the applicable laws of its respective country, without limitation of export control laws.

9.2 Subsequent, amendments, and supplements hereto must be made in writing.

Signed at _____ on _____ in two originals in each of the English language. In case of any divergence of interpretation, both texts will prevail.

On behalf of;

National Institute of Solar Energy (NISE)

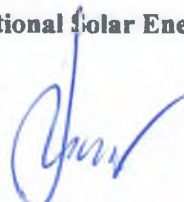


**Dr. Arun K. Tripathi
Director General
National Institute of Solar Energy (NISE)**

Date: 10.12.2020

On behalf of;

International Solar Energy Institute (ISEI)



**Matchanov Nuriddin Azadovich
Director
International Solar Energy Institute (ISEI)**

Date: 10.12.2020.

