



## 3rd Edition of North India Solar Summit- 2016 successfully organized by Indian Industries Association (IIA) from 11th - 13th March, 2016

**I**ndian Industries Association (IIA) is committed for the cause of use of clean energy and keeping in view the huge potential in Solar Energy sector, the idea of organizing of North India Solar Summit (NISS) was conceptualized in the year 2013. The first event was successfully organized in March 2014. Encouraged by the overwhelming response of the solar companies from within and outside the country, IIA decided to organize NISS every year. Second edition of the event was organized in April, 2015.



**Curtain Raiser Press Confers of NISS held on 10th March 2016 at IIA Bhawan**

**T**he third edition of North India Solar Summit (NISS-2016) was organized in IIA Bhawan Grounds from 11<sup>th</sup> to 13<sup>th</sup> March, 2016. Preparations for NISS- 2016 started immediately after NISS -2015 and the website for the event was refreshed immediately. Correspondences with MNRE, Government of India, Department of Additional Sources of Energy, Government of U.P and UPNEDA was initiated for their involvement and support. All the three departments/ organisations responded positively and UPNEDA agreed to be the co-organizer of this mega event. SIDBI and ZDH Sequa (Germany) joined as sponsors for the event. Publicity for the event was done through FM Radio, Newspaper advertisements, E-mailers and contact through phone etc.

Finally on 10<sup>th</sup> March, 2016 a curtain raiser media meet was organized at IIA Bhawan, Lucknow. In this meeting, President-IIA elaborated on the objectives, activities and expectations from NISS-2016.

### 10 मार्च 2016, नार्थ इण्डिया सोलर, सम्मिट पर श्री मनीष गोयल, अध्यक्ष आई0आई0ए0 का प्रेस एवं मीडिया सम्बोधन

पिछले कुछ वर्षों तक सूर्य देव को हम धरती पर सभी प्रकार के जीवों के संरक्षण एवं भरण पोषण करने वाला मानते रहे हैं। सूर्य देव की कृपा से बिजली उत्पादन की ओर हमारा ध्यान तब गया जब पारम्परिक तरीकों से बिजली उत्पादन की क्षमताएं क्षीण होने लगी और पर्यावरण की भी समस्या उत्पन्न होने लगी। आज लगभग 290000 मेगा वाट (290 गीगा वाट) बिजली का उत्पादन भारत वर्ष में हो रहा है। जबकि भारत में लगभग 750000 मेगा वाट (750 गीगा वाट) सौर ऊर्जा की क्षमता है जिसमें से आधी से अधिक क्षमता उत्तर एवं मध्य भारत में है। केवल उत्तर प्रदेश में 22830 मेगा वाट सौर ऊर्जा उत्पादित की जा सकती है। भारत सरकार ने वर्ष 2022 तक 100000 मेगा वाट (100 गीगा वाट) सौर ऊर्जा के उत्पादन का लक्ष्य रखा है जिसमें 40000 मेगा वाट रूफ टॉप एवं 60000 मेगा वाट ग्रिड से जुड़े मझोले और बड़े सौर ऊर्जा संयंत्रों से उत्पादित की जाएगी। इस लक्ष्य में उत्तर प्रदेश का लक्ष्य 10697 मेगा वाट का है यानी पूरे भारत के लक्ष्य का 10 प्रतिशत से अधिक, और यदि उत्तर भारत के लक्ष्य की बात करें तो यह लक्ष्य 31119 मेगा वाट है। इन आंकड़ों से भी स्पष्ट है कि समूचे उत्तर भारत के कुल लक्ष्य का एक तिहाई से अधिक लक्ष्य उत्तर प्रदेश का है। यही कारण था कि “नार्थ इण्डिया सोलर सम्मिट” के आयोजन का निर्णय इण्डियन इण्डस्ट्रीज एसोसिएशन (आई0आई0ए0) द्वारा उत्तर प्रदेश की राजधानी लखनऊ में बहुत पहले वर्ष 2013 में ही ले लिया था। कल यानी 11 मार्च को प्रारम्भ होने वाला तीन दिवसीय सम्मिट लगातार तीसरा संस्करण है।

31 जनवरी 2016 तक 5550 मेगा वाट सौर ऊर्जा का उत्पादन देश में हो रहा है जिसे बढ़ाकर वर्ष 2022 तक एक लाख मेगा वाट किया जाना है। इससे स्पष्ट है कि सौर ऊर्जा के क्षेत्र में कितनी अपार सम्भावनाएँ हैं। वर्ष 2014 में जब आई0आई0ए0 द्वारा इस नार्थ इण्डिया सोलर सम्मिट का शुभारम्भ किया तब उद्देश्य यही था कि अधिक से अधिक जनता तक सौर ऊर्जा के बारे में जानकारी एक ही स्थान पर उपलब्ध करायी जाये तथा सौर ऊर्जा उद्योग एवं सेवा क्षेत्र के उत्थान के लिए केन्द्र एवं प्रदेश सरकार







**DAY-1**

**NISS-2016 was inaugurated by Hon'ble Minister of State (Independent Charge) MSME and Export Promotion (U.P) Shri Nitin Agarwal on 11<sup>th</sup> March, 2016.**



The inaugural function of NISS-2016 was held in the conference hall of IIA Bhawan wherein the proceedings started with lightening of the lamp by the Chief Guest, Shri Nitin Agarwal and other dignitaries present on the occasion. In the Inaugural function, Hon'ble Minister lauded the efforts of IIA for organizing this biggest Solar Energy event in North India.

While visiting the stalls put up by the exhibitors Shri Nitin Agarwal took keen interest in understanding the Solar Systems, equipment and technologies. In his inaugural address Shri Nitin Agarwal said that the number of IIA representatives/proposals was pending in his department for disposal since long. As soon as I took over the Ministry of MSME and Export Promotion, I tried to dispose off these these representations of IIA on priority. As a result DI rate contract system has been notified, Government orders for purchase and price preference to MSMEs has been released. The issue of conversion of leasehold industrial land to freehold is being looked into seriously at Government level. Procurement manual will also be released soon.



Other speakers in the inaugural function spoke about the scope of utilization of solar energy in today's time and steps/initiatives already taken by the Government for Promotion and development of Solar Energy. President-IIA, Shri Manish Goel said that the use of Solar Power by MSMEs and common man is still prohibitive due to its high cost involved. Though the cost has come down substantially over the past few years yet it is beyond the affordable limits. Shri Goel further said that Government has also started





Sh. Manish Goel, President-IIA telling about the usage of Solar Energy, problems being faced by the entrepreneur and proposals of IIA submitted to the Government in this regard.

withdrawing the subsidies to certain section of users. He informed that on IIA's demand during NISS- 2015, Hon'ble Chief Minister, U.P. was kind enough to announce exemption of VAT on Solar appliances and items. This has helped in the reduction of the cost of Solar systems a bit. IIA have now represented for exemption of demand charges in the grid power supply for those consumers who will install solar power systems to the extent of Solar Power Systems installed.



Shri Sunil Vaish, Sr. Vice President-IIA, Shri Pankaj Gupta, General Secretary-IIA, Shri Ashok Agarwal, Treasurer-IIA and majority of IIA Past Presidents were also present in the inaugural function. IIA Past Presidents Shri Sanjay Kaul, Shri Ajay Gupta, Shri G.C.Chaturvedi, Shri Tarun Khetrapal, Shri Ramji Suneja, Shri Anil Gupta, Shri Jugal Kishore then had a snap with Hon'ble Minister of State (I.C) Shri Nitin Agarwal.

## Industrial Directory Western UP-2015

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**INDIAN INDUSTRIES ASSOCIATION**

AN APEX BODY OF MICRO. SMALL & MEDIUM ENTERPRISES

H.off.: IIA Bhawan, Vibhuti Khand-II, Gomti Nagar, Lucknow

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# NISS-2016

## day2



### NATIONAL SOLAR CONCLAVE-2016

“National Solar Conclave-2016” (NSC-16) was organized at IIA Bhawan Conference Hall on 12<sup>th</sup> March, 2016. Simultaneously Solar exhibition was also organized

on its peak on day 2

Objectives of organising NSC-16 was to bring together all concerned organizations working for promotion, innovation, production, implementation and use of Solar Power, so as to find solutions to the gap areas in the policies, plans ways and means to promote innovations in techno-commercial and use of power in domestic and industrial arena.



National Solar Conclave 2016 was inaugurated by Shri Alok Ranjan IAS, Chief Secretary Uttar Pradesh, Shri Parthasarathi Sen Sharma IAS, Secretary to Hon'ble Chief Minister U.P. as well as Secretary Additional Sources of Energy, Government of U.P. was the Guest of Honor on this occasion. Apart from this, experts from IREDA, UPERC, NABARD, Department of Renewable Energy Lucknow University, UPPCL and Solar Industries made presentations in this conclave.

Shri Alok Ranjan IAS, Chief Secretary Uttar Pradesh & Shri Parthasarathi Sen Sharma IAS, Secretary to Hon'ble Chief Minister U.P. visited IIA Grounds for seeing the Solar Exhibition and took keen interest in the solar products displayed





Delegates from Government and Non-Government organizations Solar Research & Training Organisation, System Integrators, Solar Equipment & Material Manufacturers & Dealers, Students, Progressive Farmers, representative groups of potential users in homes, flats, offices, commercial establishments, factories, civic authorities and media etc attended the conclave in large numbers.



National Solar Conclave-2016 then started with the lightening of the lamp of the Chief Guest, Guest of Honors and other dignitaries. Delegates from Government and Non-Government organizations Solar Research & Training Organisation, System Integrators, Solar Equipment & Material Manufacturers & Dealers, Students, Progressive Farmers, representative groups of potential users in homes, flats, offices, commercial establishments, factories, civic authorities and media etc attended the conclave in large numbers.

Shri Alok Ranjan, Hon'ble Chief Secretary U.P appreciated the efforts of IIA and said that various important steps such as Solar Policy, Net Metering system, exemption of VAT from solar products and devices etc have already been taken by the Government on the recommendations of IIA and many other positive steps are yet to come for the upliftment of Solar field. Hon'ble Chief Secretary was pleased to know that IIA will soon be installing a 20 KW solar plant.



**Inaguration of National Solar Conclave-2016 with the Lightening of Lamp by Shri Alok Ranjan, Hon'ble Chief Secretary U.P at IIA and Shri Parth Sarthi Sen Sharma, Secretary to CM U.P and Additional Sources of Energy U.P, Shri Sanjay Srivastava Secretary UPERC, Shri Manish Goel, President-IIA, Shri Sunil Vaish Sr. Vice President IIA and Shri Pankaj Gupta, General Secretary- IIA.**



**Address of Shri Alok Ranjan ,  
I.A.S., Chief Secretary,  
Government of U.P. in National  
Solar Conclave at IIA Head  
Office.**

मुझे हर्ष है कि इण्डियन इण्डस्ट्रीज एसोसिएशन (आईआईओ) द्वारा लगातार तीसरे वर्ष "नार्थ इण्डिया सोलर सम्मिट-2016" का आयोजन उत्तर प्रदेश की राजधानी लखनऊ में किया जा रहा है। यह एक सराहनीय कार्य है। मुझे यह भी ज्ञात हुआ है कि उत्तर भारत में सौर ऊर्जा की यह सबसे बड़ी प्रदर्शनी है और इस प्रदर्शनी के साथ-साथ सौर ऊर्जा पर सेमिनार और कॉन्क्लेव भी आयोजित किये जा रहे हैं।

अध्यक्ष आईआईओ श्री मनीष गोयल

ने जब मुझे यह बताया कि "नार्थ इण्डिया सोलर सम्मिट-2016" का आयोजन उत्तर प्रदेश की राजधानी लखनऊ में इस लिये करने का निर्णय लिया गया क्योंकि उत्तर प्रदेश में उत्तर भारत के सभी प्रान्तों की तुलना में सबसे अधिक सौर ऊर्जा उत्पादन की क्षमता एवं सम्भावनाएँ हैं तो मुझे अच्छा लगा। उत्तर प्रदेश में माननीय मुख्यमंत्री सौर ऊर्जा उत्पादन को गति देने के लिए लिए स्वयं रुची ले रहे हैं।

अभी इस सोलर प्रदर्शनी में मैंने देखा कि देश एवं प्रदेश की सभी बड़ी सोलर कम्पनियों ने अपने स्टाल लगाए हैं जिसमें सोलर ऊर्जा से सम्बन्धित सभी प्रकार के उपकरण और समान प्रदर्शित हैं। इस प्रदर्शनी से जहाँ एक ओर सोलर ऊर्जा संयन्त्र स्थापित करने वालों को एक छत के नीचे ही सभी जानकारीयों उपलब्ध हो जाएगी वही नये उद्यमियों के लिए भी यह एक सुनहरा मौका है क्योंकि आने वाले समय में सौर ऊर्जा के क्षेत्र में उद्यमिता की अपार सम्भावनाएँ हैं।

कुछ समय पहले सौर ऊर्जा से बिजली उत्पादन की लागत बहुत अधिक थी जो धीरे-धीरे कम हो रही है। जैसे-जैसे सौर ऊर्जा का उपयोग बढ़ेगा, सौर ऊर्जा के उपकरणों एवं सामग्री का उत्पादन भी बढ़ेगा अतः लागत कीमत में और कमी आएगी। इसलिए मेरा मानना है कि आने वाले समय में सौर ऊर्जा क्षेत्र में ग्रोथ की गति और तीव्र होगी और जो लक्ष्य हमने प्रदेश में रखे हैं हम उनको न केवल पूरे करेंगे अपितु हम उससे अधिक भी कर पायेंगे।

माननीय मुख्यमंत्री जी के नेतृत्व एवं प्रोत्साहन से विगत में प्रदेश सरकार ने सौर ऊर्जा नीति, नेट मीटरिंग तथा सौर ऊर्जा उपकरणों पर वैट समाप्त करने

जैसे महत्वपूर्ण निर्णय लिए हैं। आईआईओ अध्यक्ष द्वारा मुझे यह भी बताया गया कि आईआईओ अपने इसी भवन में 20 किलोवाट का सोलर संयंत्र शीघ्र ही लगाने जा रहा है।

प्रदेश सरकार गाँवों एवं दूर-दराज इलाकों में जहाँ बिजली उपलब्ध नहीं है में सौर ऊर्जा के उत्पादन और उपयोग की योजना बना चुकी है, सरकारी भवनों में अधिक से अधिक सौर ऊर्जा का उपयोग किया जाने लगा है, स्ट्रीट लाइटिंग के लिए भी सौर ऊर्जा का उपयोग किया जाएगा। अध्यक्ष आईआईओ ने कुछ नये सुझाव सौर ऊर्जा का उपयोग बढ़ाने के लिए दिये हैं इन पर प्रदेश सरकार विचार करेगी। मैं चाहता हूँ कि आईआईओ अपना यह प्रयास आने वाले वर्षों में भी जारी रखे। इस प्रयास में प्रदेश सरकार द्वारा आईआईओ को पूर्ण सहयोग दिया जाएगा।







Shri Manish Goel, President-IIA addressing National Solar Conclave- 2016, while Shri Sunil Vaish, sr. Vice President-IIA, Shri Parthasarthi Sen Sharma, Secretary, Additional Sources of Energy U.P, Shri Alok Ranjan, Hon'ble Chief Secretary U.P, Shri Sanjay Srivastava, Secretary UPERC, Shri Pankaj Gupta, General Secretary-IIA are sitting on the dias.

Shri Manish Goel, President-IIA while delivering his welcome address expressed his sincere thanks to Hon'ble Chief Secretary and Secretary Additional sources of Energy U.P for their continued support to IIA in its endeavors to promote Solar Energy. Shri Parthasarthi Sen Sharma, Secretary, Additional Sources of Energy U.P in his address said that very soon a Solar Mini Grid Policy will be launched which will enable a consumer to draw power from independent grids when the main grid fails to meet the demand. It will also help millions of households that are yet to be linked with the conventional power grid. He further said that in order to provide skilled manpower and dissemination in the field of alternative energy and renewable energy, the Government has set up Training Institutes for organising training programmes. At last Shri Sharma was of the view that IIA must find out ways to play a pro-active role in being part in these Training programmes. The other highlights of the Conclave were excellent presentations by the experts on various topics as under:

➤ **Powerpoint presentation made by Shri Parth Sathi Sen Sharma on “Renewable Energy and Energy Conservation in the State of Uttar Pradesh”.**

Shri Parthasarthi Sen Sharma, Secretary, Additional Sources of Energy, said that there is abundant sunshine available for solar power generation in U.P. The chief points that were discussed by him were as under:

- ❖ The status of implementation of Solar Policy-2013
- ❖ Solar Park which has been proposed to be set up
- ❖ Grid Connected Rooftop SPV Plants-2014
- ❖ Off-Grid Solar Systems (Solar Pumps)
- ❖ Off-grid Solar Power Plants
- ❖ Solar RO Water & Fan for Primary School Children





- ❖ Solar Power Pack in Dr. Lohiya Awas and Shri Janeshwar Mishra Gram 2001 w.e.f. July 2015
- ❖ Future Plans of State Government for promotion of Solar Energy.
- ❖ Decentralized distributed generation (DDG)
- ❖ Mini-grid Achievements- Mini-Grids Solar Power Plants
- ❖ Promulgated "UTTAR PRADESH MINI GRID POLICY 2016"
- ❖ Training centres set up at- Chinhath ,Lucknow and other in Ghosi, Mau
- ❖ Nomination of UPNEDA as State Designated Agency (SDA) under Energy Conservation ACT-

➤ **Success story on implementation of Roof Top Solar Power system and as a result of Government of U.P. policies and efforts of the private players presented by Shri A.K. Bhargava, GM- Kanpur Plastipack Ltd.**

Mr A.K.Bhargava, General Manager, Kanpur Plastipack Ltd gave a brief description about Roof Top Solar Plant set up at Kanpur Plastipack Ltd located at Udyog Kunj, Panki Industrial Area, Kanpur.

He said that there were various reasons for choosing solar power. Few of them were - no input material cost,



almost free power after payback period, Income Tax & Accelerated Depreciation Benefit, Use of vacant PEB roof which otherwise can't be used for any other application, Solar Panels provide insulation against heat during summer, Net Metering Benefit, Carbon Emission Reduction etc.

The exact requirements of roof for solar installation were assessed for which the size, area and structure of roof was analyzed. The outcome was that Total Generation in the first year from Oct 14 to

Sep 15 was 2,43,578 Units of electricity against projected generation of 2,67,993 Units (as per Kanpur irradiation data)

The benefits noticed as a result of installation of Roof Top Solar Power Plant at Kanpur Plastipack Ltd were as under:

- At KPL, there is a reduction in temperature inside the production hall after installation of solar panels.
- Getting on average 800 units per day of solar electricity
- Net metering benefit
- Tax Benefits
- Own power generation
- Green Power





➤ **Powerpoint presentation on “Innovative ideas in harnessing of Solar Energy” by Prof. Usha Bajpai from University of Lucknow.**



Prof Usha Bajpai Coordinator, Solar Energy & Director, B Voc Solar Energy Technology Centre of Excellence in Solar Energy Education and Research, University of Lucknow discusses the following points:

- A subsequent amount of weightage is needed to be given to the “Skill Requirements” in our course curriculum in Solar Energy Technologies.
- In a performance driven world, our students need to be equipped with

“skills” required for Solar Energy Technologies.

- We need to be aware of the skill sets that are actually required on the floor for Solar Energy Technologies
- There is a need of Industry Institute interaction in order to understand the needs and requirement of Solar Energy.

Thus in view of the above, MNRE has proactively initiated a project to estimate the future human resource (HR) needs in the Solar energy sector and evolve suitable HRD strategies for meeting them.

Apart from the above, Function-wise Skill Gaps in Solar Photovoltaic and Solar Thermal Systems was explained in detail by Prof Usha Bajpayi According to her, a productive interface between academia and industry, in the present time of knowledge and economy is a critical requirement of today's time.

She also mentioned that University Grants Commission has approved the University of Lucknow to start Bachelor of Vocation (B Voc) Courses in Renewable Energy Technology in the University which was started in 2015 – 16 academic session.

**Other than the above the following steps are required to be taken in the Solar Energy field:**

- Acknowledge “Sustainable Future and Energy Security”
- Find ways and means of integrating Solar Energy industry – institution.
- Create Solar Energy projects involving industry and institution that can be funded by industry or institution
- Involve Solar Energy industrial experts in curriculum development in institutions.
- Invite Solar Energy Industrial Experts to the campuses to share their knowledge and experience.
- Increase student exposure to actual Solar Energy industrial work.
- Embrace a “value based” teaching system.





➤ **Powerpoint presentation on the topic “Financing of Solar Energy Projects” by Shri Abhilakh Singh, General Manager IREDA.**

Shri Abhilakh Singh, General Manager, IREDA said that renewable energy with its huge untapped potential, shall be playing a significant role in the plans of the Government to provide 24 x 7 power to every home, factory and farm, Wind and Solar Energy being the predominant sectors.

IREDA is an ISO Certified Profit earning & Dividend paying Company with 29 years of experience in financing Renewable Energy Projects. It has a track record of financing more than 2200 projects. IREDA has been awarded Mini Ratna (Category – I) status by MNRE (Govt of India). The sector for which financing is available are:



- Wind Energy
- Hydro Power
- Solar Energy
- Biomass including Bagasse & Industrial Cogeneration
- Biomass Power Generation
- Waste to Energy
- Energy Efficiency & Energy Conservation
- Bio-fuel / Alternate Fuel
- Hybrid Projects with RE Technologies
- New & Emerging Renewable Energy Technologies



He ended his presentation by saying that financing shall remain a challenge to propel the growth of renewable energy and IREDA remains committed to overcome these challenges to drive the momentum of growth of the renewable energy sector.

➤ **Presentation on “The technological challenges in Jawaharlal Nehru National Solar Mission” by Dr. Suresh C Bajpai FIETE Director, Futuris Energy Pvt Ltd.**

Dr. SURESH C BAJPAI ,FIETE, Director, Futuris Energy Pvt. Ltd. & Subject Expert, Centre of Excellence in Renewable Energy Education and Research, University of Lucknow said that solar energy provides the ability to generate power on a distributed basis and enables rapid capacity addition with short lead times. Off-grid decentralized and low-temperature applications will be advantageous from a rural electrification perspective and meeting other energy needs for power and heating and cooling in both rural and urban areas. India is faced with the challenge of sustaining its rapid economic growth while dealing with the global threat of climate change. This





threat emanates from accumulated greenhouse gas emissions in the atmosphere, anthropogenically generated through long-term and intensive industrial growth and high consumption lifestyles. While engaged with the international community to collectively and cooperatively deal with this threat, India needs a national strategy to

- Firstly, adapt to climate change and
- Secondly, to further enhance the ecological sustainability of India's development path.

He further said that Jawaharlal Nehru National Solar Mission (JNNSM) aims to achieve grid tariff parity by 2022 through

- Large scale utilization, rapid diffusion and deployment at a scale which leads to cost reduction
- R&D, Pilot Projects and Technology Demonstration
- Local manufacturing and support infrastructure

The other points that were covered in his presentation are:

Brief about Solar City

- Scheme for development of Solar Parks
- Solar Rooftop- Grid Connected Programme
- Solar Power (Off-grid) Programme
- Remote Village Electrification Programme
- Cumulative Commissioned Status of Grid Connected Solar Power Projects as on 31-01-2016
- Solar Power Projects likely to commissioned in 2015-16 under State Policies
- Overall Status of tendering/PPA's for commissioning in 2016-17 for Solar Power Projects

➤ **Presentation on “One Child one light initiative” by Rakesh Goel.**

