

ALL INDIA SOLAR SUMMIT-2018



Report



PREAMBLE

Use of Renewable Energy has become absolutely essential for environment protection and dependence on energy generated using fossil fuel and nuclear fuel is required to be reduced. As such Government of India have set an ambitious target of 175 GW (175000 Mega Watt) Renewable Energy Installed Capacity by 2022 (100 GW through solar power, 60 GW from wind power, 10 GW from biomass power and 5GW from small hydro power).

Solar energy is the world's cheapest and fastest-growing power source as on date. Therefore Solar energy could one day supply most of the world's energy needs. Till November 2017 , 14.772 GW Solar Power plants (13.982 GW Grid Connected and 0.790 GW Roof Top) have been installed in India. Yet, we have to go a long way and too fast if the target of 100 GW Solar Power generations is to be achieved by 2022.

Indian Industries Association (IIA) realized the need and urgency five years back in 2013 when IIA planned to organize first SOLAR SUMMIT in March 2014. Since then SOLAR SUMMIT is being organized every year by IIA and this fifth edition of ALL INDIA SOLAR SUMMIT (AISS-2018) was organized from 23rd to 25th February 2018 at IIA Bhawan, Vibhuti Khand, Lucknow, India from 23rd Feb to 25th Feb 2018.

Since beginning **Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA), U.P. Govt. Agency** is associated with the event as Co-Organiser.

Highlights of AISS- 2018

❖ Exhibitor Participation

- 63 prominent Solar Companies from all over India participated in the Exhibition.
- Exhibitors from Karnataka, Tamil Nadu, Delhi, Gujarat, Haryana, Maharashtra, Punjab, Rajasthan & Uttar Pradesh were present in the 3days Exhibition.

❖ Partners, Supporters and Sponsors

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❖ **Visitors in large number visited AISS-2018**

More than 6000 visitors visited the Exhibition.

❖ **National Solar Conclave Organised on 24th February 2018 attended by 200 delegates.**

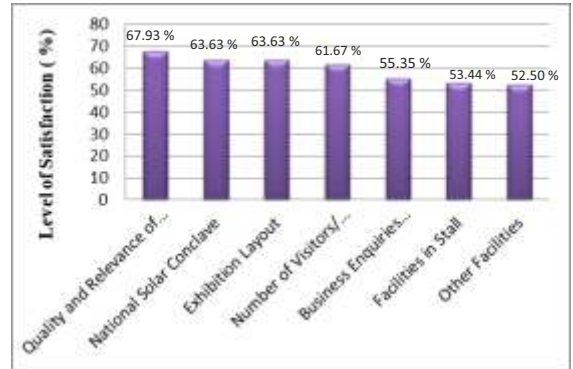
❖ **Encouraging Feedback**

(A) Exhibitors Feedback

In order to evaluate the success of the Solar Exhibition and the Solar Conclave, a comprehensive feedback was obtained from the Exhibitors on 7 different performance parameters i.e Exhibition Layout, Number of Visitor/ Footfall, Business Enquiries Generated, Quality and Relevance of Exhibitors in AISS, Facilities in Stall, Other Facilities, National Solar Conclave.

Feed back is encouraging on most of the performance parameters. However in few parameters, the feedback was below the standards set by IIA. Deficiencies have been noted for correction in future events.

Bar Chart showing the feedback score on different performance parameters of AISS for IIA is given below:



(B) Visitors Feedback

Through a structured feedback performa, the feedback of the visitors was also obtained to ascertain their satisfaction for the expectation they carried while coming to visit AISS-2018. Overall Feedback of the Visitors was also encouraging. Few important observations of the visitors are as under:

Comments

1. Came to know more about Solar Products, got enough information with valuable knowledge and lot of solar exposure through the Solar Exhibition.
2. Nice Demonstration of products through the creative Stalls.
3. Good effort made by Organizer teams to create awareness and well managed.
4. Good for beginners to setup new Industry.
5. Were able to establish direct connect with big Solar Companies.

Suggestions

1. Invite more big players and exhibitors.
2. Job fair should also be organised.
3. Enhance the promotional Activities through the Newspapers as well.
4. Exhibitor some deals for distributionship.
5. Get exhibition on Solar Water Pump & Solar AC.
6. This exhibition should be organized on Half yearly Basis on fixed date.
7. Suggested to organize some training and job fair for Renewable energy Students.
8. Spread the Layout boundaries because this kind of exhibition needs to do on large basis.
9. Organize AISS in every year in different part of UP.
10. Enquiry Desk is required for assistance.

DAY TO DAY PROCEEDINGS OF ALL INDIA SOLAR SUMMIT-2018

Curtain Raiser- 19th Feb 2018

A Curtain Raiser press conference was organized at IIA Bhawan, Lucknow on 19th Feb 2018 to announce the activities of AISS-2018, participation of Solar Companies, type of Solar Products / services to be displayed, benefits to the Visitors etc. Large number of Media representatives from prominent Print and Electronic media participated in the Curtain Raiser Press Conference addressed by Shri Sunil Vaish, National President Indian Industries Association.



Curtain Raiser Press Conference of AISS held on 19th Feb 2017 at IIA Bhawan



DAY-1 (23RD FEB. 2018)

Inauguration of All India Solar Summit-2018

Shri Brajesh Pathak, Hon'ble Minister Law & Legislative, political Pension, Additional Sources of Energy, Govt. of Uttar Pradesh was the Chief Guest for the inaugural function of "All India Solar Summit-2018. National President IIA, Shri Sunil Vaish, General Secretary IIA K.K. Agrawal, Treasurer IIA, S.B. Jakhotia, Shri Vishnu Agarwal, alongwith many office bearers, dignitaries from IIA Chapters in U.P, Uttarakhand and Delhi were present in the inaugural function. All the dignitaries visited the stalls in the exhibition displaying all kinds of Solar Products, Technologies and Services. The Chief Guests appreciated the effort made by IIA for promoting Solar Energy Sector. National President IIA presenting the bouquet to the Chief Guest in the inaugural ceremony.



Shri Vishnu Agarwal, Shri Brajesh Pathak, Hon'ble Minister, Shri Sunil Vaish, Shri S.B. Jakhotia, Shri Tareeq Hasan Naqvi on the dais for inauguration of AISS- 2018.

Welcome Address by Shri K.K. Agrawal General Secretary IIA during the Inauguration of AISS 2018



IIA National President Shri Sunil Vaish in conversation with Hon'ble Minister Law & Legislative, political Pension, Additional Sources of Energy, Govt. of Uttar Pradesh



Shri Vishnu Agarwal-CMD, Technical Associates Ltd. giving Keynote address

In his inaugural address Shri Brajesh Pathak said he is happy to note that Indian Industries Association organizes this Solar Exhibition continuously since 5 years. This not only benefits the Solar Energy Companies but the consumers of Solar Energy are also benefited. The Exhibitors & Visitors from all over country are taking parts in this solar summit which is a matter of pride for all of us in the State Capital Lucknow. This Solar Summit will help in setting up manufacturing units for Solar Equipments and materials and hence will help in the mission of Hon'ble Prime Minister & Hon'ble Chief Minister U.P. for Make in India & Make in U.P.



Chief Guest for the Inaugural Function of AISS-2018 addressing the audience



Audience in Inaugural function of AISS-2018



IIA President & Treasurer presenting Momento's to Chief Guest

Media Attention during Inauguration of AISS-2018



Chief Guest Interaction with Live Today Media



Chief Guest Interaction with News India Media



President IIA Interaction with Zee & News National Media



Chief Guest Interaction with Sahara Samaya Media

DAY-2

National Solar Conclave (24th FEB. 2018)

One day National Solar Conclave was organized concurrently with the All India Solar Summit-2018 on 24th February 2018 with the objective to bring together all concerned organizations working for promotion, innovation, production, implementation and use of Solar Power and provide a platform for meaningful discussions to bring out key insights and actionable points for propagation of Solar Power among various customer segments.

The Conclave was attended by 200 delegates came from Government and Non Government organizations, Solar Equipment & Material Manufacturers & Dealers, System Integrators, EPC and RESCO Power Companies, Solar Research & Training Organization, Students, Representative groups of potential users in homes, flats, offices, commercial



establishments, factories, civic authorities etc.

Main Topics / Areas covered in the conclave are as under:

1. Roof Top Solar Plants- CAPEX and OPEX (RESCO) Models.
2. Innovations in Energy Storage Technologies & their Applications.
3. Financing of Solar Power Projects – Roof Top & Large Projects.

Conclave was addressed by Shri Hiren Borah- Scientist MNRE, Sh. Vikas Gupta, Director, SUNLED Energy, Mr. Parag Mehra, Regional Head – Bosch Energy and Building Solutions, Ms. Manpreet Kaur, Energy Advisor, Sukhbir Energy Agro Limited, Prof.



Usha Bajpai, Hon. Coordinator, Renewable Energy, University of Lucknow. Mr Arun Krishnan, National Head Sales & Marketing, Goldi Green, Mr. Kartik Sachdeva, Head – Solar Products SU-KAM, Mr Anjani Kumar Shrivastava, Deputy General Manager, SIDBI, Mr. T. A. Sebin, Manager, NABARD, Mr Raman Grover, Dy. Zonal Manager, PNB, Dr Suresh C. Bajpai, Chief Advisor, Regional Institute of Social Entrepreneurship (RISE).

National Solar Conclave was inaugurated by National President of IIA Mr Sunil Vaish. Mr K.K.Agrawal General Secretary IIA alongwith Guest of honour Hiren Borah, Senior Scientist MNRE Delhi, Prof Usha Bajpai, Hon. Coordinator, Renewable Energy, University of Lucknow.



SESSION-I of National Solar Conclave

The first session was focused on Roof Top Solar Plants, covering the following areas –

- CAPEX and OPEX Models
- Key Success Factors for Faster Promotion & Adoption;
- Real Life Examples & Experiences shared by Leading Players

The keynote address for this session was given by **Mr. Hiren Borah**, who spoke about the National Solar Mission (NSM) of Govt. of India and its significant progress so far. Against the target of 60,000 MW through ground mounted solar projects, 18,500 MW have been installed. He spoke about Solar Rooftop scheme, launched by MNRE, as well as various initiatives including SPIN portal, ARUN mobile app as well as Concessional financing through IREDA, SBI & PNB with grants from World Bank and ADB. He highlighted the challenges in the implementation of Rooftop Solar plants, particularly involvement of multiple stakeholders in the processing and approvals for Rooftop Solar plants, and hence a need for



a time-bound system by the DISCOMs and State Nodal agencies.

Vikas Gupta, Director, Sunled Energy spoke about the soaring need for energy as we move faster on the development path, with the success of all major initiatives such as Make in India, Digital India, Swachh Bharat and Power for All, dependent on sufficient availability of power. He talked about India's per capita energy use being one-third of world average, and how just the Solar parks are not sufficient to better exploit the potential of Solar Energy. He spoke about the various business models for Rooftop Solar plants - Capex vs Opex models, Net-metering vs Gross metering, Grid-connected vs Off-grid vs Hybrid - and how they would be viable for different requirements and the key

success factors for Solar Rooftop plants. He emphasized the imperative for single-window, unified system for the various approvals & processing of netmetering and subsidy schemes, to attract higher interest among potential users.

This was followed by presentation by **Parag Mehra, Regional Head – Bosch Energy and Building Solutions**. He explained the workings for a typical mid-size Solar Rooftop plant, and the various financing model options available providing flexibility for consumers. He compared the pros and cons of Capex model with that of Opex model - including determining factors for deciding which financial model to follow. He highlighted the need for special focus on Quality & Safety in Solar Projects, sharing that



only 35% of the Solar projects meet the quality and safety expectations. He also shared the key attention areas for ensuring quality and safety at the Solar projects.

Ms. Manpreet Kaur, Energy Advisor, Sukhbir Energy Agro Limited, talked about the huge potential for Solar Rooftop plants, with an expected energy gap of around 450 bn units. She highlighted net metering, concessional financing, building bye-laws, boost in government demand and subsidy as key drivers for growth of the Solar Rooftop projects. With falling prices and better terms and conditions, the Opex model (also termed as RESCO model) is gaining higher interest among the users. Two main factors driving the RESCO market are low capital involvement by the users, and continuous operation and maintenance support from developers.

The importance of Industry-Institute Interaction in Solar Energy development was shared by **Prof. Usha Bajpai, Hon. Coordinator, Renewable Energy, University of Lucknow**, who spoke about the various potential areas for industry and academic institutions to work together. **Prof. Usha Bajpai** said that huge proposals of Rs. 66000 Crore investment in U.P. will require large number of trained manpower in the Solar.

As such there is a need for Industry Institute Interaction in the Solar Energy Sector.

We are happy to be a part of this National Solar Conclave-2018 as a Knowledge Partner and hope we will again becoming a part of it.



SESSION-II of National Solar Conclave

The second session was focused on Innovative & futuristic Solar Technologies including Storage Technologies & their applications.

Arun Krishnan, National Head-Sales & Marketing, Goldi Green, talked about the new developments in Solar PV modules and various innovative products available today. He first spoke about 1500V Solar PV modules & their benefits, namely increase in cell surface area & power output, Minimal loss due to better temperature co-efficient & higher fill factor. He then shared the details and applications of AC PV modules (with micro-inverters) and Dual Glass Bi-Facial PV modules. Glass to Glass PV modules with



White/ Transparent EVA present major potential in Snow/ desert environments and BIPV applications.

Kartik Sachdeva, Head – Solar Products, SU-KAM talked about the various new products in the inverter/PCU category, particularly the Hybrid inverters/PCU and micro-inverters now available indigenously

SESSION-III of National Solar Conclave

The third session of the Conclave was focused on Financing of Solar Power Projects – Roof Top to Large Projects. Due to high initial investment required, this is an important focus area for the Solar power projects, whether small or large.

Anjani Kumar Shrivastava, Deputy General Manager, SIDBI, shared about the various schemes and products provided by SIDBI and how the Solar Power users and developers can avail them. He explained the details and benefits of the SIDBI Make in India Fund for MSMEs (SMILE), which can benefit the Solar product and equipment manufacturers



T. A. Sebin, Manager, NABARD spoke about the NABARD's Role in finance of Solar power projects towards achieving the Renewable Energy objectives of the country. He talked about the various NABARD schemes to promote Solar power projects, including Term Loan Facility for Renewable Energy Power Production, Support to Solar Co-operatives, etc



Raman Grover, Dy. Zonal Manager, PNB, spoke about the Concessional interest financing scheme provided by PNB with grant support from Asian Development Bank. He explained the process and requirements to avail the financing under this scheme.

A brief session on Techno Economic Advances in Roof Top Solar Systems was taken by **Dr Suresh C. Bajpai, Chief Advisor, Regional Institute of Social Entrepreneurship (RISE)**.

The National Solar Conclave was concluded with the address by Mr. Sunil Vaish, President IIA and Session Chairman, followed by the vote of thanks by Mr Tariq Hasan Naqvi, Co- Chairman, Solar Energy Committee of IIA.



Question/Answer Session during National Solar Conclave





DAY-3

Closing Ceremony (25th FEB. 2018)

Three days All India Solar Summit (AISS-2018) concluded on 25th Feb 2018. **Chief Guest for the closing ceremony of AISS-2018** was Mr Devendra Chaudhary, I.A.S, Chairman UPSRTC, Govt. of Uttar Pradesh. Mr. U.C. Shukla, Director, MSME-DI, Kanpur was the Guest of Honour.



On his arrival , the Chief Guest alongwith President IIA Mr Sunil Vaish and other Senior Office bearers of IIA took a round to each of the Exhibition Stall and took keen interest in enquiring about the products and services displayed by the Exhibitors.



Mr. Devendra Chaudhary, I.A.S, Chairman UPSRTC, Govt. of Uttar Pradesh visiting Exhibition area of AISS- 2018

On completion of the visit to Exhibition Area, the Chief Guest had a look at the feedback given by the Visitors to the Exhibition. Mr Chaudhary said that getting feedback from the visitor is more important than the feedback from the Exhibitors in such events. If the visitors are satisfied the exhibitors will benefit automatically.



Chief Guest Shri Devendra Chaudhary, I.A.S, Chairman UPSRTC, Govt. of Uttar Pradesh viewing the Feedback of Visitors in IIA 's President Room after Visit

A committee of Indian Industries Association headed by the President IIA also evaluated the Exhibitors for awarding them 1st, 2nd, 3rd and Consolation prizes based on Display, Technology and Presentation accordingly M/s Easy Solar Solutions Pvt. Ltd., Goldi Green Technologies & SuKam Solar Power Ltd. and Clean Power Tech were adjudged for awarding 1st, 2nd, 3rd & Consolation Trophies. The selection of the awards was got confirmed by the Chief Guest also.

Closing Ceremony function was held in the Conference Hall of IIA Bhawan. At the outset President IIA Mr Sunil Vaish delivered the welcome address and Mr K.K. Agrawal, General Secretary IIA presented a comprehensive report of the proceedings of all the three days exhibition as well as National Solar Conclave organized on 24th February 2018.

Mr Devendra Chaudhary, Chairman UPSRTC and the Chief Guest for the Closing Ceremony said, “looking at the efforts Indian Industries Association is putting to promote the Solar Energy, I must congratulate the Management of IIA”. The Chief Guest expressed his satisfaction on the quality of exhibitors as well as the feedback of the Visitors. Shri Choudhary said that Govt. of India have now fixed a Renewal Energy Purchase obligation (RPO) of 8% for the Power utility Companies in the States. It was difficult for the Power Companies to adhere to this obligation in the past but the bundling is now easy because cost of Solar Power is coming down. There is a great scope for Rural Solar Electrification for which IIA should make a study said Mr Chaudhary.

In the end Chief Guest and the dignitaries sitting on the dais presented mementos to all the Exhibitors and Chief Guest presented trophies to the awardees.

Feedbacks about the event were taken from all the exhibitors. A positive feedback was received from a number of people, however some suggestions/ advices were also received for further improvements for the next year's event.



Mr. Devendra Chaudhary, I.A.S, Chairman UPSRTC, Govt. of U.P Addressing the Audience



M/s Easy Solar Solutions receiving 1st prize in AISS-2018



M/s Goldi Green receiving 2nd prize in AISS-2018



M/s Su-Kam receiving 3rd prize in AISS-2018



M/s Cleon receiving consolation prize in AISS-2018

In the end, dates of All India Solar Summit- 2019 were announced and the banner of AISS-2019 was unveiled. President IIA Shri Sunil Vaish, during his address said that on the basis of success of AISS-2018, we expect that next edition will have more Solar Companies participate.



President IIA presenting Memento to the Chief Guest of Closing Ceremony AISS-2018



National Treasurer, IIA giving vote of thanks in the Closing Ceremony AISS-2018

Press coverage of All India Solar Summit- 2018

(23rd to 25th Feb. 2018)

A collage of newspaper clippings from various Indian publications, including Hindustan Times, The Pioneer, and Hindustan Times Lucknow, covering the All India Solar Summit 2018. The clippings feature headlines such as 'Solar electrification will curb problem of land availability', '10 हजार सूर्य मित्रों की होगी भर्ती', 'सोलर प्रदर्शनी का हुआ आगाज', and 'प्रदेश में मार्च तक 1000 मेगा वाट सौर ऊर्जा के टेण्डर जारी होंगे'. The images show various attendees, including officials and industry experts, at the summit events.