

Conference on

# DISTRIBUTED SOLAR IN INDIA

Rooftop Power, Microgrids and  
Solar Pumps

December 5, 2018, Le-Meridien, New Delhi

Supported by:



Conference on

# O&M FOR SOLAR PROJECTS

Pressing Issues, Evolving Landscape and  
Growing Role of Digitalisation

December 6, 2018, Le-Meridien, New Delhi

Organisers:



RenewableWatch

Co-sponsor:



## Mission

- Although officially, all villages in the country have been connected to the power grid, nearly 240 million Indians continue to lack access to electricity. In this scenario, distributed solar power is a good way to electrify remote habitations in a cost-effective way. This could be in the form of setting up rooftop plants, solar-based microgrids, etc. Distributed solar power generation can play a major role in the country's energy security as well as economic progress.
- While subsidies are crucial for this market, sustainable growth cannot depend purely on financing support. The distributed solar segment is now at a pivotal point where market forces have made it economically viable to function without the need for financial assistance. A drop in the costs of solar power equipment, increased awareness and the existence of multiple business models have all precluded the need for financial assistance from the exchequer.
- The challenges in handling this type of power now pertain to the regulatory and technical aspects. To encourage distributed generation of solar power, the government needs to provide support by ensuring that commercial and industrial customers are not subjected to adverse charges or approval processes by their local distribution companies when they decide to invest in a rooftop solar system.
- Further, a long-term goal needs to be set for the microgrid segment for lowering the investment risks in this space. This market faces a number of challenges pertaining to the lack of a regulatory framework, and these need to be sorted out at the earliest.
- Going forward, the distributed solar segment is bound to grow because of the benefits it offers and the government's increased focus on promoting the development of decentralised sources of energy through various rooftop programmes supported by comprehensive state-level net metering regulations.
- **The mission of this conference is to highlight the emerging opportunities in the distributed solar space in India; analyse the performance of operational projects; examine the key challenges; and showcase the most promising technologies, business models and noteworthy projects. The conference will also provide a platform to industry players, government officials, rooftop project owners and microgrid operators to share their experience and exchange ideas.**

## AGENDA/STRUCTURE

The conference agenda will cover the following topics and themes:

❖ EMERGING TRENDS AND MARKET SIZE

❖ SPOTLIGHT ON THE RESIDENTIAL SEGMENT

❖ COST TRENDS AND PROJECTIONS

❖ MICROGRIDS: HOW CAN THEY FIT INTO THE BIGGER PICTURE?

❖ ROOFTOP SOLAR IN THE COMMERCIAL AND INDUSTRIAL SEGMENTS

❖ ROLE AND OPPORTUNITY OF ENERGY STORAGE

❖ STATE FOCUS SESSION:

The session will cover regulatory scenario, challenges and opportunities

❖ SECTOR FOCUS SESSION:

The session will cover plans, potential and achievements across sectors such as telecom, airports, railways, ports and metro rail

❖ SOLAR PUMPS: GROWING GOVERNMENT FOCUS

❖ DISCOMS' PERSPECTIVE

## Target Audience

The two conferences will have participation from executives, managers and decision-makers from:

- Distributed solar developers and operators
- Inverter manufacturers
- Consultancy organisations
- Panel manufacturers
- Financial institutions and investors
- Captive power users
- Utility representatives
- Regulatory agencies
- Technology providers
- Research agencies
- OEM players
- Equipment manufacturers
- Rooftop solar equipment manufacturers
- Government agencies
- Solar energy service providers
- Energy storage experts
- Rooftop solar developers
- Distribution companies
- HT power consumers
- Solar pump manufacturers
- Etc.

## Mission

- Solar plants are built to last 20–25 years. After the engineering procurement and construction (EPC) period is completed, developers need to ensure that the operations and maintenance (O&M) activities are seamless for sustained energy generation over the project lifetime.
- In the initial years of solar power development in India, O&M was often coupled with EPC and performed by the same vendors. But of late, solar O&M has emerged as a separate market with its own landscape, trends and dynamics. These trends are derived from the broader developments in the sector, which is growing at a CAGR of over 65 per cent. Project sizes are getting larger, tariffs are declining and there are large capacities in the pipeline for development.
- As a result, a large number of O&M-focused players are coming up, some as hive-offs from existing EPC companies and others as independent specialists. These include vertically integrated players providing O&M as part of a broader package, EPC players venturing into the O&M space and specialised/stand-alone O&M contractors.
- The total addressable market for solar PV O&M is expected to reach 30 GW in 2018-19. It is likely to more than triple by 2022 to exceed 100 GW, clearly presenting a significant business opportunity.
- Going forward, digitalisation and automation will play a key role in providing efficient O&M services, thereby changing the O&M cost composition, which is currently dominated by manpower expenses.
- The mission of this conference is to highlight the emerging opportunities in the solar O&M space in India, examine the key issues and challenges, discuss the role of digitalisation and automation, and showcase the most promising technologies, business models and noteworthy projects. The conference will also provide a platform to industry players, government officials and technology providers to share their experience and exchange ideas.

## AGENDA/STRUCTURE

The conference agenda will cover the following topics and themes:

❖ MARKET SIZE AND PROJECTED OPPORTUNITY

❖ COST TRENDS AND COMPOSITION

❖ PROJECT DEVELOPERS AND O&M PLAYERS' PERSPECTIVE

❖ EMERGING O&M BUSINESS MODELS

❖ LEGAL ISSUES AND CONSIDERATION IN O&M CONTRACTS

❖ IMPACT OF FORECASTING, SCHEDULING AND DSM REGULATIONS ON PLANT O&M

❖ GROWING ROLE OF AUTOMATION AND ARTIFICIAL INTELLIGENCE IN O&M

❖ FOCUS ON MODULE CLEANING SOLUTIONS AND TECHNOLOGIES

❖ CASE STUDIES OF UTILITY AND ROOFTOP PLANTS

## Previous participants at related conferences

*The participants in our recent Solar conferences on Solar Power in India include: ABB India Limited, ACME, Adani Green Energy, Adani Ports, Aditya Birla Management, AES India, Aligarh Muslim University, Amplus Solar, Arctech Solar, Avnet, AZB Partners, Benara Solar, Birla International, Bridge To India, CESC, C & S Electric, Canadian Solar, Clean Max Enviro Energy, Corning Technologies, Coslight India, CLP India, CTR Manufacturing, Customized Energy Solutions, Daqo New Energy, Delta, Dhanush Infrastructure, DLF Power & Services, Damodar Valley Corporation, Energy And Environment Foundation, Emergent, Enerparc, Eicher Engines, Enrich Energy, Essel Green Energy, Exide Industries, First Solar, Fortum India, Fronius India, Gensol, GETCO, Greenko Group, GIZ, Global Village Foundation, HAREDA, Hareon Solar, Hero Future Energies, HIS Markit, Huawei, HPGCL, ICRA, IDBI Bank, IDFC Alternatives, IDFC PE, IFCI, India Energy Forum, India Infradebt, Indus Towers, ICFI, ICRA, Integrated Research and Action For Development, Infrastructure Development Corporation (Karnataka), IL&FS Energy Development Company, IREDA, ICICI Bank, IIFCL, Infokool, International Advanced Research Centre for Powder Metallurgy and New Materials (ARC), Jakson & Company, JSW Steel, Kaco, KEI Industries, Kstar, Kirloskar Electric Company, Khaitan & Co, KPMG, L V S Power, Luminous Power Technologies, Luthra & Luthra, Maruti Suzuki, Maharishi Solar, Madhav Corp., Mitsubishi Chemical, MNRE, MMRDA, Moser Baer Solar, MEDA, Ministry of Power, Motilal Oswal, NAIR, NELCO, NSEFI, Nextech Electronics, NTPC, One Indiabulls Centre, Optimum Tracker, PEDA, Phono Solar, Portolan Solutions, POSOCO, Praxair India, PTC India Financial Services, Prudent Insurance Brokers, RAGA Integrated Technology, RAL, RDSO, Ru-arch Power, Safire Capital Advisors, SEMBCorp Green Infra, SBI Caps, Solar Energy Corporation of India, Solar PDA, Siemens, Skyline Institute of Engineering & Technology, Solairedirect Energy, Swelect Energy, Suzlon Energy, Sprng Energy, Sterling & Wilson, Sunergy Consulting Services, Sungrow Power Supply, Suntech Power, Tata Steel, Telecom Network Solution, Tata Power Solar, Tikona Digital, Usha International, Vertivco, Vikram Solar, Voltamp Transformers, Yes Bank, Yes Securities, Zhshine Pv-Tech, etc.*

## Organisers

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company publishes **Power Line**, **Renewable Watch**, **tele.net**, **Indian Infrastructure** and **Smart Utilities** magazines. It also publishes **Power News** (a weekly newsletter), and a series of reports on the energy sector, including **Solar Power in India**, **Future of Solar O&M in India**, **Power Transmission in India**, **Smart Cities in India** and **Wind Power in India**. It also publishes the **Solar Power Directory and Yearbook**.

# REGISTRATION FORM

I would like to register for the "DISTRIBUTED SOLAR IN INDIA" conference (December 5, 2018, Le-Meridien, New Delhi)

I would like to register for the "O&M FOR SOLAR PROJECTS" conference (December 6, 2018, Le-Meridien, New Delhi)

I would like to register for **both the conferences**

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are available**

## REGISTRATION FEE

### ANY ONE CONFERENCE

Delegates	Fee			
	INR	GST @18%	Total INR	Total USD
One delegate	16,000	2,880	18,880	315
Two delegates	28,000	5,040	33,040	551
Three delegates	40,000	7,200	47,200	787

### BOTH CONFERENCES

Delegates	Fee			
	INR	GST @18%	Total INR	Total USD
One delegate	22,500	4,050	26,550	443
Two delegates	37,500	6,750	44,250	738
Three delegates	52,500	9,450	61,950	1,033

- Registration will be confirmed on the receipt of payment.
- To register online, please log on to <http://indiainfrastructure.com/conf.html>

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- Full payment must be received prior to the conference.
- Conference fee cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.
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