

# SESI Newsletter

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been gathered from various original and public sources.*

## 106<sup>th</sup> Governing Council Meeting of SESI held on 13<sup>th</sup> May, 2011



**T**he 106th Governing Council Meeting was held in New Delhi on 13 May, 2011. Shri Ajay Prakash Shrivastava, President, SESI chaired the meeting. Other members of the G.C. who participated in the meeting are Mr. Rajinder Kumar Kaura, Secretary General, Mr. K.S. Popli, Dr. M. Srinivasan, Mr. Prafulla Pathak, Dr. M. Srinivasan

and Mr. Ragvendra Aggarwal. The important points discussed in the meeting are matters relating to 2nd International Conference on JNSSM held on 19-20 April, 2011 at Mumbai, Budget for SESI for the year 2011-2012, Budget of ICORE-2011, progress of various activities of ICORE-2011 and Trade Show, SESI Journal etc.

## SESI President visits Dubai on invitation of UNO

On the invitation from the United Nations Conference on Trade and Development (UNCTAD), Geneva, Switzerland, Mr. Ajay Prakash Shrivastava, President of Solar Energy Society of India (SESI) went to Dubai, United Arab Emirates, between 9th and 12th of May, 2011 to attend the first Annual Investment Meeting (AIM 2001) organized by UNCTAD in partnership with the Ministry of Foreign Trade of United Arab Emirates (UAE).

The meeting was held in Dubai International Convention and Exhibition Centre from 10th to 12th May, 2011.

Mr. Shrivastava was invited to participate in the panel on Green FDI.

The Investment Showcase focused on emerging investment opportunities in Kenya, Malaysia, Morocco and Uzbekistan.

The views and insights of Mr. Shrivastava during the panel discussions were much appreciated and contributed to a very successful meeting. The High-Level Session received good feedback from participants and got wide coverage by the local and international media.

## SESI Team visits Tezpur University Assam for ICORE-2011

During the Governing Council Meeting of SESI held recently it was decided to have frequent visits to Tezpur University to interact with the local organizing committee regarding the arrangements for ICORE-2011. A team comprising of Shri Rajinder Kumar Kaura, Secretary General, SESI and Shri Jagat Jawa, DG, SESI visited Tezpur University on 29-30 May, 2011.

The team had review meeting with Local Organizing Committee headed by Prof. D.C. Baruah who is the Head of Department, Department of Energy, Tezpur University. During the meeting various points were discussed regarding successful hosting of ICORE-2011 & Trade Show.

The SESI team alongwith Prof. Samdarshi also called on Professor Mihir Chaudhuri, Vice Chancellor, Tezpur University who is the Congress Chair for ICORE-2011. During the meeting Prof. Chaudhuri was apprised of the progress of various activities relating to ICORE-2011 & Trade Show. He very much appreciated that SESI had already sent invitations to Hon'ble Prime Minister of India and Hon'ble Minister for New and Renewable Energy to be the Chief Guest and Guest of Honour respectively during ICORE-2011. Prof. Chaudhuri also assured that all efforts would be made for successful hosting of ICORE-2011.

## 2<sup>nd</sup> International Conference on National Solar Mission held at Mumbai

The two days Conference on National Solar Mission –Issues & Solutions was organized by SESI and Electronics Today jointly on 19-20 April, 2011 at Bombay Exhibition Centre, Goregaon, Mumbai. More than 200 participants from different parts of the country took part in it and there were eminent Speakers from Govt. departments, industry, academia, research institutes, financial agencies, consultant etc.

Mr. Deepak Gupta, Secretary, Ministry of New and Renewable Energy, Govt. of India was the Chief Guest in the Inaugural Session of the Conference. Mr. Ajay Prakash Shrivastava, President, SESI, in his welcome address appreciated the steps being

taken by Govt. departments for implementation of National Solar Mission. Mr. Rajinder Kumar Kaura, Secretary General, SESI, outlined some of the critical issues being faced by the solar industry in setting up of solar power plants but assured that SESI would support MNRE for achieving the targets set in the National Solar Mission. Mr. Deepak Gupta, clarified the various points coming in the way of timely completion of solar power plants and assured MNRE help and support to the genuine problems of the solar industry.

Other speakers in various sessions of the Conference were Mr. V.S. Verma, Member, CERC, Dr. Ashvini Kumar, Vice President, SESI and Director MNRE, Mr. K.S. Popli, Treasurer, SESI and Director IREDA, Mr. Ravi Khanna, Vice President (North), SESI and CEO, Solar Power Business, Aditya Birla Group, Mr. A.K. Maggu, GM, NVVN, Mr. B.V. Rao, GM, IREDA, Mr. Rakesh Kumar, Executive Vice President, PTC India, Mr. Shiv Shukla, President, Abengoa Solar India Pvt. Ltd., Mr. Rajiv Gyani, Executive Engineer, CREDA, Prof. Swati Ray, Head, Energy Research Unit, India Association of Cultivation of Science, Mr. Gautam Mohanka, Managing Director, Gautam Polymers, Mr. Joy Ganjoo, MD, Lotus Technologies, Mr. Rajesh Singh, GM, Positive Packaging Industries, Mr. Pankaj Chaudhury, India Representative, VDE Testing and Certification Institutes, Dr. Ranjana Jha, School of Applied Sciences, Netaji Subhash Institute of Technology, Ms. Vanita Thakkar, Asstt. Professor, KJIT University, Mr. Sayed Mujibur Rehman, Research Scholar, Jadavpur University, Mr. Ishan Jaithwa, KIIT University, Ms. Pragya Sharma, Solar Research Wing, Gujarat Energy Research and Management Institute, etc. The two days Conference was a grand success.

# TOWARDS ENLIGHTENING LIFE IN RURAL INDIA

## 5 MWp Solar PV Grid Interactive Plant - Rajasthan



**R**eliance Industries Limited (RIL), India's largest private sector enterprise with businesses in diverse sectors has commenced Solar Group in 2007-08. Thus, in addition to the several Off-grid products and projects, it has made concrete efforts to come up in big way with Grid- Connected Solar PV Power Plants.

Reliance Industries Limited recently installed the ground mounted solar PV system at Khimsar, Rajasthan with

a generating capacity of 5 MWp in a state of art solar farm in the country.

Through this project it has been proved that even the barren lands can earn and contribute to the country and become an energy pocket in itself.

The project includes design, supply, installation, commissioning, operation and maintenance for 25 years. The electricity generated by the plant will be supplied to three discoms of Rajasthan.

Project is standing with its head held

high in a small village named Khimsar, district Nagaur. This location has been selected based upon the excellent solar irradiance received compared to other locations. The plant covers 35 acres of land.

The general weather there is hot and dry. The ambient temperature ranges from 48oC in summers to 5.5oC in winter season. The high temperature during the summer, the dusty storms and some times the rains made the project more challenging.

## PLG Comes Up With 40 Mw of Solar Power Generation Unit in India

PLG Power Limited is the flagship energy and Power division of the 3500 cr. PLG Group has started its 40 MW Solar Power Generation Plant in Patan near Ahmadabad. PLG is one of the leading manufacturers of crystalline PV modules in India with their manufacturing plant at Sinnar, Nasik.

The Company has already signed the PPA (Power Purchase Agreement) for the generation of 40MW Solar Power with the government of Gujarat. PLG has got the distinction of becoming the very first company to come up with 40 MW of solar power generation at a stretch in India. PLG Power has the equity participation of 20 MW with Zamil of Saudi Arabia and 20 MW with Ashburg of U.K.

CEO of the Company Mr. Punit K. Goyal Informed that The Power generation of 40 MW will be into four purchases of 10 MW each. 1st phase of 10 MW is likely to be connected shortly for the power generation. And all 4 phases of 40 MW Power generation will be completed by the end of next financial year.

## W2E Incinerator Site to be Reconsidered in Delhi

The Delhi government is considering relocating a waste to energy facility that is due to be operational in July in a crowded south Delhi suburb home to 600,000 people, as per the report published by Waste Management World

The 16 MW waste incineration plant, currently under the construction has sparked controversy with residents and environmentalists, leading environment minister, Jairam Ramesh, to write a letter expressing his concern.

One of the bones of the contention, is that the facility is intended to burn RDF pellets derived from mixed, unsorted waste-including e-wastes and chlorinated plastics, the report maintained.

## Solar Junction Breaks World Record with 43.5% Efficient CPV Production Cell

Solar Junction, a developer of high efficiency multi-junction cells for the concentrated photovoltaic (CPV) market, recently announced it has set a world-record for 43.5 percent efficiency on a commercial-ready production cell. This achievement was, in part, supported under the U.S. Department of Energy (DOE) PV Incubator Program, managed through DOE's National Renewable Energy Laboratory (NREL). The cell's efficiency was confirmed by NREL's Measurement and Characterization Laboratory. The 5.5mm x5.5mm production cell tops the current record by 1.2 percent and is significantly higher than the average efficiency gain achieved by previous record holders. The Solar Junction cell measured a peak efficiency of 43.5 percent at greater than 400 suns and still maintained an efficiency as high as 43 percent out to 1,000 suns.

Solar Junction's cells incorporate the company's proprietary adjustable spectrum lattice matched, A-SLAM tm technology, which enables the company to more optimally partition the solar spectrum for maximum efficiency and greater reliability. Increases in CPV cell efficiencies are a key driver for improving CPV economics, with each cell efficiency gain leveraged and multiplied in value by the components that account for the remaining 80 percent of total system costs.

## CLP India expands its wind portfolio by 152.8MW with two new wind farms

CLP India, one of the largest foreign private power players in India, recently announced that it will develop two new wind farms – one in Rajasthan and the other in Andhra Pradesh. The 102.4MW Sipla Wind Farm will be located at Jaisalmer District in the state of Rajasthan, and the 50.4MW Narmada Wind Farm will be located at Nallakonda, Anantapura District in Andhra Pradesh. CLP India has entered into agreements with major wind turbine manufacturer, Enercon India Ltd to develop these Greenfield projects.

The Sipla and Narmada Wind Farms will use 128 and 63 Enercon Gearless E53 800kW wind turbines respectively. Both projects will be developed and constructed under a comprehensive EPC arrangement and will be commercially operational by March, 2012.

## XL Energy bags EPC contract for solar plant

XL Energy Ltd., on Wednesday bagged order valued Rs. 12.1 crore for the turnkey supply and installation of solar power plant in Haryana.

The company said the project had achieved financial closure, while the various other opportunities under negotiation are at various stages of closure and should conclude in the near future.

Dinesh Kumar, the company's Chief Executive Officer and Managing Director said: "XL Energy is in active negotiations for securing turnkey contracts in a big way in many states in India and announcements of these projects are expected in April/ May.

XL Energy has been focusing on on-conventional energy sector since 1994 and has recently shifted its focus to Indian market as a turnkey solution provider for setting up complete solar power plant in addition to export sales of solar panels of higher capacity.

## World PV market grew to 18.2GW in 2010, up 139% on year, says Solarbuzz

Worldwide solar photovoltaic (PV) market installations reached a record high of 18.2GW in 2010, representing a 139% growth on year, according to research firm Solarbuzz.

The PV industry generated US\$10 billion in global revenues in 2010, up 105% from US\$40 billion in 2009. Companies throughout the PV chain successfully raised more than US\$10 billion in equity and debt over the last 12 months.

In 2010, the top five countries by PV market size were Germany, Italy, Czech Republic, Japan, and the United States, representing over 80% of global demand. European countries represented 14.7GW, or 81% of world demand in 2010. The top three countries in Europe were Germany, Italy, and the Czech Republic, which collectively totaled 12.9GW. The Japanese and US markets grew by 101% and 96%, respectively. In all, over 100 countries made some contribution to soaring global PV demand last year.

Worldwide solar cell production reached 20.5GW in 2010, up from 9.86GW a year earlier, with thin film production accounting for 13.5% of total production. Producers in China and Taiwan continued to build share, and now account for 59% of global

cell production, up from 49% last year. The top two cell manufacturers in 2010 were Suntech Power and JA Solar, who tied for the first position, followed closely by First Solar.

The top eight polysilicon manufacturers had 145,200 tonnes per annum of capacity in 2010, while the top eight wafer manufacturers accounted for 45% of global wafer supply. The excess of production over market demand caused crystalline silicon factor gate module prices to drop 14% in 2010, significantly less than the 38% reduction in the previous year.

By 2015, Solarbuzz projects the European market share to fall to between 45-54% as North America and several Asian markets grow rapidly. The US will be the fastest growing major country market over this period. Over the next five years, factory gate module prices are projected to drop between 37% and 50% from 2010 levels.

In the short term, assumptions about the immediate policy environment remain critical to outcomes over the next 24 months.

“The industry has now entered a phase of tightening incentive terms across important European markets. Cuts in unit tariffs will be far more rapid than the industry’s pace of cost reduction,” said Craig Stevens, president of Solarbuzz. “While some key markets will decline in size as a result over the next two years, the US, Canada, China, and Japan are some of the major countries that still offer growth potential. In addition, the rush to beat mid-year tariff reductions will ensure strong first half 2011 demand performance in Italy and Germany.”

Stevens added, “Planned manufacturing capacity expansions will ensure the industry has adequate cell supplies over 2011 and 2012. However, the potential for excess supply taken together with al-

ready planned subsidy cuts will make both years challenging for the industry.”

## UP ready with draft plan on climate change

The Uttar Pradesh Government is ready with its draft action plan on climate change. A German Government-owned corporation, GTZ, has formulated the draft plan and submitted it to the state’s Environment Department. After approval from the chief secretary, the draft plan will be finalized and sent to the Ministry of Environment and Forests. The action plan will be executed in the next 10 to 15 years under the eight missions set by the Prime Minister. These missions include National Solar Mission, National Mission for Enhanced Energy Efficiency, National Mission on Sustainable Habitat, National Water Mission, National Mission for Sustaining the Himalayan Ecosystem, National Mission for a Green India, National Mission for Sustainable Agriculture and National Mission on Strategic Knowledge. In the action plan, GTZ has recommended anticipatory planting of species across latitudinal and longitudinal gradient, promotion of natural regeneration and mixed species forestry, prevention of fire in forests, prevention of fragmentation of forests and linking of protected areas, sustainable harvesting of timber and non-timber product, protected areas management and reduced forest fragmentation by conserving contiguous forest patches. For enhancement of observational infrastructure under the State Water Mission, GTZ has recommended that an “early warning system” be provided in rivers originating from Uttarakhand and Nepal and infrastructure for monitoring water flow in rivers as well as weather parameters be

strengthened. GTZ has recommended that the state government obtain approval on Ground Water Control and Management Bill and develop ponds to store rain/food water in river basins to maintain minimum water flow in rivers. It recommended constitution of a Lake Development Authority and State Level Aquifer Management Authority. Under the Mission on Sustainable Agriculture, recommendation has made for effective extension of direct sowing systems and promotion of “climate change and suitable agro-based systems” through agro-science centres. Under the State Solar Mission for Enhanced Energy Efficiency, UP will work on action points including revision of Environment Impact Assessment standards making it more stringent for new thermal power plants, strict enforcement of energy audit and examination and certification by Bureau of Energy Audit.

## Tata Power to invest Rs. 13 bn in FY12 in wind, solar energy

Tata Power Company (TPC) said it will invest Rs.1,300 crore in 2011-12 to add 185 MW generation capacity from wind and solar energy. The company, which commissioned a 3-MW solar power in Maharashtra's Mulshi last month, is targeting to add 35 MW from solar in FY12 that will entail investing Rs. 550 crore. The capacity addition will come from a 25-MW project at Gujarat's Mithapur slated for commission in December, 2011 and the rest is equally divided between expanding at Mulshi and installing capacities on rooftops of buildings. The ramp-up on both solar and wind energy is partly necessitated by regulatory environment which asks a power distribution company

to source a certain percentage from cleaner sources. TPC's distribution arm operates in Mumbai and New Delhi. Though the power generated will go into a central grid, it has entered into necessary agreements, under which the power supplied is added to the distribution company's share from clean power. Under regulatory guidelines, TPC will be required to source 10 MW from solar power by FY12-end. The company, which has set an ambitious target of sourcing 25% of its total generation from clean sources by FY17, will also be upgrading its total installed wind power capacity to 400 MW from the current 250 MW. The wind power addition will require an investment of around Rs. 5 crore per MW, which translates to an investment of Rs. 750 crore. A bulk of the new capacity is coming up in Tamil Nadu, followed by Gujarat, Karnataka and Maharashtra.



Solar Energy Society of India (SESI) and Tezpur University Organise



# ICORE 2011

INTERNATIONAL CONGRESS ON RENEWABLE ENERGY (ICORE)

RENEWABLES: GROWTH THROUGH ACADEMIA-INDUSTRY INTERFACE

& **TRADE SHOW**

2-4 November, 2011, Tezpur University, Assam

For more information, please contact : Mr. Jagat S. Jawa, Director General

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# NEW & RENEWABLE ENERGY

## Cumulative Achievements as on 31.12.2010

No.	Sources / Systems	Cumulative Achievements
<b>1. Power From Renewables</b>		
<b>A. Grid-Interactive Renewable Power</b>		<b>In MW</b>
Wind Power		13065.78
Small Hydro Power		2850.25
Biomass Power (agro-wastes / residues)		979.10
Bagasse Cogeneration		1494.53
Waste to Power		72.46
Solar Power		17.82
<b>Sub total (A)</b>		<b>18479.94</b>
<b>B. Off grid/distributed renewable power (including captive/CHP plants)</b>		
Biomass power/Cogeneration (Non-Bagasse)		267.08
Biomass gasifiers		128.16
U&I waste-to-energy		60.78
Rural waste-to-energy		0.45
Solar PV Power plants and street lights (>1kW)		2.39
Aero-generators / hybrid systems		1.07
<b>Subtotal (B)</b>		<b>459.93</b>
<b>Total (A+B)</b>		<b>18939.87</b>
<b>2. Remote Village Electrification (villages / hamlets provided with electricity/lighting systems)</b>		<b>6446/1587</b>
<b>3. Decentralized Energy Systems</b>		
Family type biogas plants (in lakh)		43.10
SPV street lighting system (in nos.)		1,22,339
SPV home lighting system (in nos.)		6,69,400
SPV lanterns (in nos.)		8,13,380
SPV pumps (in nos.)		7495
SPV water heating-collector area (in million sq m)		3.53
Solar Cookers (in lakh)		6.64
Wind pumps (in nos.)		1420

Source: MNRE



**DD BERG PROJECT CONSULTANTS PVT. LTD.**



**Solar Farm**



**Telecommunication  
Solution**



**Water Pumping**



**Off Grid System**

DD Berg is a diversified company of Bergen Group having multinational foot prints in the field of Research and Development, Consultancy, Turnkey Solutions in the sector of Electronics Manufacturing and Renewable Energies.

With persistence and consistence pursuit of quality and executing excellence our experts strive to provide the customers with complete outstanding solutions.

We at this point are equipped for undertaking assignments and providing solutions for the Solar Farms on EPCI basis to be ready for the upcoming **Jawaharlal Nehru National Solar Mission** .

*“ We dedicate ourselves to provide the whole world with better PV solutions progressively “*

### **Our Strengths: Design -to -Delivery**

- Project Design
- Site Visit for Solar Farms
- Equipment Selection
- Construction – Facility & Utility
- System Designing ( Component Selection )
- Implementation
- Commissioning – Process Optimization
- Training – maintenance & manpower Development
- Power Evacuation
- Sales and Marketing
- Project Delivery

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