

SESI Newsletter

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INSIDE

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SESI News

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Editor: Jagat. S. Jawa

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SOLAR ENERGY SOCIETY OF INDIA

A-14, Mohan Cooperative Industrial Estate,

Mathura Road, New Delhi-110044

Telephone: 011-65649864, Telefax: 011-26959759

E-mail: dg_sesi@yahoo.com, info@sesi.in,

Website: www.sesi.in

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Indian Solar Industry participate in a big way in Intersolar Europe

The Intersolar Europe, 2011 Conference and Trade Fair was organized during June 6-10, 2011 at Munich, Germany. Dr. Farooq Abdullah, Hon'ble Minister for New and Renewable Energy (MNRE), Govt. of India inaugurated Intersolar Europe, 2011.



Mr. Deepak Gupta



Mr. D. Majumdar



Dr. B. Bhargava

Mr. Deepak Gupta, Secretary, MNRE, Mr. D. Majumdar, CMD, IREDA and Dr. B. Bhargava, Director, MNRE represented India in the official delegation in the above event. Indian Solar Industry also participated in the Conference in a big way. Solar Energy Society of India (SESI) had been invited by M/s Solar Promotion GmbH, the organizers of Intersolar to take part in this Conference and Trade Show which is considered to be the largest exhibition for solar industry.



Mr. Rajinder
Kumar Kaura



Mr. Ravi Khanna



Mr. Rabindra
Satpathy

Mr. Rajinder Kumar Kaura, Secretary General, SESI and CMD, Bergen Group of Companies was an Invited Speaker and also moderated a session chaired by Dr. Farooq Abdullah. Mr. Ravi Khanna, Vice-President, SESI and CEO, Solar Power Business, Aditya Birla Group was also an Invited Speaker in the above session. Mr. Rabindra Satpathy, Vice-President, SESI and President (Solar Energy Group), Reliance Industries Ltd., Mr. Jagat S Jawa, DG, SESI also participated in the Conference and Trade Fair

REC eyes renewable energy foray; plans investment

Looking to diversify into power generation, state-run Rural Electrification Corporation plans to set up renewable energy projects entailing an investment of about ` 2,800 crore in the next five years. REC, which offers finance for various power projects, plans to enter renewable energy sector through its subsidiary REC Power Distribution Company Ltd. Noting that plans for renewable energy are at initial stages, Khunteta said the company is in discussions with a number of players for the same. REC has already approached the Himachal Pradesh government for setting up about five to seven hydro electric projects.

Birla Surya to invest 54 bn in solar power unit

Birla Surya Limited, a part of the Yash Birla Group, plans to invest ` 5,400 crore, over the next five years, to set up an integrated unit for fabrication of multi-crystalline silicon wafers and manufacturing solar photovoltaic cells. The company would invest ` 1,493 crore in the first phase that would entail setting up of a manufacturing unit with 60 megawatt capacity for multi crystalline silicon wafers and a fabrication unit of capacity 125 mw. The decision to foray into solar power was driven by the opportunity arising from the government's National Solar Mission which aims at capacity of 20 gigawatts by 2022.

CLP may invest in first Indian solar project

CLP Holdings Ltd., the biggest power supplier in Hong Kong and India's largest owner of wind farms, may invest in

its first solar project in India next year. The Hong Kong-based company has begun collecting sun irradiation data at Indian wind farms to also evaluate the possibility of installing solar plants. CLP aims to get 20 percent of its power from renewable sources by 2020 and may complete its first 55-megawatt solar plant in Thailand. India is CLP's third-largest market by revenue after Hong Kong and Australia. Building solar plants alongside wind farms can be more efficient because the projects can share infrastructure, such as power lines and personnel. CLP didn't bid for licenses in India's first solar auction in part because the government limited the size of photovoltaic projects it awarded to 5 megawatts. The Ministry of New and Renewable Energy said that it may consider changing the rules in India's second solar auction, expected later this year, to lift restrictions on the size and amount of projects awarded to companies. In India, CLP has about 2,613 megawatts of capacity either built or under construction, including a 1,320-megawatt coal plant in Haryana.

Kerala, NTPC to rope in tribals for wind energy generation plan

The Kerala government has mooted a business-model with tribals of Palakkad to rev up its green energy production with an 80-mw wind power plan. The Kerala State Electricity Board (KSEB) will join hands with National Thermal Power Corporation (NTPC) for the proposal. According to the business plan, KSEB and NTPC will float an offer for utilisation of tribal-habitated land in Palakkad for wind power generation. If they agree, they would be adequately compensated by way of price of the land. The state outfit will also enter into a long-term agreement

with the tribals. According to the accord, the tribals are to be paid a fixed amount of money from every unit of power that is generated from the windmills that come up on their land. The two places identified as high potential for wind generation are Attapadi and Kanjikode in Palakkad district. Kerala has urged for additional power from central pool at subsidised rate, so that the state could be compensated for dropping several hydel projects on environmental reasons. KSEB expects the demand for power to reach about 6,000 mw in another ten years, while generation from both hydel and small thermal plants would remain at about 2,300 mw.

Solar industry ripe for consolidation

The solar power industry may be heading for a shake-out as sliding solar cell prices and looming overcapacity spark a round of consolidation and force small and weaker players out of the market. Solar companies are rapidly increasing their capacity to produce equipment despite fears that demand could slip this year as countries such as Italy cut solar power subsidies.

Moser Baer may start India's largest solar plant

Moser Baer Ltd., India's second-largest maker of solar cells, plans to start the country's biggest solar-power plant in the next three weeks. The 30-megawatt project in the western state of Gujarat would be India's largest solar photovoltaic plant to date. The project will use thin-film panels that are coated with a layer of semiconductor material to absorb sunlight. Moser Baer is using 10 megawatts each of panels made

by First Solar Inc., the world's largest maker of the thin-film devices, and DuPont Co., the third-biggest U.S. chemical maker, as well as its own panels.

Techno Electric Co Ltd achieves financial closure for 100 MW wind power project

Techno Electric & Engineering Company Ltd (TEECL), a company focused on power sector, has achieved financial closure for the first phase of 100 MW wind energy generation project in Tamil Nadu. Simran Wind Project Pvt Ltd., a wholly owned subsidiary of TEECL, has brought in International Finance Corporation (IFC), the investment arm of the World Bank as major investor. IFC has made a total investment of \$35 million, which is a mix of debt & equity. Equity investment by IFC is \$5 million, which translates into a 3.38% stake in Simran Wind Projects. The remaining \$30 million comes in the form of debt. TEECL's stake in the company will reduce to 96.62%. Along with IFC, leading foreign banks Standard Chartered Bank & DBS Bank are financing the project in the form of debt by investing \$30 million & \$20 million respectively. TEECL will be contributing \$48.33 million (₹ 218 crore) in the equity portion. The agreements were signed by TEECL at Kolkata, which marked the financial closure of Phase I. The total project cost for generating 100 MW of wind energy is \$133.33 mn (₹ 600 crore). Total debt financing amounts to \$80 mn (₹ 360 crore) and \$53.33 mn (₹ 240 crore) as equity investment. The debt-equity ratio for the project stands at 60:40, with Simran valued at \$148 million approximately. Out of the total 100 MW, Simran has already commissioned 37.5 MW. The

company has entered into a Power Purchase Agreement with the Tamil Nadu Generation & Distribution Company under the REC scheme for the 37.5 MW. The company is set to commission the entire 100 MW of the project by mid July 2011.

BHEL to set up 5 MW solar power plant for KPCL

The electronics division of Bangalore-based Bharat Heavy Electricals Limited has won a major turnkey contract for setting up an eco-friendly, grid-connected solar power plant of 5-MW capacity. Valued at ₹ 62 crore, the order for setting up a solar photovoltaic (SPV) power plant near Shivasamudram, in Mandya district, was placed on BHEL by Karnataka Power Corporation Limited (KPCL). BHEL's scope of work under the contract involves the design, manufacture, supply, installation and operation and maintenance of the solar power plant. With this order, BHEL is presently executing SPV-based power projects of various capacities totalling 16 MW, the company said. Solar cells and modules manufactured by BHEL are also exported to countries like Germany, Australia and Italy. The company's PV modules are certified to international standards by JRC, Ispra, Italy.

MBSL signs deal for solar modules distribution in US

Moser Baer Solar Limited (MBSL) has signed an agreement with Munro Solar for the distribution of its solar photovoltaic modules in the United States. Munro Distributing Company Inc. has its presence in 11 locations across four states in the East and West

coasts and will offer MBSL's multi-crystalline silicon solar modules and utilize them to design commercial turnkey solar PV systems for its customers.

India set to produce 700 MW solar power in 2011

India is on track to produce 700 megawatts of solar power at a cost of \$2.2 billion by December, ahead of an initial target for an ambitious plan that seeks to boost green power generation from near zero to 20 gigawatts (GW) by 2022. Under India's Solar Mission, investors bid to build solar power plants and the winning bids are determined by the electricity tariff that they accept as viable. Such has been the interest that the government has been flooded with investment pledges for the first batch of projects rolling out in December. India's 20 GW solar plan is likely to attract overall investment of about \$70 billion, the government has estimates. Issued in 2009, the plan envisages India producing 1,300 megawatts (MW) by 2013, another up to 10 GW by 2017 and the rest by 2022.

Konark Group eyes \$30-35 mn private equity investment in power arm

Konark Group plans to raise \$30 million-\$35 million through private equity placement in its power projects business. The Mumbai-headquartered group's listed company Konark Synthetics has set up a subsidiary, Konark Infratech, for foray into power sector. It plans to invest ₹ 1,000 crore to set up 155 megawatts of solar and wind capacity by 2015. The expansion would be financed through internal accruals, debt and private equity. The company aims to commission 15 MW of solar

power in 40 MW of wind energy by March 2012 and subsequently scale up the capacity to a total of 155 MW by 2015. To boost renewable energy in the country, the government, through the National Action Plan on Climate Change set a target of 15% share of clean energy in total generation. The Ministry of New and Renewable Energy subsequently brought down the target to 6% as against the current share of around 4%. The company plans to sell the power from its planned units to various state electricity boards.

Germany scraps reductions for photovoltaic power planned for July

The German government scrapped plans to reduce subsidized power prices paid for photovoltaic energy in July because new installations fell short of the level needed to trigger a cut. Germany, the world's largest solar market, installed 7.4 gigawatts of solar power as developers were spurred by its subsidized rate for clean energy known as a feed-in-tariff. The government had planned in July to advance 3 to 15 percent of the cut scheduled January 2012 to prevent a similar boom. The new installation figures show that there is no room for further cuts to solar subsidies. The industry hopes to install 5 gigawatts of solar capacity in Germany this year.

Italy solar power reform puts funding at risk

A reform of Italy's solar energy incentives scheme has put 1 billion euros (\$1.41 billion) of financing for the sector at risk of renegotiation. Italy approved a long-awaited decree on the

cuts in May, ending a period of uncertainty which had irked international investors and weighed on shares of major global solar companies. Italy's solar market, the world's second largest after Germany, has boomed since 2007 when the government boosted production subsidies but Rome has sought to cut incentives to help consumers who support the scheme through power bills. The decree aims to cap subsidies for solar developers at between 6 billion euros and 7 billion euros per year by the end of 2016, when installed capacity is expected to be around 23,000 megawatts. Italy's booming solar sector has attracted the world's biggest photovoltaic module makers such as China's Suntech Power Holdings Co Ltd, Trina Solar Ltd, Yingli Green Energy Holding Co Ltd and U.S. firms First Solar Inc and SunPower Corp.

U.S. solar capacity jumps 66 pc in first quarter on incentives, low prices

The amount of solar energy capacity installed in the U.S. increased 66 percent in the first quarter as panel prices fell and developers took advantage of expiring government incentives. Developers installed 252 megawatts of photovoltaic power systems in the first quarter, compared with 152 megawatts a year earlier, according to a report released by the Washington-based Solar Energy Industries Association and GTM Research. Commercial and government projects accounted for 59 percent of the installations, compared with 44 percent a year earlier. Residential projects were 28 percent and the remaining 13 percent came from utility-scale plants. The cost of installing solar power is falling, driven by lower costs for com-

ponents, greater economies of scale and streamlined development and installation, the report said. Prices of solar panels in the first quarter fell about 7 percent from a year earlier. First-quarter installation volume also increased after developers rushed to break ground on projects before the end of 2010 when a U.S. Treasury grant incentive program was set to expire. That program, which reimburses 30 percent of the costs of building solar systems, was extended in December until the end of 2011.

Johnson controls may seek to build solar-power plants in India

Johnson Controls Inc. (JCI), a U.S. developer of energy-saving technology and hybrid car batteries, may seek to enter India's solar industry as a plant contractor. India has awarded licenses to build at least 1,100 megawatts of solar capacity by next January, roughly equivalent to one new nuclear power plant and about 30 times what exists. Companies are racing to line up financing and contractors for projects to meet their deadlines. Within 20 years, India's solar sector could create a \$50 billion market and rival China's, Karkal estimated. Johnson Controls had global sales of \$12.8 billion installing equipment and controls for air-conditioning, heating, refrigeration and other processes that allow buildings to reduce energy consumption. The systems it has installed since 2000 have saved \$7.5 billion in operating costs, the company estimates. India is trying to pass legislation that would restrict the energy consumed by commercial buildings. If successful, that could create a \$500 million market within five years for services in Asia's third-largest energy consumer.

IFC invests in India's first large-scale thin-film solar plant to promote clean energy

The International Finance Corporation (IFC), a member of the World Bank Group, is investing \$4 million in India's Sapphire Industrial Infrastructures Private Limited to implement the country's first large-scale grid-connected thin-film solar plant. IFC said the plant will help bolster clean energy locally and provide additional electricity to about 11,000 people. IFC's investment in Sapphire, subsidiary of Moser Baer Clean Energy Limited, will support construction of the 5-megawatt solar plant at Sivaganga in Tamil Nadu, a southern state in India. The plant, with a capacity of 8 million units of power a year, is expected to avoid approximately 6,600 metric tons of greenhouse-gas emissions annually.

India among top destination for renewable energy investment

India and China are among the countries that are expected to see higher investment in the renewable energy sector, which has seen M&A deals worldwide worth over \$11 billion in first three months of 2011. The US, China, India, Germany and the UK would be top destinations for renewable energy investments.

World-Bank backed Azure starts up solar-power plant in India

Azure Power, an Indian developer of solar power plants backed by the World Bank, has started running a 5-mega-

watt project in western India. The state government of Gujarat will buy power from the plant under a 25-year power purchase agreement. The International Finance Corp., the private-sector financing arm of the World Bank, is an investor in the project. The 1.7 billion-rupee (\$38 million) project at Khadoda village in Gujarat's Sabarkantha district will be expanded to 10 megawatts by the time it's completed, Azure said. Other investors include the U.S. Overseas Private Investment Corp. and two venture-capital firms -- Helion Advisors, based in Gurgaon near New Delhi, and Menlo Park, California-based Foundation Capital, Azure said.

Agile receives \$24 mn from Good Energies for solar projects

Agile Energy Inc., a California solar power developer, raised \$24 million from Good Energies Capital. The funding is an extension of Good Energies' March 2010 Series A investment in Agile.

Bharat Heavy Electricals Ltd bags ` 620 mn solar contract

Bharat Heavy Electricals Ltd has won ` 62 crore order for setting up a solar power project at Belakavadi in Karnataka. Bharat Heavy Electricals Ltd is executing another 11-mw solar photovoltaic power projects. The company manufactures photovoltaic modules at its Bangalore manufacturing facility. Solar cells and modules manufactured by the company are also exported to countries like Germany, Australia and Italy. Bharat Heavy Electricals had signed an agreement with Spain's Abengoa to set up solar power projects in India. The companies seek

to tap emerging opportunities arising out of the Jawaharlal Nehru national solar mission, which aims at the establishment of 20,000-mw solar power generation capacity by 2022.

Astonfield inks deal with Grupo for Rajasthan project

Astonfield Renewable Resources said it has signed an agreement with Spanish firm Grupo T-Solar Global SA for setting up a solar power project in Rajasthan. Touted to be the first long-term strategic collaboration between the two companies, Astonfield will deploy T-Solar's thin film modules under the project. The project will be one of the first utility-scale solar power plants commissioned under the Jawaharlal Nehru National Solar Mission (JNNSM) and is expected to be commissioned by October, 2011. Construction on the project has begun and once operational, it is expected to generate at least 8,500 megawatt hours (MWh) per year, sufficient to power the equivalent of over 13,000 Indian households. T-Solar's strategic investment and project debt financing is in place from leading Indian banking institutions such as State Bank of India and the Export-Import Bank of India. Schneider Electric, a leading global engineering, procurement and construction company has been retained as project EPC manager.

India's NALCO to invest \$61 mn for wind power project

State-run National Aluminium Co Ltd (NALCO), India's third-largest aluminium producer, said it plans to build a 50 megawatts wind power project at Gandikota in the southern state of Andhra Pradesh. The company will

invest 2.74 billion rupees (\$61 million) for the project. The order will be executed by wind turbine maker Suzlon Energy.

Govt sanctions 4.8 bn fund to help solar power producers

The Union Cabinet has approved setting up a ` 486 crore contingency fund to compensate solar power producers for possible default by state electricity boards, giving a boost to the rapidly growing sector. The fund would be utilized for phase 1 of the National Solar Mission and would act as a security to the central agency purchasing solar power from the developers. This scheme will facilitate setting up 1000 MW grid connected solar power projects. This funding would expedite the process of financial closure of the pending projects. Termed as a payment security mechanism, the fund would result in creation of Solar Payment Security Account. This would be provided to Ministry of New and Renewable Energy for ensuring availability of adequate funds to address all possible payment related risks in case of defaults by distribution Utilities for the bundled power. NTPC Vidyut Vyapar Nigam (NVTN) is the nodal agency which will purchase Solar Power from the developers and sell it to the utilities bundled with unallocated Thermal Power available from NTPC. The Payment Security Scheme (PSS) will be implemented by the Ministry of New and Renewable Energy (MNRE) and NVTN has the provision

to draw funds as per the requirement. MNRE would allocate funds for each year for the account. A Fund Management Committee (FMC), comprising of the Secretary, MNRE, representatives from Planning Commission and from Ministries of Expenditure and power will oversee the overall implementation of this scheme and shall be empowered to issue any directions to remove any difficulties with regards to its implementation. The Jawaharlal Nehru National Solar Mission (JNNSM) was launched by the Government in 2010 as a part of National Action Plan on Climate Change. It envisages 20,000 MW of grid-connected solar power by 2022 and 2,000 MW equivalent off-grid solar applications. Payment Security Mechanism approved by the Government is critical for achieving financial closure by the developers of the solar power projects given that the associated risks, especially, pertaining to technology and performance are not fully understood under Indian conditions.

SBI agrees to record 14 year loan for T-Solar, Astonfield plant

State Bank of India, the nation's largest lender, and a government trade bank will extend a record 14-year loan to a solar plant being built by Spain's Grupo T-Solar Global SA and Astonfield Renewable Resources. The long tenure may be the longest in the south Asian nation where banks have been reluctant to offer loans for more than 10 years to the nascent sector.

Nature helps: Solar power lights up thousands of homes

It's the solar power which is lighting up homes in many parts of the state. Over two months after Tata Power commissioned the 3-MW solar power plant at Mulshi in Pune district, it has been producing around 13,000 units of electricity every day to meet the energy requirements of the people.

Suntech says to up wafer self-supply, sees further growth

Suntech Power Holdings, the world's largest solar cell maker, aims to boost its in-house wafer production to 50 percent of its total cell capacity. Suntech said the company would increase its solar panel capacity to 2.4 gigawatts (GW) by end-2011, raising funds for expansion through joint ventures, bank loans and its own capital.

U.S. offers \$150 mn loan aid for solar wafers

The U.S. Energy Department offered a \$150 million conditional loan guarantee to 1366 Technologies Inc to support development of the company's solar wafer technology. The company's technology could lower the cost of manufacturing solar wafers by about 50 percent. Solar wafers are used to make the cells that transform sunlight into electricity in panels.

Organiser



Co-organiser



Tezpur University, Assam

Solar Energy Society of India organises



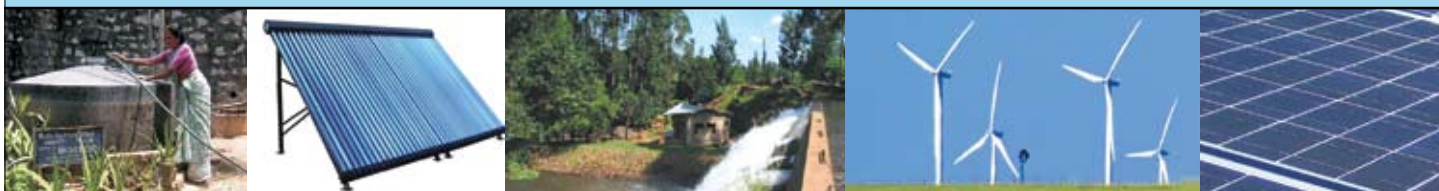
ICORE 2011

INTERNATIONAL CONGRESS ON RENEWABLE ENERGY (ICORE)

RENEWABLES: GROWTH THROUGH ACADEMIA-INDUSTRY INTERFACE

& **TRADE SHOW**

2-4 November, 2011, Tezpur University, Assam



ICORE 2011

Solar Energy Society of India (SESI) has been organizing conventions/conferences/ seminars since last over three decades at national/international level. During the period it has undergone profound changes and finally it has grown up to take up the challenge of organizing an annual event like ICORE (International Congress on Renewable Energy) thus bringing India at par with developed nations having international events on regular basis. The congress covers all the aspects of new and renewable energy thus providing excellent platform for all renewable energy researchers, academia, policy makers and industries of India as well as abroad. This year the ICORE 2011 is proposed to be held at Department of Energy, School of Engineering, Tezpur University, Tezpur from 2-4 November, 2011.

Important topics for Conference

- Solar PV Systems & Technology.
- Off Grid Applications of Solar PV.
- Solar Thermal systems & Technology.
- Tidal, Small Hydro and other renewable technologies.
- Employment Generation through Renewables
- Manufacturing and Equipment
- Biomass and bio-fuel-conversion technology.
- Policy and Programme Implementation on RE.
- Wind Energy
- Electrochemical energy conversion & storage.
- Hydrogen energy production & storage.
- Application of nano materials in energy systems.
- Energy, climate change and carbon trade.
- Renewable energy education capacity building & training.

Organized By :



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

SOLAR ENERGY SOCIETY OF INDIA (SESI)

(Indian Section of the International Solar Energy Society)

A-14, Mohan Cooperative Industrial Estate, Mathura Road,

New Delhi-110044 (INDIA), Tel.: + 91-11-65649864, Telefax: + 91-11-26959759

E-mail : dg_sesi@yahoo.co.in, info@sesi.in, Website : <http://www.sesi.in>, www.icoreindia.org

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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

email: Info@ddberg.com

www.ddberg.com

690-691, Phase- V, Udyog Vihar, Gurgaon-122016(Haryana) Tel: +91-124-4002342-43, Telefax: +91-124-4002344.