Bharat Heavy Electricals Limited

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Press Release

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4,000 MW Ultra Mega Solar Power Project to be set up in Rajasthan; To be the largest single location solar electricity generation project in the world; BHEL, SECL, SSL, Powergrid, SJVN and REIL sign historic MoU

An Ultra Mega Solar Power Project (UMSPP) with a cumulative capacity of 4,000 MW will be set up in Rajasthan in the Sambhar Salts Limited (SSL) area close to Sambhar Lake, about 75 kms. from Jaipur. Significantly, with the commissionong of this plant and commercial utilisation of the harvested energy therein, this would become the largest single location solar electricity generation project in the world. A Joint Venture Company (JVC) will develop the Solar Power Project on the surplus land available with SSL in Sambhar, Rajasthan with equity participation from Bharat Heavy Electricals Limited (26%), Solar Energy Corporation of India (23%), Hindustan Salts Limited (16%), POWERGRID (16%), Satluj Jal Vidyut Nigam Limited (16%) and Rajasthan Electronics and Instruments Limited (3%). The project set up on land provided by SSL will have equipment supplied by **BHEL**, power evacuation by POWERGRID, sale of electricity by SECI, O&M by REIL and project management by SJVNL. The plant shall be set up in two phases over a period of 7 years with Phase I comprising 1,000 MW and the balance 3,000 MW in subsequent phases.The JVC shall be incorporated as a public limited company under the Companies Act, the JVC, under DHI and will have at its registered office in Delhi/NCR. To this effect, a Memorandum of Understanding (MoU) was signed among the six companies in the presence of Sh. Praful Patel, Honâ€™ble Union Minister of Heavy Industries and Public Enterprises, Government of India, Dr. Farooq Abdullah, Honâ€™ble Union Minister of New and Renewable Energy and other dignitaries. Sh. B. Prasada Rao, CMD, **BHEL**; Sh. Mr. Rajendra Nimde, MD, SECI; Mr. R.K. Tandon, CMD, SSL; Mr. R.N. Nayak, CMD, Powergrid; Mr. R.P. Singh, CMD, SJVN and Mr. A.K. Jain, CMD, REIL, signed the MoU. Directors on the board of **BHEL** as well as officials of the Ministry of Heavy Industries & Public Enterprises, **BHEL**, SECI, SSL, Powergrid, SJVN and REIL, were also present on the occasion. The solar Power Plant will rely on proven and reliable Crystalline Silicon technology supplemented by refinements in encapsulation hardware and Mounting configuration to surmount the harsh tropical environments. With an estimated plant life of 25 years, the generation potential of the 4,000 MW Solar plant is estimated to be 6400 million units of (Solar) electricity per year. This is expected to reduce the Carbon footprint by over 4 million tons per year. The mega scale project will not only demonstrate the reliability of Solar PV power but also provide further impetus to this clean, cheap and abundant source of power. The implementation and commissioning of a utility scale 4000 MW Solar power plant presents critical design challenges and logistical planning strategies. The

land development, alignment and topology of Solar arrays, Design of Power electronics, Electrical Power Distribution , evacuation strategy and the safety and statuary regulations all need to be diligently planned and worked out to also pave way for establishing a green corridor. The proposed Ultra mega solar project will not only demonstrate the utility of large scale Solar PV Power generation in Indian context but will also serve as peak load sharing in the existing grid especially in regions deprived of continuous reliable power. India, due to its geo-physical location, receives solar energy equivalent to nearly 5,000 trillion kWh/year. This is far more than the total energy consumption of the country today. Currently, India has about 2 GW of grid connected solar PV capacity. While India receives solar radiation of 5 to 7 kWh/m2 for 300 to 330 days in a year, power generation potential using solar PV technology is estimated to be around 20 MW/sq. km. and using solar thermal generation is estimated to be around 35 MW/sq. km. The above data suggests that there is tremendous scope for growth in the solar energy sector.