BHEL signs contract for ± 800 kV, 6000 MW Bhadla-Fatehpur LCC HVDC Terminal Station along with AC Transmission at Bhadla and Fatehpur

New Delhi, April 03: Bharat Heavy Electricals Limited (BHEL), in consortium partnership with Hitachi Energy India Limited, has signed a contract with Rajasthan Part I Power Transmission Limited, a 100% subsidiary of Adani Energy Solutions Limited (AESL), to design and execute 6,000 MW, ±800 kV, bi-pole and bi-directional high-voltage direct current (HVDC) terminals to transmit renewable energy from Bhadla in Rajasthan to the industrial and transport hub in Fatehpur, Uttar Pradesh.

Expected to be established by 2029, this HVDC link will significantly contribute towards the national mission to achieve 500 GW of power from Renewable Energy by 2030. Notably, a strong HVDC system ensures bi-directional power flow control and grid stability to meet India's rapid pace of renewable energy integration. This project demonstrates BHEL's sustained commitment to the 'Make in India' initiative of the Govt. of India.

Significantly, this is the fourth Ultra High Voltage Direct Current (UHVDC) transmission project contract awarded to BHEL. The company has already executed the North-East Agra ±800 kV, 6,000 MW, Multi Terminal HVDC link and ±800 kV, 6,000 MW Raigarh-Pugalur HVDC link and is currently executing ±800 kV, 6,000 MW Khavda-Nagpur HVDC link jointly with Hitachi Energy India Limited (erstwhile ABB).

For this project, among other equipment and systems, BHEL will supply Converter Transformers, Shunt Reactors, Filter Bank Capacitors, MV Switchgear & Instrument Transformers from its Bhopal Plant and Thyristor Valves from its Electronics Division, Bengaluru. These valves will be used to convert AC Power at Bhadla into DC power for transmitting it over a HVDC transmission line of over 950 kms and then converting it back to AC at the Fatehpur end to evacuate power. Besides these, the company's Transmission Business Group will design, supply and install the mega size 765 kV/ 400 kV power evacuation system at the Fatehpur terminal and 400 kV AC sub-station at Bhadla and Bhadla Extension.

BHEL has been associated with major HVDC projects in India since the inception of state-of-the-art technology solutions in the Indian grid, like Rihand-Dadri, Chandrapur-Padghe, Ballia-Bhiwadi, North East -Agra and Raigarh-Pugalur HVDC links and has established manufacturing facilities for HVDC products up to 800 kV.

BHEL is the undisputed leader in the Power Generation and Transmission segments in India. In the field of Power Transmission, BHEL undertakes turnkey projects from concept to commissioning for EHV Substations, HVDC Converter Stations and FACTS solutions backed by Power System Studies.

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