



POWER SECTOR

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POWER PURCHASE

- » **NTPC REACHES 20% TORREFIED BIOMASS CO-FIRING MILESTONE AT TANDA POWER PLANT**
 - > NTPC Limited (NTPC) has achieved a milestone by co-firing 20% torrefied biomass at its Tanda thermal power plant in Uttar Pradesh, a first in the Indian power sector. At NTPC Dadri, the company had successfully co-fired 7-10% non-torrefied biomass with coal, paving the way for further exploration into higher co-firing percentages.
 - > NTPC's Energy Transition and Policy Research Division explored the use of torrefied biomass to achieve higher co-firing rates without major modifications to the existing infrastructure. Torrefied biomass, created by heating biomass in the absence of oxygen, resembles coal in its properties, making it suitable for higher co-firing ratios and enhancing efficiency.
 - > Each percent increase in biomass co-firing can proportionally reduce carbon emissions, contributing to NTPC's decarbonization goals and reducing air pollution from stubble burning. The Gross Calorific Value (GCV) and cost of torrefied biomass pellets are comparable to imported coal, making it a viable and sustainable alternative for NTPC's operations.



POWER PURCHASE

- » **NTPC REACHES 20% TORREFIED BIOMASS CO-FIRING MILESTONE AT TANDA POWER PLANT**
- » **RENEW SECURES 2.2 GW PPAs, GROWING ITS PORTFOLIO TO 15.6 GW**
- » **POLARIS SECURES A NEW SMART METERING PROJECT VALUED AT Rs 2,246 CRORE IN WEST BENGAL**



RENEWABLES

- » **GREW ENERGY IS SET TO ESTABLISH A 3.2 GW SOLAR MODULE MANUFACTURING FACILITY IN JAMMU & KASHMIR**
- » **MNRE APPROVES FIRST SOLAR'S THIN FILM MODULES FOR DCR SOLAR PROJECTS**
- » **NTPC REL ISSUES TENDER FOR LAND AND TRANSMISSION PACKAGES FOR 900 MW SOLAR PROJECT**



Policy and Regulatory

- » **IPCL AND E2S TO DEVELOP THERMAL ENERGY STORAGE SYSTEM**



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POWER PURCHASE

➤ RENEW SECURES 2.2 GW PPAs, GROWING ITS PORTFOLIO TO 15.6 GW

- ReNew Power Private Limited (ReNew) has signed five Power Purchase Agreements (PPAs) totaling approximately 2.2 GW, expanding its renewable energy portfolio to 15.6 GW.
- The PPAs include three solar agreements totaling 800 MW at ₹2.59 per kWh, a 1 GW Firm and Dispatchable Renewable Energy PPA at ₹4.39 per kWh, and a 438 MW PPA with a multinational commercial and industrial customer.
- These agreements will involve the development of 1,500 MW of solar and 688 MW of wind projects, expected to be commissioned within the next 24 months.
- ReNew's expansion supports India's target of achieving 500 GW of non-fossil fuel energy capacity by 2030, aiming to reduce projected carbon emissions by one billion tonnes.
- Founded in 2011, ReNew has an operational capacity of about 9.5 GW, generating approximately 21 billion units of clean electricity annually, enough to power six million households and avoid around 17 million tonnes of CO2 emissions each year.





POWER PURCHASE

➤ POLARIS SECURES A NEW SMART METERING PROJECT VALUED AT RS 2,246 CRORE IN WEST BENGAL

- Polaris secures a Rs 2,246 crore contract to install 2.2 million smart meters in West Bengal, bringing their total orders to over Rs 7,700 crore across multiple regions. Polaris Smart Metering will supply, install, and maintain smart meters equipped with advanced technology, enabling prepaid billing, real-time energy monitoring, and improved grid management for the next decade.
- The contract operates under a Design-Build-Finance-Operate-Own-Transfer agreement, enhancing efficiency and accountability in metering operations.
- Polaris also secures a Rs 206 crore contract for the smart meter installation in Manipur, aiming to install over 1.6 lakh smart meters in the Imphal region.
- In January, Polaris secured a Rs 5,200 crore contract for installing over 5.1 million smart meters in Uttar Pradesh, aligning to reduce losses for discoms and empower consumers with better control over energy consumption.





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RENEWABLES

» GREW ENERGY IS SET TO ESTABLISH A 3.2 GW SOLAR MODULE MANUFACTURING FACILITY IN JAMMU & KASHMIR.

- > Grew Energy, part of the Chiripal Group, will invest 45 billion (~\$538.8 million) to set up a 3.2 GW solar module manufacturing facility in Kathua, Jammu & Kashmir.
- > The facility, spread over 80 acres, will include three stages and have an annual production capacity of 3.2 GW of high-efficiency solar modules and 2.8 GW of solar ingots, wafers, and cells.
- > With this new plant and its existing 2.8 GW module facility in Rajasthan, Grew Energy aims for a total manufacturing capacity of 6 GW for modules and 2.8 GW for solar components by fiscal year 2025.
- > The company recently won Solar Energy Corporation of India's (SECI) auction to supply 200 MW of domestically manufactured solar modules at \$271,597 per MWp. Grew Energy was awarded 75.67 billion (~\$70 million) under SECI's performance-linked incentive program to produce 2 GW of solar modules.
- > Additionally, Jammu & Kashmir is set to host GoodEnough Energy's 4.50 billion (~\$54 million) battery energy storage systems gigafactory, commencing operations in October 2024, with plans to expand to 20 GWh capacity by 2026.





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RENEWABLES

>> MNRE APPROVES FIRST SOLAR'S THIN FILM MODULES FOR DCR SOLAR PROJECTS

- > The Ministry of New and Renewable Energy (MNRE) has approved the use of thin-film solar modules from First Solar's Tamil Nadu facility for projects with a Domestic Content Requirement (DCR) mandate.
- > First Solar's Tamil Nadu plant, with a 3.3 GW annual capacity, produces Series 7 solar modules tailored for the Indian market, developed at the company's U.S. R&D centers.
- > The Series 7 modules have a carbon and water footprint about four times lower than Chinese crystalline silicon panels and meet the Bureau of Indian Standards norms for cadmium telluride thin film-based models.
- > MNRE's efficiency criteria for these modules are 19% for grid-scale projects, 18.5% for rooftop and solar pumping, and 18% for solar lighting, with First Solar's annual supply capacity listed at 3,212 MW.



- > First Solar reported a 455% increase in net income for Q1 2024, reaching \$236.6 million, driven by higher sales volume and gross margins, with a record production of 3.6 GW of solar modules and a bookings backlog of 78.3 GW valued at \$23.3 billion through 2030.



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RENEWABLES

➤ NTPC REL ISSUES TENDER FOR LAND AND TRANSMISSION PACKAGES FOR 900 MW SOLAR PROJECT

- NTPC Renewable Energy (NTPC REL) has invited bids for land and power evacuation packages to develop a 900 MW ISTS-connected solar power project in the Neemuch Region of Madhya Pradesh. Bids are due by July 10, 2024.
- The project requires securing 5 acres per MW of land, building access roads, conducting topography surveys, and ensuring land modifications for tracker-based structures, with a specific slope orientation.
- The selected bidder must construct a 220 kV/400 kV AIS pooling substation, including a power transformer, automation systems, and an extra-high-voltage transmission line to the ISTS substation, along with three years of operation and maintenance.
- The Bidders must have arranged land or obtained feasibility approval for 100 MW or higher projects, with financial criteria based on quoted capacity. The minimum annual turnover varies, and bidders must have a positive net worth as of the last financial year.
- In March, NTPC REL also invited bids for a 150 MW grid-connected solar power project in Bhadla, Rajasthan, indicating ongoing efforts to expand solar energy infrastructure.





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POLICY AND REGULATORY

» IPCL AND E2S TO DEVELOP THERMAL ENERGY STORAGE SYSTEM

- India Power Corporation Limited (IPCL) collaborates with Switzerland's E2S Power (E2S) to develop a Thermal Energy Storage System (TESS) for efficient energy storage and transmission.
- The 250Kwh TESS unit, engineered by E2S, is seamlessly integrated with IPCL's system, aiding the company's target of incorporating 80% renewable energy into its distribution network by year-end.
- TESS technology plays a pivotal role in India's net zero emission goals, facilitating efficient storage of renewable energy while ensuring flexibility in thermal power operations, crucial for national energy security. TESS offers a distinctive proposition for power sector players, enabling seamless integration of renewables and thermal energy, and enhancing operational efficiency.
- IPCL's TESS business plans to expand across India, South East Asia, and ASEAN countries, promising widespread impact and potential for adoption. The initiative aligns with the Make in India campaign, with TESS components primarily sourced locally, reducing dependence on imports compared to Lithium-ion Battery systems. enhancing operational efficiency.

