



NLC India: Powering National Growth Through Energy Security and Sustainability

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As India moving towards becoming a developed economy by 2047, reliable and sustainable power holds the key for national growth. Navigating the dual imperative of uncompromised baseload energy and ambitious decarbonisation, **NLC India Limited (NLCIL)**—a Navratna enterprise under the Ministry of Coal with existing power generation capacity of 8,405 MW and Mining Capacity of 59.10 MTPA at present—is redefining its identity from a legacy mining enterprise to rapidly evolving into an integrated, future-ready energy powerhouse backing India's *Panchamrit* climate goals.

Energy Security: Reliable energy is critical to economic expansion, and coal and lignite continue to serve as the nation's baseload anchor. To meet India's power requirements sustainably, NLCIL is expanding its mining footprint responsibly while modernizing generation:

- **Capacity Scaling:** Increasing total mining capacity from 59.1 MTPA to 104.35 MTPA by 2030, targeting 115.85 MTPA by 2047 to avoid import dependence.
- **High-Efficiency, Low-Emission (HELE) Generation:** Transitioning to cleaner thermal power with supercritical units at Ghatampur (1,980 MW) and ultra-supercritical pit-head thermal power projects at Talabira (2,400 MW) and Machhakatta (4,000 MW), drastically minimizing specific coal consumption and emissions.
- **Logistical Efficiency via FMC:** Commissioning 63.5 MTPA capacity across First Mile Connectivity (FMC) rail corridors at Pachwara South, North Dhadu (west), Talabira, Machhakatta and New Patrapara (South) to eliminate road transport emissions/ oil dependency, thus improving logistical efficiency.

Renewable Energy: NLCIL is actively developing India's clean energy through its dedicated green arm, **NLCIL Renewables Limited (NIRL):**

- **10 GW by 2030:** Growing its operational renewable portfolio from ~1.8 GW to over 10 GW by 2030 (scaling to 32.7 GW by 2047), establishing a 50% clean energy mix in its generation well ahead of schedule.
- **Battery Energy Storage System (BESS):** Projects under development includes 250 MW / 500 MWh in Tamil Nadu, 300 MW / 1,800 MWh with SECI in Rajasthan, 275 MW / 550 MWh with GUVNL in Gujarat and 50 MW / 200 MWh with WBSEDCL.
- **Pumped Storage Projects (PSP):** Targeting large-scale storage assets in Tamil Nadu and Odisha to balance renewable grid intermittency.

Other Diversification Projects: To safeguard India from global supply chain disruptions and to achieve low-carbon industrialization, NLCIL is implementing the following:

- **Green Hydrogen & CCS:** Constructing a pilot 4 MW solar-powered PEM electrolyzer Green Hydrogen plant at Neyveli and partnering with IIT Madras on advanced Carbon Capture Systems.

- **Strategic Mineral Autonomy:** Currently, NLCIL has secured domestic composite exploration licenses for phosphorite, limestone in Chhattisgarh and vanadium, titanium in Telangana states. Also pursuing international prospects through KABIL for critical minerals.

By aligning with national self-reliance (*Aatmanirbhar Bharat*), NLC India Limited is ensuring Nation's energy security today, while laying a robust foundation for low carbon emission revenue businesses/initiatives for tomorrow.

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