



NTPC, India's largest power utility, is undergoing a major transformation.

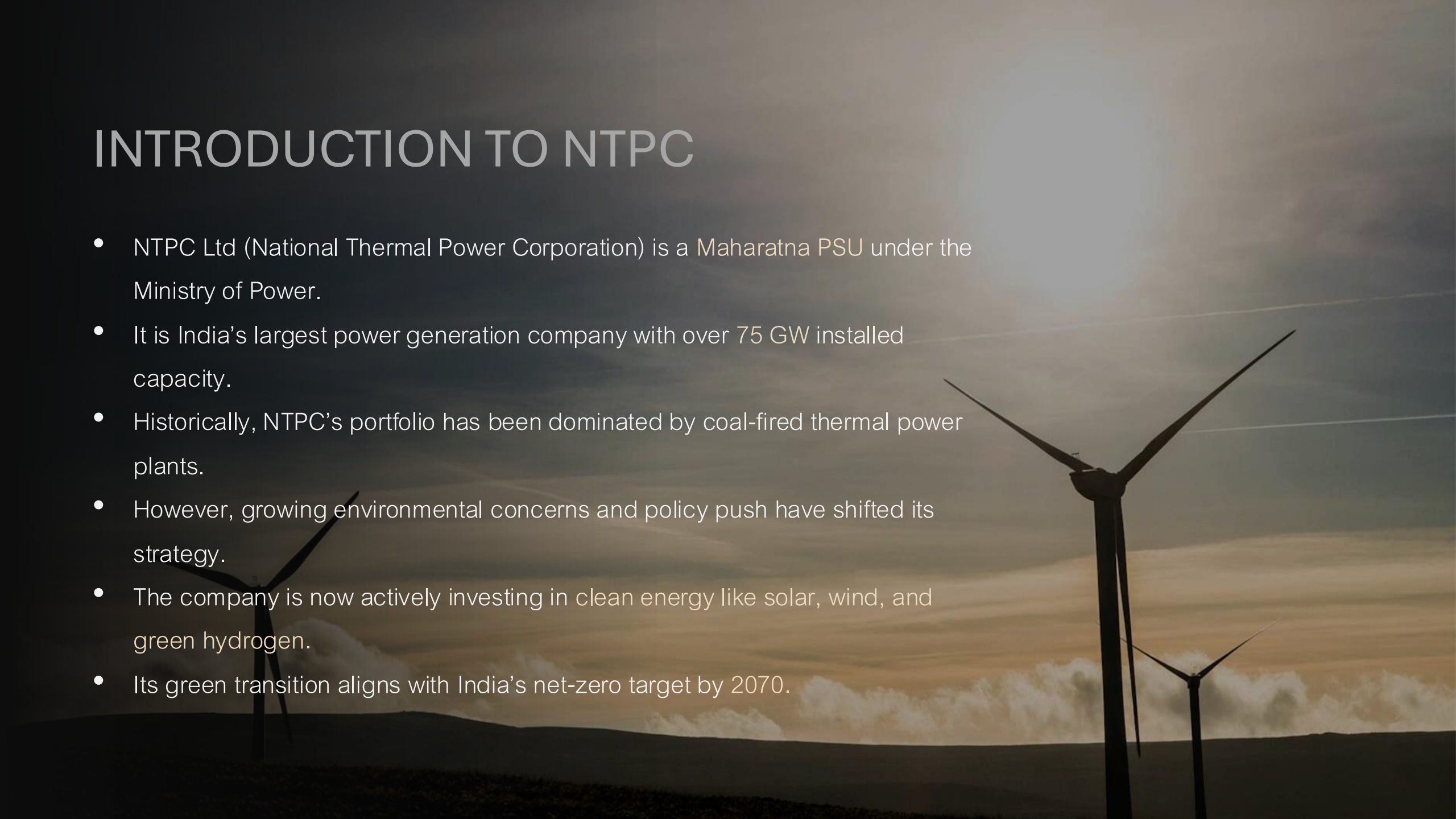
NTPC's Shares and Growth in Renewables

- *Green Energy Vision 2032.*



INTRODUCTION TO NTPC

- NTPC Ltd (National Thermal Power Corporation) is a Maharatna PSU under the Ministry of Power.
- It is India's largest power generation company with over 75 GW installed capacity.
- Historically, NTPC's portfolio has been dominated by coal-fired thermal power plants.
- However, growing environmental concerns and policy push have shifted its strategy.
- The company is now actively investing in clean energy like solar, wind, and green hydrogen.
- Its green transition aligns with India's net-zero target by 2070.



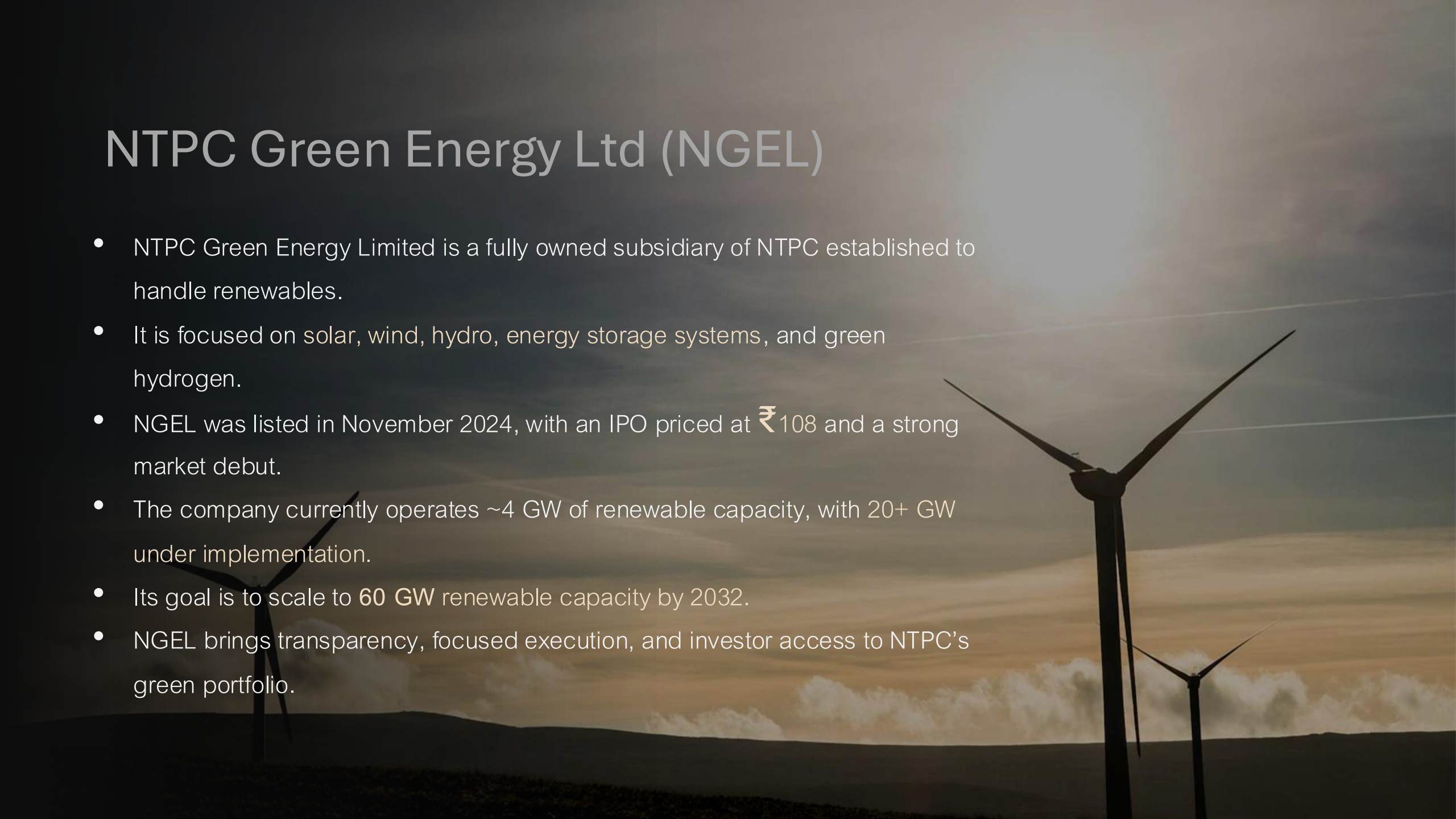
Why NTPC Is Entering Renewables

- India has set a national target of achieving 500 GW of non-fossil fuel capacity by 2030.
- Thermal power is facing pressure due to environmental regulations and rising fuel costs.
- Renewable sources offer cleaner, cheaper, and more sustainable energy in the long term.
- By diversifying into renewables, NTPC ensures business continuity and environmental compliance.
- It helps the company access ESG-based funding and attract green investors.
- Clean energy also improves NTPC's global reputation and competitiveness.



NTPC Green Energy Ltd (NGEL)

- NTPC Green Energy Limited is a fully owned subsidiary of NTPC established to handle renewables.
- It is focused on solar, wind, hydro, energy storage systems, and green hydrogen.
- NGEL was listed in November 2024, with an IPO priced at ₹108 and a strong market debut.
- The company currently operates ~4 GW of renewable capacity, with 20+ GW under implementation.
- Its goal is to scale to 60 GW renewable capacity by 2032.
- NGEL brings transparency, focused execution, and investor access to NTPC's green portfolio.

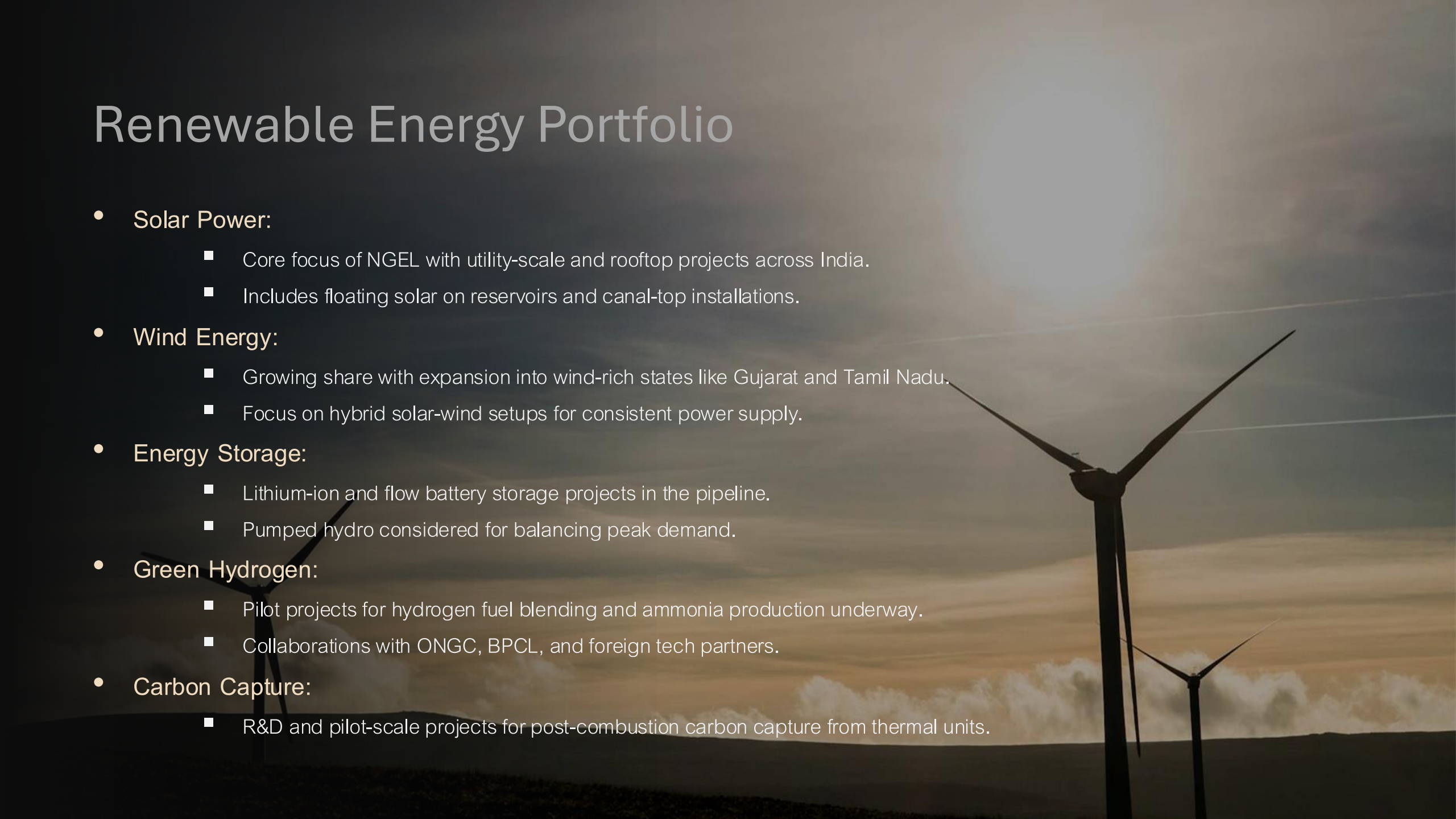


Major Projects and Acquisitions

- 1,000 MW Solar PPA with UPPCL signed in June 2025 — one of India's largest state-level PPAs.
- Acquisition of Ayana Renewables: Added 4.1 GW of operational & pipeline capacity.
- Joint venture with ONGC to form ONGC–NTPC Green, targeting offshore wind and hydrogen.
- 500 MW solar + 1,000 MW battery storage win under SECI tender — hybrid solutions.
- JV with UPRVUNL to develop green parks across Uttar Pradesh (51% NTPC stake).
- Signed MoUs with Madhya Pradesh and Gujarat to develop large solar and wind parks.



Renewable Energy Portfolio

The background of the slide features a silhouette of two wind turbines against a dramatic sky at sunset or sunrise. The sky is filled with soft, golden clouds, and the sun is low on the horizon, creating a warm, orange glow. The turbines are dark and stand out against the lighter sky.

- **Solar Power:**
 - Core focus of NGEL with utility-scale and rooftop projects across India.
 - Includes floating solar on reservoirs and canal-top installations.
- **Wind Energy:**
 - Growing share with expansion into wind-rich states like Gujarat and Tamil Nadu.
 - Focus on hybrid solar-wind setups for consistent power supply.
- **Energy Storage:**
 - Lithium-ion and flow battery storage projects in the pipeline.
 - Pumped hydro considered for balancing peak demand.
- **Green Hydrogen:**
 - Pilot projects for hydrogen fuel blending and ammonia production underway.
 - Collaborations with ONGC, BPCL, and foreign tech partners.
- **Carbon Capture:**
 - R&D and pilot-scale projects for post-combustion carbon capture from thermal units.

NTPC's Renewable Roadmap

- NTPC aims to achieve **60 GW renewable capacity** by FY2032.
- Estimated total investment: **₹2 lakh crore (~\$23 billion)** across solar, wind, hydrogen, and storage.
- Signed major MoUs with Madhya Pradesh and Rajasthan for 20+ GW of green energy parks.
- Plans to establish **energy transition hubs** combining solar, wind, hydrogen, and storage in one location.
- Development of **green hydrogen corridors** to supply industrial clusters.
- Focus on grid reliability, storage integration, and environmental sustainability.



THANK YOU

