



RENEWABLE ENERGY INDUSTRY NEWSLETTER

Q1 - FY 2026

India propels its renewable energy ascendancy via unprecedented expansion, avant-garde innovation, colossal investment, and synergistic alliances



NATIONAL RENEWABLE ENERGY CAPACITY:

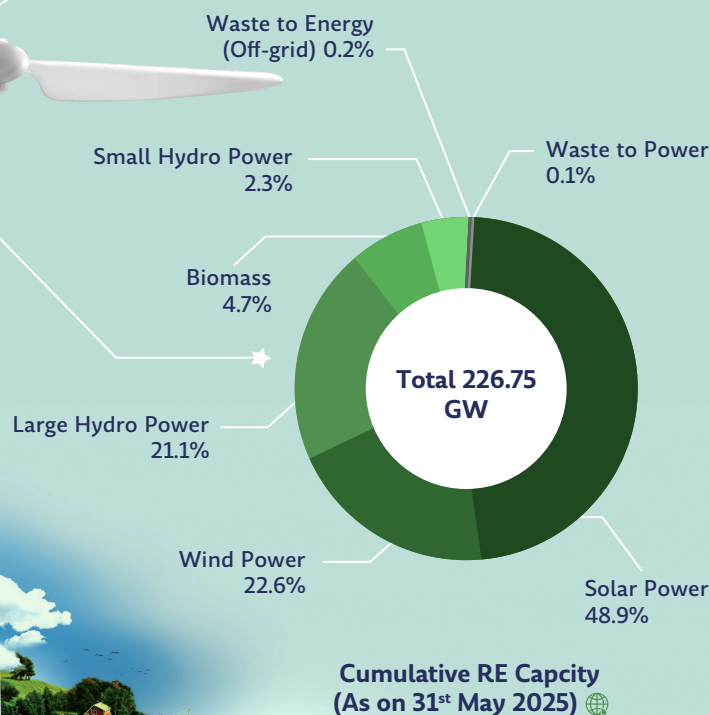
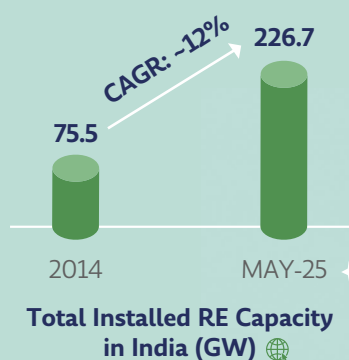
India's renewable energy sector has undergone a remarkable transformation over the past decade, firmly establishing the nation as a global frontrunner in clean energy deployment. As of May 2025, installed capacity has surpassed 226.75 GW, led by ~110 GW of solar and ~51 GW of wind, underscoring the government's unwavering commitment to its 500 GW non-fossil fuel target by 2030 and the broader energy transition agenda. 🌍

DID YOU KNOW?



World's Largest Solar Park

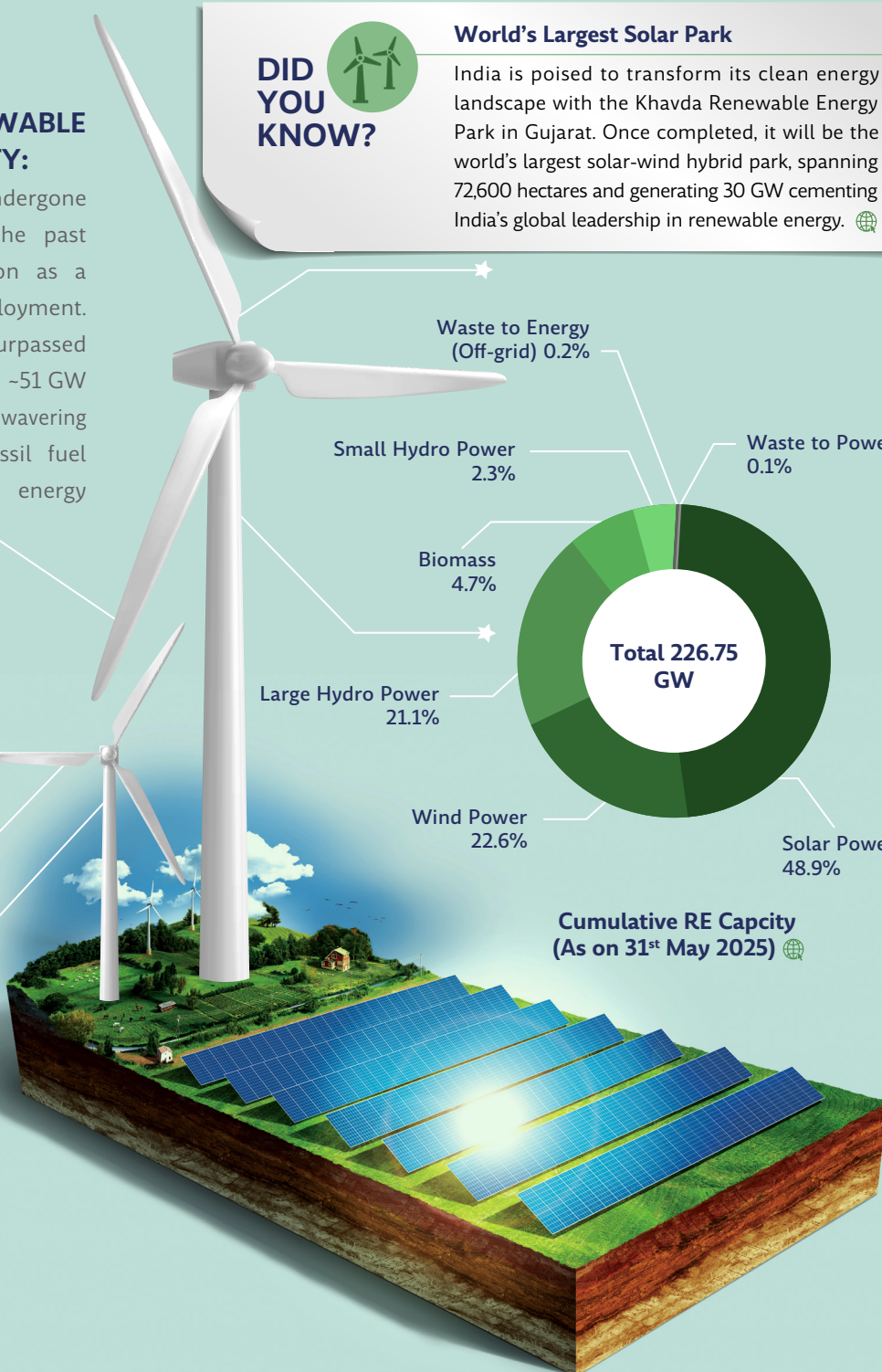
India is poised to transform its clean energy landscape with the Khavda Renewable Energy Park in Gujarat. Once completed, it will be the world's largest solar-wind hybrid park, spanning 72,600 hectares and generating 30 GW cementing India's global leadership in renewable energy. 🌍



6.45 GW

RE Capacity increased in FY 2025-26,

(1st April 2025 - 31st May 2025)



LATEST DEVELOPMENTS



Crucial Projects & Giga Developments

Greenko Unveils USD 4.2 Bn Integrated

RE Megaproject:

In Andhra Pradesh, Greenko launched the world's largest integrated renewable energy project comprising 4 GW solar, 1 GW wind, and 1.68 GW/10.08 GWh pumped hydro. Backed by GIC and ADIA, it targets annual CO₂ reduction of 3.3 MT and supports Greenko's 50 GW goal by 2030.



Green Initiatives & Hydrogen Expansion

IndianOil Finalizes India's Largest Green

Hydrogen Plant:

A 10 KTPA green hydrogen facility at Panipat refinery, powered by renewable energies, will anchor IndianOil's clean hydrogen ambitions.



Tenders, Auctions & Regulatory Milestones

India to Launch 4 GW Offshore Wind Tenders:

The first commercial-scale offshore wind push is scheduled for May-June 2025 in Tamil Nadu and Gujarat.



Mergers, Acquisitions & Strategic Partnerships

Premier Energies & SAS Form JV for 2 GW Wafer Plant:

The joint venture will establish a 2 GW upstream wafer manufacturing unit, boosting India's solar supply chain localization.



Financial Developments & Market Growth

SAEL to commission 2.5 GW solar capacity by FY26; eyes IPO amid limited waste-to-energy pipeline:

SAEL plans to scale up solar capacity and fund growth via IPO. Its pipeline is solar-heavy, with limited exposure to waste-to-energy.



Major Investments in Clean Infrastructure

ReNew Invests INR 220 Bn in 2.8 GW

Hybrid Project:

Aimed at delivering peak power for four hours, ReNew's Andhra Pradesh project (1.8 GW solar + 1 GW wind) aligns with India's 500 GW non-fossil goal by 2030.

JSW Energy Commits INR 140 Bn via Oxygen Power:

Through its subsidiary, JSW will expand pumped storage and renewable energy capacity, aiming for a 20 GW portfolio by 2030.



Energy Storage Systems & Policy Support

Rajasthan Floats 1,000 MW / 2,000 MWh

BESS Tender:

RVUNL invited bids for six standalone battery storage projects with full EPC scope, including grid integration and O&M. Bids are due by August 4, 2025.



**DID
YOU
KNOW?**



India's Climate Commitment

India is the only G20 country on track for the 2°C climate goal (as of COP27). 

REGULATORY CHANGES



India inaugurates solar waste governance to mandate producer stewardship, ecological safeguards, and circular valorization

Central Pollution Control Board (CPCB) Issues Draft Guidelines for Solar Waste Collection and Storage:

The CPCB has issued draft guidelines for storage and handling of waste photo voltaic modules or panels or cells under E-waste (Management) Rules, 2022. The key aspects of the guidelines along with impacts are outlined below.

Key Provisions & Requirements:



Scope: Applies to all end-of-life, damaged, or rejected PV modules and cells including waste from transport, installation, or manufacturing classified under Extended Producer Responsibility (EPR) norms.



Storage: Requires ventilated, dry storage spaces with non-leachable floors, stacking limits (max 2m or 20 layers), and mandatory fire safety provisions.



Transport & Disposal: Waste must be moved in covered, preferably authorized vehicles; open dumping or informal disposal is prohibited.



Tracking: Mandatory labelling, inventory logs, and regular inspection to ensure traceability and prevent contamination.

Implications for the Renewable Energy Sector

Operational & Financial Compliance Burden: Manufacturers of solar cells and modules will need to establish formal waste collection, storage, and tracking systems. It also increases lifecycle project costs, particularly for utility-scale developers with aging assets approaching decommissioning.

Growth of a Solar Waste Management Ecosystem: Triggers the development of domestic recycling and reuse markets, especially for glass, silicon, aluminium. Moreover it opens circular economy business models, module refurbishment, raw material recovery, and certified e-waste handling.

Policy Maturity & Lifecycle Discipline: Embeds EPR as a project design requirement, which will be factored into financing, ESG scoring, and tender bids. Additionally, lays groundwork for future sustainability-linked regulations, aligning with international ESG norms and investor expectations.

Limited Impact on Energy Transition Pace: These are operational and compliance-driven impacts, not supply chain or energy mix disruptions. The rules promote sustainable RE growth, not restrict it.

EDME's View on Emerging Risks

The fast-paced growth of solar installations in India which is crucial for energy transition comes with its own unique challenges which need to be managed effectively especially the end-of-life disposal of solar PV modules.

Under the E-waste (Management) Rules, 2022, solar waste is categorized as electrical and electronic equipment waste. The rule places the onus of managing solar waste on the manufacturer of solar components.

Improper disposal of solar PV modules might lead to following future environmental risks and liabilities upon the company affecting the balance sheet of the company:

- Metals like lead, cadmium and arsenic present in PV modules may contaminate the soil/water bodies if left in open ground after for a long time.
- Burning of PV modules in unscientific manner can release toxic fumes into the environment.
- Handling of these in an unscientific manner may cause adverse health effects to the people involved.

The module manufacturers/IPPs need to be mindful of this emerging risk entering their risk landscape and need to opt appropriate risk transfer strategies.

The pollution legal liability (PLL) insurance is one of the risk transfer strategies going forward in this context.

The PLL insurance covers the following costs:



Clean up costs that the insured is legally obligated to pay resulting from a pollution.



The costs the insured is legally obligated to pay as a result of third-party property damage or bodily injury resulting from the pollution.



Emergency response costs incurred by insured in response to a pollution condition or an imminent threat to human health or the environment.



Defense costs.



Business interruption costs caused directly by a pollution condition.

Key exclusions under the PLL:

- Intentional non-compliance
- Criminal fines and penalties
- Prior knowledge/ non-disclosure
- Employer liability
- Material changes in use

DID YOU KNOW?



Wind Resource Potential

India has a wind energy potential of 1,164 GW at 150m height-nearly 2.5x its current installed power capacity! 

EMERGING TRENDS: AGRIVOLTAICS



Elevating India's Clean Energy Trajectory through Agrivoltaics: A Strategic Synthesis of Technology, Sustainability, and Rural Empowerment

India is actively pursuing agrivoltaics and floating solar power as dual strategies to address the intersection of land scarcity, agricultural resilience, and renewable energy expansion. These innovations serve a critical national objective: to enhance resource efficiency while delivering clean power and empowering rural economies.

Agrivoltaics-Merging Agriculture with Solar Energy:

Agrivoltaics, or Agri-PV, involves the simultaneous use of land for both agriculture and solar power generation. Elevated solar panels are installed above crops, allowing sunlight to reach the plants while also generating electricity. This dual-use approach optimizes land productivity and provides additional income streams for farmers. India has an overall.

Benefits:

Enhanced Land Use Efficiency: Combining agriculture and solar energy production can increase land productivity by 35–73%. 🌍

Microclimate Creation: Solar panels provide shade, reducing soil moisture evaporation which increases the water holding capacity of the soil thus increasing the water-usage efficiency of agricultural land.

Economic Diversification: Farmers gain additional income from leasing land for solar installations or from the energy produced.

DID YOU KNOW?



Floating Solar

India is now home to one of Asia's largest floating solar parks the 600 MW Omkareshwar Floating Solar Project in Khandwa, Madhya Pradesh! It will generate more than 4600 million units of clean energy over the next 25 years 🌍

Innovations Driving Growth

- Adjustable solar structures tailored for different crops.
- Smart shading algorithms to balance light and yield.
- IoT monitoring for real-time soil and climate data.
- AI-based software for optimal crop and energy management.

Implementation in India:

4.5 MW Agrivoltaic Solar Farm, Madhya Pradesh: India's largest agrivoltaic project, developed by IIT Roorkee graduate Anand Jain, is a 4.5 MW solar farm that successfully integrates agricultural practices under elevated solar panels in Madhya Pradesh. This project sets a national benchmark for large-scale dual-use solar installations. 🌍

Cochin International Airport, Kerala: Implemented interspace farming between solar panel rows, making it one of the largest agrivoltaic installations with installed capacity of 40 MWp at an operational airport in the country. 🌍

Gujarat Projects: 1 MW demonstration plants at Amrol and Panandharo showcase the practical integration of agricultural production with ground-mounted solar power infrastructure. 🌍

CAZRI, Rajasthan: The ICAR-Central Arid Zone Research Institute (CAZRI) in Jodhpur pioneered India's first agrivoltaic (APV) pilot project in 2017, establishing a 105 kWp system over one acre, integrating solar photovoltaic panels with crop cultivation, optimizing land use in arid regions. 🌍

Challenges:

- High initial costs due to elevated structures.
- Not all crops thrive under partial shading; careful selection is necessary.
- Lack of clear policies and limited awareness among farmers.

Conclusion:

Agrivoltaics is no longer experimental, it is scalable, climate-smart solutions to India's land, water, and energy challenges. With coordinated policy support, financing innovations, and robust private participation, this technology can power both India's rural development and clean energy leadership in the decade ahead.



INSURANCE FOCUS:

Case Study and Insurance Solution



ALOP insurance is a fiscal bulwark against project delays, securing profits amidst renewable energy uncertainty

Introduction: Navigating Risk in the Renewable Energy Boom

India's renewable energy projects are exposed to construction-stage risks such as natural disasters, fires, and transit-related damage. To protect against revenue loss from such insured events, Advance Loss of Profit (ALOP) insurance offers a strategic financial shield for developers.

What Is ALOP Insurance:

ALOP insurance protects project developers and financiers against anticipated financial losses due to delays in the commercial start date of a project. These delays must be caused by material damage or insured events covered under Erection All Risk (EAR).

Key Features of ALOP Insurance

-  **Policy Structure:** ALOP cover is not issued as a standalone policy. It is available only when linked to an admissible claim under the main EAR (Erection All Risks) policy.
-  **Trigger Mechanism:** Activated only after the project attains Commercial Operation Date (COD); loss is calculated based on aggregate delay beyond the Scheduled COD (SCOD).
-  **Indemnity Basis:** Covers cumulative delays resulting from insured events; compensation is aligned to lost gross margins during the delay window.
-  **No Claim Clause:** If the project achieves COD within the originally committed timeline—despite any insured interruptions, no ALOP payout is admissible.

What Does it Covers?

An ALOP policy is typically an extension of your CAR/EAR insurance. Its coverage includes:

 Loss of Gross Profit Revenue losses during the delayed operation period	 Fixed Operational Costs Salaries, lease payments, and other fixed costs during downtime	 Debt Servicing Obligations Repayment instalments or interest due during the delay	 Additional Mitigation Costs Extra expenses incurred to minimize business interruption losses
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The indemnity period usually starts from the planned Commercial Operation Date (COD) and lasts until operations begin up to a maximum period defined in the policy.

Delays Covered (Eligible for Claims):

- **Cumulative Delay:** Indemnifies total delay beyond SCOD due to covered physical damage—not isolated incidents.
- These delays must be caused by insured perils like NATCAT events, fire and allied perils, riots, strikes to name a few which are covered under Erection All Risk (EAR) policy as this is the underlying policy for ALOP.

Delays not Covered:

- **Supply Chain Delays:** Import hold-ups unless linked to insured damage.
- **Regulatory Bottlenecks:** Land or grid access delays unless caused by damage.
- **Execution Risks:** Labour, access, or terrain challenges without physical loss.
- **Force Majeure:** War, pandemics, or quakes-unless explicitly covered.
- **EPC Default:** Insolvency or poor performance not insurable.
- **Design Failures:** Unproven or defective tech losses not linked to damage.

Why ALOP Is Critical for India's Renewable Energy projects:

India's renewable energy projects face mounting exposure to climate volatility, terrain challenges, and execution bottlenecks, making ALOP insurance essential to safeguard revenue during commissioning delays.

Climate-Driven Disruptions: In 2024, the Emergency Events Database (EM-DAT) in India recorded 393 natural hazard-related disasters: 🌐

- Cyclone Remal: INR 12,000 Mn loss in RE-linked T&D assets (Odisha, Bengal).
- Flash Floods (Mandi, HP): Destroyed hydropower and RE infrastructure.

PPA-linked Penalties: SCOD delays trigger financial penalties or PPA cancellations.

Debt Stress: Even minor delays disrupt loan repayment and investor cash flows.

Low-Tariff Margin Risk: Bids at INR 2.20-INR 2.80/kWh leave no cushion for delay-related losses. 🌐

Asset Exposure: High-value equipment losses often do not cover revenue impacts.

EPC Gap: Contractors cover LDs, but project owners bear the profit risk ALOP fills this gap.

CASE STUDY



On 21st April 2025, a massive fire broke out at an under-construction 70 MW solar project in Gujarat. The blaze destroyed solar panels, transformers, and cables worth over INR 400 crores. No casualties were reported, but the entire stockpile of critical project equipment was destroyed. Additionally, project commissioning timelines are now uncertain, with delays ranging from 6 to 9 months. 🌐

Financial Implications (Based on Assumptions)

Assuming a Power Purchase Agreement (PPA) rate of INR 2.70/kWh and a Commercial Operation Date (COD) delay until August 2025:

 Estimated Daily Generation	 Estimated Daily Revenue Loss	 Assumed Delay Duration	 Projected Revenue Loss Due to Delay
~315 MWh/day (315,000 kWh/day)	INR 0.85 Mn/day	180 days (approx. 6 months)	INR 153 Mn

This revenue loss would be precisely the kind of risk ALOP insurance is designed to cover.

Note: This figure represents a topline revenue loss and does not account for fixed costs, depreciation, or financing implications. This is only for representation purpose.

As this case shows, even a single day’s disruption can cost lakhs multiplied over months, it threatens viability.

Lessons from the above Incident:

Key Takeaway	How ALOP Helps
Equipment damage led to project shutdown	ALOP compensates for income lost during shutdown period
Re-procurement will delay COD	Indemnity covers the delay-triggered loss of profit
Tension with locals posed predictable risk	ALOP would still respond if EAR policy covers fire damage
NTPC's request for police hints known threats	Highlights the need for pre-emptive risk transfer via ALOP

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Green Hydrogen Vision

India targets 5 MMT of green hydrogen by 2030, backed by INR 19,744 Crs mission funding enough to decarbonize fertilizers and steel sectors. 🌐



RECOMMENDATIONS



Integrate ALOP Proactively: Secure ALOP coverage at the bid submission or financial closure stage well before any site activity commences to ensure full eligibility for delay-related indemnification.



Institutionalize Timeline Documentation: Maintain robust and contemporaneous records of project execution plans, PPA milestones, and commissioning schedules to serve as credible evidence during claim evaluation.



Enhance Contractor and Site Awareness: Conduct targeted training for EPC contractors and site teams on the importance of timely and accurate documentation during insured events—a prerequisite for defensible claims.



Safeguard Financial Returns: If ALOP had been procured at the appropriate juncture, company for this case could have mitigated revenue losses stemming from project delays and recovered incremental expenditures incurred to expedite restoration (e.g., accelerated procurement, overtime labour).

ALOP IS NOT AN OPTION, IT IS A NECESSITY

Advance Loss of Profit (ALOP) insurance is a critical tool for project owners and developers, shielding them from revenue losses due to insured delays like fire or natural disasters. While delays may stem from EPC performance, only the project principal benefits from ALOP not contractors. In a high-stakes, time-sensitive sector, ALOP ensures that delays do not turn into financial distress.

While evaluating the need for ALOP policy, the principal has to also take into consideration factors like:



**Lead time
of critical
machinery**



**Availability
of spare parts**



**Cost Benefit Analysis
of premium vis-à-vis
the risk hedged**

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Youth Employment Boost

India's renewable energy sector is powering up more than just clean electricity it's set to generate over 3 million jobs by 2030! 



INSURING THE FUTURE OF RENEWABLE ENERGY



About EDME

Edme Insurance Brokers Ltd., formerly Aditya Birla Insurance Brokers Ltd. (ABIBL), is a trusted IRDAI-licensed composite broker with a 24-year legacy in the insurance industry. We provide comprehensive insurance and risk advisory services to businesses and individuals, offering tailored solutions across commercial insurance, reinsurance, and personal coverage.

About Renewable Energy Team

EDME's renewable energy speciality team is dedicated to supporting the evolving needs of clients operating in clean energy sector. With deep expertise in Solar, Wind, Hydro, Biomass and emerging technologies, our team provides tailored risk management solutions that align with the unique challenges of Renewable Energy Industry. We combine in-depth sector knowledge with a robust understanding of global insurance markets to deliver comprehensive broking advice from project development and construction to operations and asset management. Whether advising on complex risk transfer strategies, navigating regulatory environments, or securing bespoke coverage, our goal is to protect your investment and support a sustainable future!

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