

# Project Appraisal and Monitoring Services

## Renewable Energy – Solar Power



### About Us

Resurgent India Limited is a growing Investment Bank and a SEBI registered Category I Merchant Banker. We offer services in the lines of Techno-Economic Viability (TEV) studies, Lender's Independent Engineer (LIE) assessments, Agency for Specialised Monitoring (ASM) services, Mergers & Acquisitions, Private Equity, Debt Solutions, Structured Finance, Capital Market Solutions, Transaction Advisory, Valuations, and ESG Advisory.

Our Project Appraisal and Monitoring vertical provides independent assessments of project viability, along with reports that assist in both pre- and post-disbursement decision-making for lenders. We have delivered over 1,500 Techno-Economic Viability (TEV) studies and more than 500 Lenders' Independent Engineer's (LIE) reports. Furthermore, Resurgent India is empanelled with nearly all public sector banks, several private banks, and NBFCs for LIE and TEV studies, and with the Indian Banks' Association (IBA) as an Agency for Specialised Monitoring (ASM).

### Solar Power Sector Overview

The transition towards cleaner energy sources is crucial to India's energy strategy. While fossil fuels like coal and oil dominate the energy mix, there is a growing emphasis on renewable energy sources (RES) such as solar, wind, and biomass, along with battery energy storage and emerging technologies like green hydrogen and green ammonia. Policies promoting the tripling of RES capacity and doubling energy efficiency, coupled with technological advancements, market transformation, and investment incentives, play a crucial role in accelerating this transition.



India has emerged as one of the fastest-growing solar power markets globally, driven by strong government policy, falling technology costs, and rising private investments. India's solar energy capacity has seen substantial growth:

- **Installed Capacity:** As of August 2025, India's solar installed capacity stood at 87 GW, contributing ~17% of the total electricity generation capacity. Solar is the single largest contributor among renewable sources.
- **Growth Trends:** Between FY18 and FY25, solar capacity grew at a CAGR of ~20%. Rooftop installations grew sharply after regulatory support and falling module prices.
- **Share in Renewables:** Solar constitutes ~47% of India's total renewable capacity (~185 GW).
- **Sector Contribution:** The sector supports India's climate goals and is central to achieving the target of 500 GW non-fossil fuel capacity by 2030.
- **Cost Competitiveness:** The levelised cost of solar power has fallen by more than 80% over the last decade. Post GST reduction from 12% to 5% (Sept 2025), project costs have further declined by ₹20–25 lakh per MW.

Solar power is not only a driver of clean energy transition but also a critical sector for employment, rural electrification, and industrial competitiveness.

## Market Size and Growth Projections

- The global solar energy systems market was estimated at USD 255.4 billion in 2024 and is projected to reach around USD 1,146.25 billion by 2034, with a CAGR of ~16.2% from 2025–2034. Precedence Research
- For the broader solar PV market (modules, installations) – valued at USD 334.21 billion in 2024 and forecast to reach USD 609.30 billion by 2030 (CAGR ~10.6% between 2025–2030). Grand View Research
- According to one source, the global solar PV market size was ~USD 63.35 billion in 2025 and expected to reach USD 233.3 billion by 2034 (CAGR ~15.6%). Business Research Insights
- For installations: the cumulative global PV capacity surpassed ~2,260 GW by end 2024, with new installations of about 553 601 GW in 2024

## Government Initiatives under “Viksit Bharat 2047” Vision

- **GST Reduction (2025)** – Rationalisation of GST on solar modules, cells, and power equipment from 12% to 5% to lower project costs and boost adoption.
- **Production Linked Incentive (PLI) Scheme** – ₹24,000 crore allocation for integrated solar module manufacturing (polysilicon to modules), aimed at reducing import dependency.
- **Approved List of Models & Manufacturers (ALMM)** – To promote domestic manufacturing and quality assurance.
- **PM-KUSUM Scheme** – Promotes solar pumps, decentralised solar plants, and farmer-led energy production.
- **Green Hydrogen Mission** – Integration of solar projects with electrolyser facilities to enable green hydrogen production.
- **Energy Storage Push** – GST reduction on certain storage technologies, viability gap funding for Battery Energy Storage Systems (BESS).
- **Renewable Energy Parks & Ultra-Mega Solar Parks** – Land and evacuation infrastructure support.
- **Net-Metering & Rooftop Solar Incentives** – Support to households, MSMEs, and commercial consumers for adopting rooftop solar.



## Solar Sector Growth Potential

India's solar industry has immense headroom for expansion:

- **Capacity Growth:** Expected to reach 280 GW solar by 2030, with ~65% from utility-scale and ~35% from distributed/rooftop projects.
- **Investment Potential:** Estimated investments of USD 200–250 billion required by 2030.
- **Rooftop Solar:** Market size projected at USD 12 billion by 2030, supported by subsidies and net metering.
- **Solar + Storage:** With falling battery costs, solar coupled with storage is expected to dominate peaking power demand.
- **Green Financing:** Rising ESG mandates and green bonds are increasing financing avenues for solar developers.
- **Employment:** The sector is expected to generate ~1 million jobs by 2030 across EPC, manufacturing, O&M, and financing.

## Financing & Credit Opportunities

For banks, NBFCs, and institutional investors, solar offers wide-ranging financing opportunities:

- **Utility-Scale Projects** – Financing for Independent Power Producers (IPPs), EPC developers, and hybrid (solar + wind) projects.
- **Rooftop Solar** – Retail financing for MSMEs, residential projects, housing societies, and commercial establishments.
- **Solar Manufacturing** – Financing for module/cell factories, backward integration into polysilicon, wafers, and ancillary industries like glass, EVA, and inverters.
- **Solar Pumps & Agri-linked Solar** – Financing under PM-KUSUM for farmers and cooperatives.
- **Battery Storage & Hybrid Projects** – Project financing for BESS integration with solar plants to provide round-the-clock (RTC) renewable power.
- **Green Bonds & ESG-linked Loans** – Investors keen on sustainable projects provide access to low-cost global funding.

## Emerging Financial Avenues

Financing opportunities are also widening across new and innovative solar sub-segments. Institutions are increasingly funding floating solar projects, canal-top installations, decentralized micro-grids, and EV charging infrastructure powered by solar energy. In addition, working capital, bridge financing, and refinancing of operational projects are gaining momentum through green credit lines and sustainability-linked instruments. With the government's focus on energy transition and net-zero targets, financial institutions can explore blended models combining public funding, concessional loans, and private equity participation. Growing interest in Infrastructure Investment Trusts (InvITs) and YieldCos also indicates a maturing investment environment, allowing capital recycling and long-term returns. Overall, the solar sector offers strong potential for diversified credit exposure while supporting India's broader renewable energy and climate goals.



# Resurgent India has created a strong presence in Project Appraisal (TEV)

Resurgent India has conducted TEV studies, LIE monitoring, and ASM services for multiple solar projects, including **Integrated solar cell and solar panel manufacturing plants with the capacity up to 5 GW, Mega Solar power generation projects with the capacity of 400 MW, Multiple solar power projects under PM- KUSUM Scheme of different generation capacities, Solar power projects for captive consumption and third party sale etc.**

## Sources of Information

- MNRE (Ministry of New & Renewable Energy), Government of India
- CEA (Central Electricity Authority)
- Press Information Bureau (PIB), Ministry of Finance, GoI
- RBI Bulletin
- NITI Aayog & IREDA
- IEA (International Energy Agency)
- Industry Reports (EMIS)
- Resurgent Research
- Recent news sources

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