Press Release

Assam can generate 13,000 megawatts of electricity and 1.8 lakh green jobs by adopting solar rooftop, finds iFOREST study

- *Assam has 95% of its rooftop solar potential in residential and mixed-use buildings.*
- *Lokhra, Garbhanga, Sarusajai, Bor Sojai and Sawkuchi emerge as high-potential solar zones*
- *Harnessing of full theoretical potential (estimated 13,000 MW) could power the entire state and create 1.8 lakh direct jobs*
- *Guwahati rooftops alone can potentially generate up to 984 MW of solar power, with highest potential in wards like Gorchuk, Betkuchi, Jalukbari, Kahilipara, and Machkhowa.*
- *The study calls for focused interventions on high potential regions and consumer categories.*

June 20th 2025, Guwahati: Environment think tank iFOREST has released a new study 'Rooftop Solar Potential in Assam', presenting the first district, ward, and city-level analysis of the state's rooftop solar capacity. The study estimates a technical potential of 13,428 MW, enough to make Assam 100% energy secure. For context, the current target of Assam is 1,900 MW under the Integrated Clean Energy Policy 2025.

The report was released at an event in Guwahati titled*: Sunrise Assam—Report Release and Workshop on Accelerating Solar Rooftop in Assam,* organized in close coordination with the Assam Power Distribution Company Limited (APDCL), the nodal agency for solar rooftop implementation in Assam.

This first-of-its-kind study provides a granular assessment of Rooftop Solar (RTS) feasibility in Assam, combining satellite imagery, ward-level mapping, stakeholder consultations, and policy analysis. With a total built-up area of 737.1 km²—86% of which lies in rural regions—the study finds that 95% of Assam's rooftop solar potential is concentrated in residential and mixed-use buildings. Guwahati emerges as a key hotspot, with an estimated RTS potential ranging from 625 MW to 984 MW, and high-potential zones including Lokhra, Garbhanga, Sarusajai, Bor Sojai, and Sawkuchi. Given that each megawatt of RTS capacity can generate approximately 14 jobs across manufacturing, installation, and maintenance, harnessing Assam's full 13,000 MW potential could create up to 1.8 lakh jobs, offering significant employment opportunities for local youth.

The Sunrise Assam event featured discussions among senior representatives from the government, energy utilities, industry, technology partners, solar developers, and expert organisations.

In his opening address Shri. Hirdesh Mishra, IFS, Additional Principal Chief Conservator of Forests (Climate Change) & CEO, Assam Climate Change Management Society (ACCMS) said, “Assam is in a pivotal moment in his climate change and energy journey. Fossil fuel dependence isn’t going to go away soon. But we are making a determined push. Assam is one of the most climate vulnerable states in India. We urgently need a transition to clean, reliable and locally available sources of energy. But economics drives everything. Solar roof top will flourish as costs come down”.

Baishali Talukdar, Deputy Manager - New and Renewable Energy Division, APDCL said, “Under PM Surya Ghar Scheme, Assam has made substantial progress. To date, 20,000 solar installations have been successfully completed, aggregating to a capacity of around 60 MW in the State. Key hurdles remain such as limited consumer awareness, less number of solar vendors with skilled technicians, high upfront costs to be paid by consumers despite subsidies, and prolonged delay in availing loans by interested consumers. However, APDCL is proactively addressing these issues through targeted awareness campaigns, streamlined vendor empanelment processes, and use of digital platforms for faster processing.”

iFOREST Programme Director Mandvi Singh said, “Rooftop solar is especially important for Assam because it is a land-neutral technology. Our recent project experience has shown that land scarcity and acquisition challenges are significant barriers to large-scale renewable energy deployment in the state. In contrast, the vast untapped rooftop area presents a massive opportunity. With the right policy push and targeted incentives, rooftop solar can scale rapidly and sustainably across Assam.”

The report points to key recommendations to address demand side challenges identified based on detailed consultations from local solar EPC players. Financial access remains a major hurdle, especially for C&I consumers due to high upfront costs and limited loans. Regulatory gaps in metering, subsidies, and agency roles hinder non-residential adoption. Grid integration faces issues like voltage fluctuations, while fast market growth raises concerns over installation quality, calling for stronger vendor accreditation and workforce training.

The study recommends a combination of policy, financial, and institutional reforms:

- Target high-potential zones like Guwahati’s mixed-use wards and Barak Valley, which offer strong solar potential but low uptake.
- Implement PM-SGY in mission mode with district-level launches, local branding, digital tracking tools, and community engagement to boost adoption.
- Build local manufacturing capacity to meet Assam’s 3 GW solar target, reduce costs by 10–15%, and create over 30,000 green jobs.
- Strengthen policy and regulation by finalising virtual net metering, mandating RTS for new buildings, and incentivising the RESCO model with payment security.
- Support inclusive business models like APDCL’s Utility-Based CAPEX Model (UBBM) to scale adoption in low-income residential areas.

- Enable innovative financing through one-time incentives, concessional credit, and capital subsidies for rooftop solar plus storage.

About iFOREST

The International Forum for Environment, Sustainability and Technology (iFOREST) is an independent non-profit research and innovation organization working on pressing environment-development challenges in India.

We conduct independent evidence-based research, develop new knowledge and innovative solutions, convene stakeholders to increase awareness and build consensus to scale up green solutions.

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