



**MR. RAVINDRA GOYAL**  
PRESIDENT-SALES,  
VIKRAM SOLAR

## How Seriously is India Considering Rooftop Solar Applications?

India is obviously trying to build a stable infrastructure to uphold its rooftop solar vision. And MNRE's announcement of generating 40 GW from grid connected solar rooftop installations by 2022, speaks in favor of India's commitment to the idea. However, the latest installed capacity of a meagre 525 MW (in 2015) present some very logical doubts, putting India's boast of reaching the mammoth goal on unstable grounds. Drastic decline in solar energy costs from INR 17/kWh in 2010 to INR 4.34/kWh in 2015 still keeps us hopeful. But to understand whether India's efforts are serious enough to enhance its national solar growth, we need to consider all variables at play.

### How Effective Present Policies and Regulations Are

Govt. backed capital subsidy and accelerated depreciation policies are considered to be the primary support for solar development. Definitely, subsidy based policies have played a major role in the early years of solar development. But lack of fund generation in recent years have dried these lifelines up. Solar Energy Corporation of India had used the subsidy scheme in a diversified manner to allot financial help for EPC companies since 2013. However, development under these schemes shows an unimpressive 44.5 MW capacity generation till now, which is hardly capable enough to outfit our country for a 40GW by 2022 leap.

India has allowed its states to formulate their own versions of policies aiding solar rooftop growth, mirroring the central mandate. But, the considerable variation within the policy frame work in between states, complicates the solar sector growth measurement process. In-depth research shows that, while states like-

- Andhra Pradesh, Gujrat, Tamil Nadu, and Uttrakhand have functioning policies working in favor of rooftop solar improvement.
- Rajasthan, Haryana, Kerala, Punjab, Manipur are in desperate need of regulatory revisions to initiate rooftop solar programs successfully.

- While Jharkhand, Meghalaya, Assam, and Goa are yet to receive any kind of policy for their individual statewide growth.

Govt. needs to speed up the policy development and deployment all around the country while mandating an accepted policy standard and framework (state wise growth targets can be unique depending on solar radiation level, technological availability etc.)

### Primary Survey and Market Research

Recent surveys show that India is fully committed to be a part of 'green energy' revolution, seriously pursuing ways to enhance its rooftop solar capacity. Its new major developments are-

- Govt. issuing 16,800 crores for low cost finances to make rooftop solar installation a feasible choice.
- Karnataka allowing domestic consumers, educational institutions, and hospitals to sell solar power generating from their rooftops.
- Gujrat Govt. initiating specialized rooftop solar solutions for residents.
- SECI welcoming bids for 500 megawatts rooftop solar project.

Although these initiatives will definitely bring new opportunities, in-depth market research reveals a few pit falls that Govt. must address before focusing on higher

investments in solar development. These issues are-

- Lack of investment bringing initiatives
- Lack of awareness
- Lack of functioning roof top space policy/regulation in place
- Non-availability of electricity metering policy



- Mandate towards installing the rooftop

### Suggestions to Boost Rooftop Solar Growth

Revising available policies, while taking new initiatives through meticulous planning based upon market demand can help India achieve its 40GW goal by 2022. Here are a few suggestions that can promote a structural growth of India's rooftop idea.

#### Practicality of Focusing on Net Metering:

Net-metering is important to access the circle of consumers that rooftop solar solutions generally target. Under this energy consumption model, power generated by the rooftop panels is fed to the meter and if there is any excess of energy, it is transmitted to the grid. Understandably, this model offers end-consumers an opportunity to reduce their energy expense and allows them to earn money by selling the energy surplus. Net metering is a viable option because-

- It is already accepted and functional in multiple states in India
- It ensures a fair deal for utilities and the end consumer/rooftop owner both
- It is easy to understand for non-technical consumers (residents)

Although several states across India are adopting and experimenting with net metering choices, there are regulation flaws that need to be addressed first. For example, Tamil Nadu doesn't offer net metering for industries, Kerala, Rajasthan only allows net metering up to 1 MW. However, Government needs to focus on creating a uniform policy, reducing multiple permission requirement, adding clarity in model implementation, and training utility staff for attract consumers. Addressing these issues through regulation enforcement and skill development can improve interconnections between user and service provider.

#### Focus on Rooftop Space Policies:

Lack of policies and regulations on rooftop solar installation always delay projects timelines in residential and industrial sectors both. Govt. should focus on designing policies and interlinking them with building regulations to develop more buildings with 'rooftop ready' modifications for solar.

#### For A Better Investment Flow:

Research based data shows that rooftop solar development in India needs INR

75,000 per kWp finance. A considerable amount indeed, which can only be tackled by investments amounting to INR 300,000 crores (approx.). Although, Govt. is trying its best to raise fund internally, data on fiscal constraints identify private investors as the viable source to extract financial assistance. To interest investors, India should produce opportunities potential for growth and economic viability with the help of favorable government policies. Besides policies, Govt. should also focus on designing energy security measures and easy distribution infrastructure.

#### Building Consumer Awareness:

As the target consumers of rooftop solar are largely non-technical in nature therefore, increasing awareness is a vital component to make these ventures succeed. Focusing on providing information about-

- Quality, cost, and benefits of the option
- Limit of solar energy
- Interconnecting with the grid or metering

State Nodal Agencies assisting independent consumers to understand the fundamentals of the whole process can work wonders. Producing system-performance based data and paddling it to the masses can also bring exposure.

#### Rolling Out Incentives and Subsidies in Time:

Impact of subsidies and incentives depend on implementation time frame. So, Govt. should initiate in-depth investigation to find out when to activate subsidies for maximum impact. The investigation should target consumer demand, and market growth. Selecting most effective subsidies is also an important factor to get the most out of the venture.

Undoubtedly India is showing quite the effort to enhance its solar capacity. And initiatives such as- using solar installations on government buildings, railways, airports, educational institutions are testament to their commitment. However, more is needed from the Govt. and private players both. Coming into alliance in order to build awareness, attract investment, and focusing on strategies like net-metering can ultimately create a strong platform for rooftop installation in India ◀◀

