

# Business Standard

## Don't give rooftop solar units the short shrift (Comment)

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Riding on the wave of the record low solar tariff, of Rs 2.97/kWh, in the 750 MW Rewa Solar Park project in Madhya Pradesh, the Cabinet Committee of Economic Affairs approved increasing the number of such parks to 50 (from 33), which will take the installed capacity from 20 GW to 40 GW by 2020. An additional Rs 8,100 crore (\$1.2 billion) has been earmarked for this.

It is perfectly logical for the government to hand large, ground-based solar parks a boost considering that the Madhya Pradesh bids showed that solar can compete financially with fossil fuels.

However, the possibility of the government reducing the rooftop photovoltaics (RTPV) target from 40 GW to 20 GW to accommodate the doubling of capacity of solar parks is real and worrying. Promoting large-scale solar may look like an economically-viable option to the government, considering that RTPVs are more expensive than ground-based solar -- even though experts in the field agree that the best application of solar is in its decentralised RTPV form.

RTPV requires no land (which comes at a premium in countries like India), provides energy security for the consumer and reduces environmental impact by displacing diesel generators. From the perspective of distribution companies (Discoms), RTPV reduces system congestion as well as transmission and distribution losses because generation and usage are decentralised. RTPV also has immense potential, in countries like India, to drive policy changes such as time-of-use pricing, which is at its incipient stage here.

Yet, RTPV contributes only around 10 per cent of India's 10 GW installed solar capacity. Countries such as Germany (>75 per cent), the US (>40 per cent) and Australia (>85 per cent) have a large share of their installed solar capacities on rooftops. Boosting RTPVs in India is necessary. However, various problems associated with it need to be first addressed.

The central government offers a 30 per cent capital subsidy for RTPV systems for domestic, institutional and social sector consumers. Recently, the Solar Energy Corporation of India (SECI) floated tenders for 1.5 GW RTPV on government buildings across the country.

However, RTPV in India is essentially driven by state-level policies of gross-metering (GM) or net-metering (NM) and more than 90 per cent of the installed 1.1 GW has come through state channels. Each state has its State Electricity Regulatory Commission (SERC) prescribing GM/NM rates based on the PV market economics and the financial strength of the Discoms. Most schemes have a plethora of complicated forms and procedures, restrictions on sanctioned load and unviable rates --- all of which dissuade consumers. Applicants for the central capital subsidy have rarely received it because of red-tape issues.

A stable policy regime, which aligns well with state and central schemes, a streamlined process to avail subsidies and eradication of corruption are some measures that are urgently required to encourage RTPVs in India.

Considering that the onus of adopting RTPVs lies on consumers (unlike developers of solar parks), domestic, institutional, commercial and industrial consumers need to ramp up uptake of RTPV systems for the sector to gain

momentum. However, lack of guidance, misinformation and rapidly-changing policy regimes have prevented consumers from investing in RTPV.

Unreliable consultants, looking to make a quick buck, fail to explain the intricacies of shadows and grid-connectivity to prospective consumers. Only after installing systems have consumers found out that their business cases are skewed.

In Karnataka, more than 1,000 consumers were lured in to sign up for 1 MW systems when their sanctioned load was less than 5 kW and there was no roof! This was because third-party investors wanted to exploit the loopholes in the state RTPV policy which were subsequently addressed in three changes in 2016-17 alone. Unfortunately, these changes in policy and GM/NM rates have made consumers sceptical and only 57 MW has been installed in the state so far.

Unsure of receiving monthly payments from Discoms, consumers do not have the confidence (in RTPV) to apply for loans. A one-stop shop is needed that allows consumers to accurately assess the techno-economic potential and facilitate turnkey implementation along with obtaining finance without further hassles.

Discoms often complain that RTPV will lead to attrition of revenue. Moreover, there is a fear that the already fragile distribution network might face technical difficulties while importing fluctuating electricity, intermittently generated from RTPV systems. Proper load flow analyses need to be performed taking into account distribution transformers and existing capacities and capabilities. Financial innovations and structural overhauls in Discoms are needed, along with robust roadmaps with stable GM/NM prices, to achieve RTPV targets.

State governments and the Centre need to address these issues and attempt to rejuvenate the RTPV segment while encouraging solar parks. With most states on course to achieve their ground-mounted targets by 2020 (Karnataka aims to cross 6 GW by 2018-19) it only makes sense to increase the 100 GW target to accommodate the doubling of solar park capacities whilst keeping the 40 GW RTPV target intact.

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