SPECIAL ARTICLE

Steps to Achieve India's Solar Potential

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The needs of India's burgeoning population are rising. However, the status quo of resources might not be adequate to fulfill the growing demands of a fast-paced economy. Take for example the power sector.

Country's per capita consumption of electricity stands at a meagre 1,100 kWh/year which is much lower compared to other large economies like the US and China. Demand for power is set to rise further with increasing rates of urbanization and industrial growth. Plugging this demand-supply gap by augmenting capacity in the power sector is a key priority for the policy makers.

Unfortunately, our traditional sources of energy generation are already nearing their saturation levels. India must also honour its global commitments on curbing greenhouse gas emissions, as per the Paris

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Agreement, implying we need to move away from a fossil fuel driven growth path. Clearly, we need to look at alternate solutions so we can address our energy security in a sustainable fashion, with a progressive reduction in carbon levels. Evidence from several developed countries points towards renewable energy adoption as the only way forward. Clearly, India needs to adopt this route in its growth journey. The country has a huge potential for harnessing renewable energy, especially solar, since almost the entire country is blessed with abundant sunlight throughout the year.

The Indian Government has set the renewables capacity target at 175 GW, to be achieved by the year 2022, with the highest percentage, 100 GW, to be contributed by solar power. The Government has accorded prime focus to this sector, with several initiatives and incentives to attract more players and ramp up capacity. As a result, in the past years, we have already added 28 GW solar capacity while the compound annual growth rate has reached as high as 55 per cent. Launch of the International Solar Alliance, was also a significant step to strengthen the sector. By setting up solar parks, providing viability gap funding support and introducing schemes like KUSUM (aiming to harness solar power for agriculture) and SRISTI (catalyzing adoption of rooftop solar solutions), the Government has shown its keenness to fast track growth of solar industry. However, there is room for more strategic interventions to fully realise India's solar potential and plenty of groundwork is needed to help us move closer to the ambitious target of 100 GW solar power capacity by 2022. Here are five areas that need more attention and focus, to take the Indian solar power industry to the next level.

India must also honour its global commitments on curbing greenhouse gas emissions, as per the Paris Agreement, implying we need to move away from a fossil fuel driven growth path. Clearly, we need to look at alternate solutions so we can address our energy security in a sustainable fashion, with a progressive reduction in carbon levels. Evidence from several developed countries points towards renewable energy adoption as the only way forward.

1) Technology

While solar is becoming an important contributor to energy needs in India, there is still a huge gap to be filled. Rooftop solar solutions, for example, can add large capacities but certainly need a push from respective state governments. Newer advancements in the field like floating solar (solar panels mounted on structures that float on water bodies), and BIPV (wherein the conventional materials used for facades and roofs of buildings are replaced by photovoltaics systems) can play a vital role in increasing capacity. Considering the huge potential in the sector, both the government and private entities must emphasise and support R&D and adoption of latest technology and innovations in this area. This will not only help shape the future course but also yield benefits in the form of reduced costs – in turn facilitating adoption.

2) Policy Push

Thanks to technology evolution and government policy, solar power tariffs have decreased over the past few years making solar energy more accessible to the common man. However, tariff margins discovered in reverse auctions have been pushed lower in recent years leading to a squeeze in profit margins. Considering that tariffs are now significantly lower than other sources of energy, we need to move towards healthier tariffs to help private players work with sustainable business models, and attract a higher capital inflow. This will eventually lead to augmented supply and further lowering of prices for the common people. Respective state governments should also accentuate the rate of solar power generation with regular capacity addition.

3) Discom Health

Despite the government's initiatives to reinvigorate power distributing companies, the health of state discoms has not improved much over the years. These distribution companies form a crucial link in the cycle of energy generation and have an impact on the overall process. Hence, maintaining

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discoms in good shape forms an extremely important link on the road to 2022. The healthier the distribution companies, the more power they can purchase and supply. Steps should be taken to strengthen the discoms such that they are able to support higher tariffs, honour RPOs and settle power providers' dues on time.

The government should also bring in policies to operationalise ancillary and capacity markets to extract the total value of renewable energy technologies.

4) Financial Reforms

Reforms in banking systems will go a long way in assisting the renewable energy sector. As of now, sectoral categorisation of banks sees renewables as part of the power sector, due to which, for most banks, the loan limit is majorly consumed by thermal plants and only a small fraction of the fund remains available for the renewables sector. Reality is that the renewables sector has clocked exponential growth and contributed handsome revenues to the exchequer. Considering the above, renewables should be categorised as a separate sector. This will help widen access to funds and simplify the process of loan procurement for companies. The government can also consider according priority sector status to renewables, given its strategic importance. Deeper and diverse bond markets will help in securing affordable finance for clean energy projects in the future. The government should continue its mission of cleansing the banking system and help them regularise bad loans while also reviewing lending norms so they are less stringent A healthy banking system will be able to provide more funds at a competitive cost to propel the renewables sector.

5) Enabling Ease of Doing Business

The government's pursuit of reforms has created a more conducive environment for investments in India, reflected in our steady rise in Ease of Doing Business rankings over the past couple of years. However, faster processing of approvals for project implementation across the value chain, especially conversion approvals of land in different states would be of great help to the renewables sector. It has been seen that lack of proper power evacuation infrastructure has resulted in investor disinterest in the past. Considering this, the government should work on building more robust transmission systems. This will not only increase investor faith in the overall process but will also ensure no MW loss/leakage during power distribution.

Achieving the ambitious target of 100 GW solar power capacity by 2022 needs a collaborative effort from all the stakeholders, including the central and state governments' financers, discoms and private players. The government has a key role to play – not only by providing the required policy support but also acting as a central coordinator– guiding and synchronising efforts from various stakeholders, to catalyze the solar industry's growth. ❑

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