

Renewable Energy: Tariff and capacity update

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Tariff of renewable energy is witnessing a steady rise. The latest tariffs from the auctions indicate a recovery after hitting historic lows in the previous auctions during 2017-18. The March 2018 auctions for wind energy witnessed bids of Rs. 2.85 per unit for 500MW capacity in Maharashtra. This marked a 16% increase in tariffs over the bids for 2000MW capacity held in February 2018.

Solar energy capacity was bid at Rs. 2.96 per unit for 500MW capacity in Gujarat during the same month.

Renewable Capacity and Generation (2017-18)

Particulars	2016-17	2017-18
Capacity addition	11,650MW	8,302 MW*
Total installed capacity	57,244 MW	65,546 MW*
Electricity Generation	81,862 MU	93,208 MU*
Capacity Auctioned	5,000 MW	12,500 MW [#]

*Cumulative April-Feb 2018. # As per MNRE

Solar Energy:

The fall in solar power tariffs during the previous year was in line with the fall in prices of solar power components by almost 80%, most of which is imported from China. Domestic manufacturers of solar equipment and modules have been demanding duties to safeguard their interests, which in turn is slowing the pace of new capacity development especially in the solar power segment.

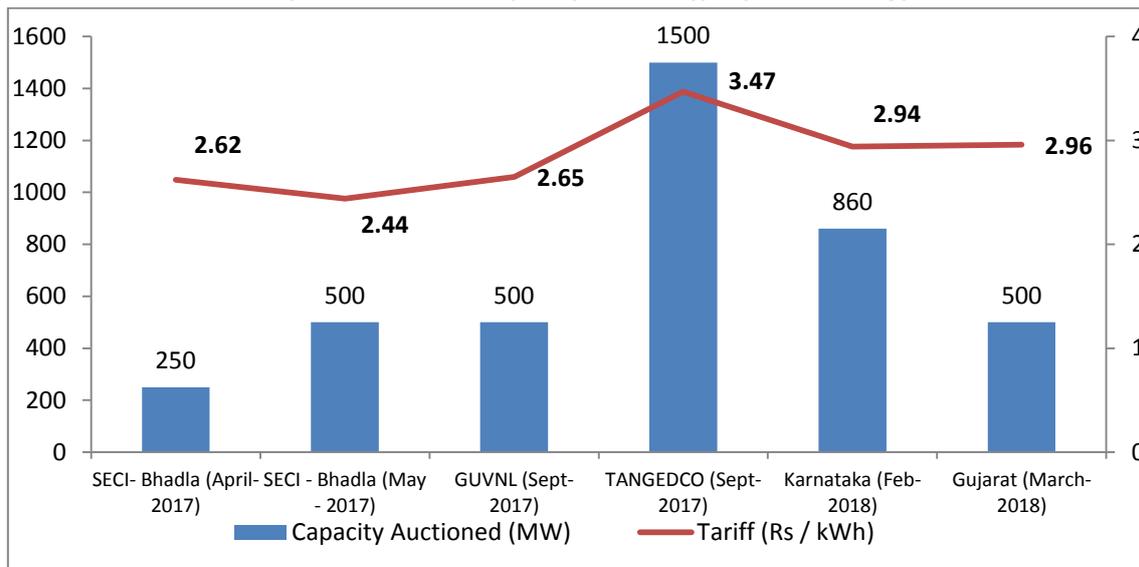
The Union Government has set a target of 100GW of Solar Power Capacity by 2022. Out of this, 19.6 GW has been installed by the end of Feb 2018. Solar energy capacity of 7.3 GW has been added till February end 2017-18. The solar tariffs witnessed steep decline in 2017, with lowest bids of Rs. 2.44-2.45 per unit recorded for 500MW capacity at Bhadla.

Thermal and renewable power tariffs are at par, as per the recent renewable tariffs under various auctions and the prices of thermal power data from CEA.

The previous lower solar tariffs were attributed to high competition for limited capacity auction by SECI. Recent auctions in Karnataka and Gujarat witnessed much higher tariffs of Rs. 2.94 per unit and Rs. 2.96 per unit respectively indicating a recovery in tariffs. Two recent auctions, Karnataka followed by Maharashtra witnessed subdued interest from developers. The 1,200MW auction for projects at Pavagada Solar Park in Karnataka drew bids for only 550MW. The development agency set an upper tariff ceiling of Rs. 2.93 per unit.

The auction announced by Maharashtra Discom in December 2017 for 1,000MW had to be postponed for the 4th time, as it received only two bids for 530 MW. The upper tariff ceiling was fixed at Rs. 3.00 per unit.

Graph 1 Auctioned Capacity and Tariffs of Solar Energy



Source: SECI and MNRE

The reason for lack of participation for solar power auctions can be attributed to

- Ambiguity on imposition of anti-dumping and safeguard duties on solar power components
- Auctioning agencies not providing enough safeguards for revision of tariffs in case of cost escalation.
- Fixing upper ceiling of tariffs too has led to developers not bidding for the projects.

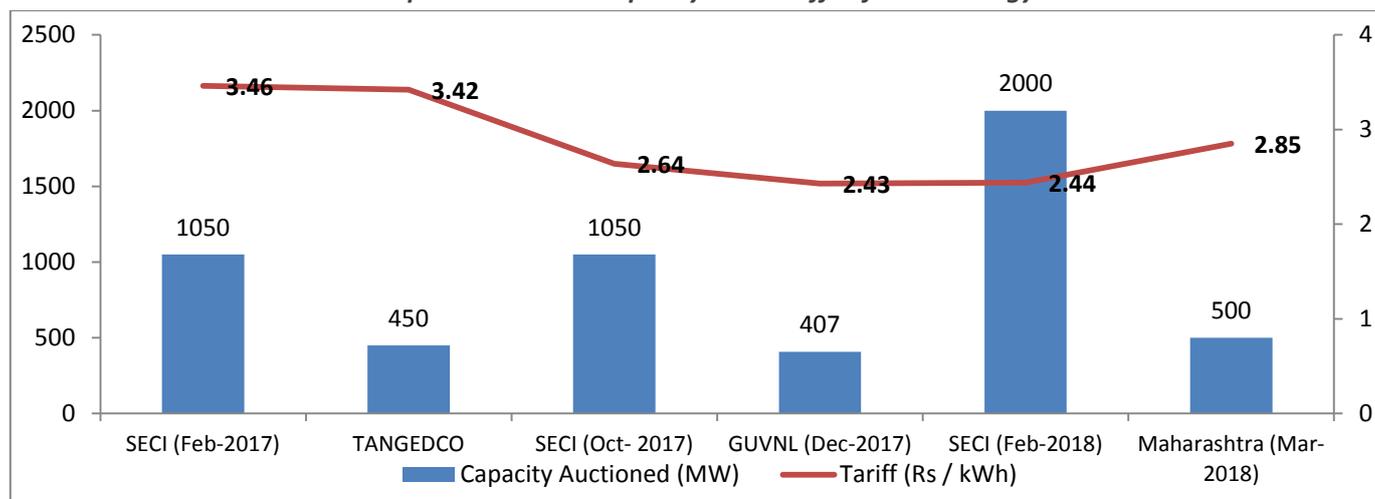
Among the prominent policy measures, the Government introduced new set of guidelines under the National Solar Mission which aimed at bringing transparency in procurement of solar power and at the same time penalising developers or discoms in case of unilateral termination or amendment in PPAs. This came as a relief for the industry at a time when low tariffs led to many state discoms pushing for renegotiation of existing PPAs with developers.

Wind energy trends:

Wind energy tariffs dropped from a high of Rs. 3.46 per unit in Feb-2017 which was the first auction under reverse auction mechanism post transition from Feed-in-Tariff regime (FiT) for wind energy projects. The tariffs touched a low of Rs. 2.44 per unit during the SECI auction conducted in Feb-2018.

Tariffs inched upwards to Rs. 2.85 per unit during the latest auctions, a 16% increase in tariff levels from the previous auction. The rise in tariffs of wind energy can be attributed to better order visibility of 10GW each for the year 2019 and 2020 as set by the Ministry. The targeted installed capacity for wind energy by 2022 is 60GW out of which 33 GW is already in place.

Graph 2 Auctioned Capacity and Tariffs of Wind Energy



Source: MNRE and State Discoms

Table 3 Renewable energy league table (Installed capacity)

Only 8 states in India are suitable for wind power projects namely Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Telangana. Out of these 8 states, Gujarat, Maharashtra and Karnataka states discoms are better performing as per data available on UDAY website in terms of revenue loss per unit electricity supplied in the country.

State	Installed Capacity (GW)
Tamil Nadu	10.8
Karnataka	10.3
Maharashtra	8.0
Gujarat	7.2
Rajasthan	6.7

CARE Ratings View:

- Renewable power developers will continue to bid competitively for projects in states with better performing discoms namely Maharashtra, Gujarat and Karnataka.
- With better order visibility for wind energy (10GW each for 2019 & 2020), their tariffs may witness gradual normalization in line with tariff of solar and thermal power.
- Discoms fixing upper ceiling of tariffs has led to limited participation which in turn may slow down rate of new capacity addition especially for solar power.
- Increase in wind/solar tariffs for few projects can also be attributed to geographical factors like wind speed, duration and intensity of solar radiation etc.

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