

## Records Keep Falling at Bhadla Solar Park Auctions as Tariff Breaches Rs.2.50 (~\$0.038)/kWh in the 500 MW Phase-III Solar Park Auction

*Solar Tariff Falls 7 Percent in a Week*

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In India, the solar tariff breached Rs.2.50 (~\$0.038)/kWh, making it cheaper than thermal power in some cases. In the 500 MW Bhadla Phase-III Solar Park auction, ACME quoted a tariff of Rs.2.44 (~\$0.037)/kWh to win bid to develop 200 MW of solar. The other winning bid was that of SBG Cleantech, which quoted Rs.2.45 (~\$0.038)/kWh to develop 300 MW. Tariffs fell by 7 percent between the tariff quoted in the 250 MW Bhadla Phase-IV Solar Park (Rs.2.62 (~\$0.0405)/kWh) auction and the lowest tariff quoted in the 500 MW Bhadla Phase-III Solar Park (Rs.2.44 (~\$0.037)/kWh) auction, just one week prior.

The project completion timeframe is 12 months from the date of signing power purchase agreements (PPA) and developers will enter 25-year PPAs with Solar Energy Corporation of India (SECI), the off-taker. The SECI set up a payment security mechanism in order to ensure timely payment to the developers. This fund will cover three months' payments.

NSM Phase-II Batch 4: Bhadla Phase-III Solar Park, Tranche-VIII, Rajasthan					
Auction Results for 500 MW Solar Projects (Open Category)					
Developer	Capacity	VGF	Quoted Bids/Tariff		% Over Winning Bid
	MW		(₹/kWh)	(\$/kWh)	
ACME Solar	200	0.00	2.44	0.0376	-
SBG Cleantech	(300)* 500	0.00	2.45	0.0377	0.41%
Hero Solar Energy	300	0.00	2.46	0.0379	0.82%
ReNew Power	500	0.00	2.47	0.0380	1.23%
Avaada Power (Welspun)	200	0.00	2.6	0.0400	6.56%
Shapoorji Pallonji Infrastructure	400	0.00	2.65	0.0408	8.61%
RattanIndia Solar	100	0.00	2.87	0.0442	17.62%
Duroc Solar	100	0.00	2.88	0.0444	18.03%
Orange Renewable	200	0.00	2.95	0.0454	20.90%
Lightsource Renewable Energy	100	0.00	2.98	0.0459	22.13%
Solairedirect	300	0.00	3.08	0.0474	26.23%
Mahoba Solar (Adani)	300	0.00	3.14	0.0484	28.69%
Aditya Birla Renewables	200	0.00	3.18	0.0490	30.33%

\* SBG Cleantech bid for 500 MW but won 300 MW

Source: SECI

Mercom India

ACME Solar was the lowest bidder, quoting a tariff of Rs.2.44 (~\$0.037)/kWh to develop 200 MW of solar. The capacity comprises of two projects of 100 MW each. SBG Cleantech was

the other winner, who won a bid to develop 300 MW of solar by quoting Rs.2.45 (~\$0.038)/kWh.

In all, 10 developers quoted tariffs below Rs.3 (~\$0.046)/kWh, out of which six quoted a tariff lower than the previous low tariff of Rs.2.62 (~\$0.0405)/kWh.

“We were expecting prices near Rs.2.65 (~\$0.041)/kWh, similar to the Bhadla Phase-IV 250 MW auction, but developers have surprised us. Within a week, we have successfully put thermal behind solar on price,” stated an official at the Solar Energy Corporation of India. The competition is getting tougher in the solar sector, added the SECI official.

**A Comparison of the Lowest Bids in Solar Reverse Auctions in India**

	Rewa Low Levelized Bid	Kadapa Solar Park Low Bid	Bhadla Phase-IV Low Bid	Bhadla Phase-III Low Bid
Auction Date	Feb-17	Apr-17	May-17	May-17
Solar Park	Rewa Solar Park	Kadapa Ultra Mega Solar Park	Bhadla Phase-IV Solar Park	Bhadla Phase-III Solar Park
Location	Madhya Pradesh	Andhra Pradesh	Rajasthan	Rajasthan
Tariff/Bids	Levelized Tariff Over 25 Years - ₹3.30 (~\$0.0494)/kWh <i>(the low bid of Rs.2.97 (~\$0.0444)/kWh will escalate at ₹0.05 (~\$0.0007) for next 15 years)</i>	₹3.15 (~\$0.0487)/kWh	₹2.62 (~\$0.0405)/kWh	₹2.44 (~\$0.0378)/kWh
PPA Terms	25 Years	25 Years	25 Years	25 Years
Time to Commissioning from Auction Date	20 Months	16 Months	14 Months	14 Months
Construction Timeline from PPA	19 Months	13 Months	12 Months	12 Months
Estimated PPA Signing Date	Apr-17	May-17	Jul-17	Jul-17
Estimated Completion Date	Nov-18	Jun-18	Jul-18	Jul-18
Project Size/Bidder	250 MW (ACME Solar)	250 MW (Solairedirect)	50 MW (Phelan Energy Group), 100 MW (Avaada Power)	200 MW (ACME Solar)
% Decline in Lowest Tariff	-24%	-4.5%	-16.8%	-6.9%
Offtaker	76% - MPPMCL with State Government Payment Guarantee, 26% - Delhi Metro Rail Corporation (DMRC)	NTPC	SECI (3 Month Payment Guarantee)	SECI (3 Month Payment Guarantee)
Deemed Generation Benefit	Yes	-	-	-

Source: Mercom India

We did not expected the solar tariff to cross Rs.2.50 (~\$0.038)/kWh yet. It is a pleasant surprise and shows that the efforts by the Ministry of New and Renewable Energy (MNRE) are finally showing, stated an MNRE official. The MNRE has clarified the tender guidelines, made the entire process transparent and formulated policies like payment security mechanisms, which have provided a boost to developer’s morale and the results are here for everyone to see, added the MNRE official.

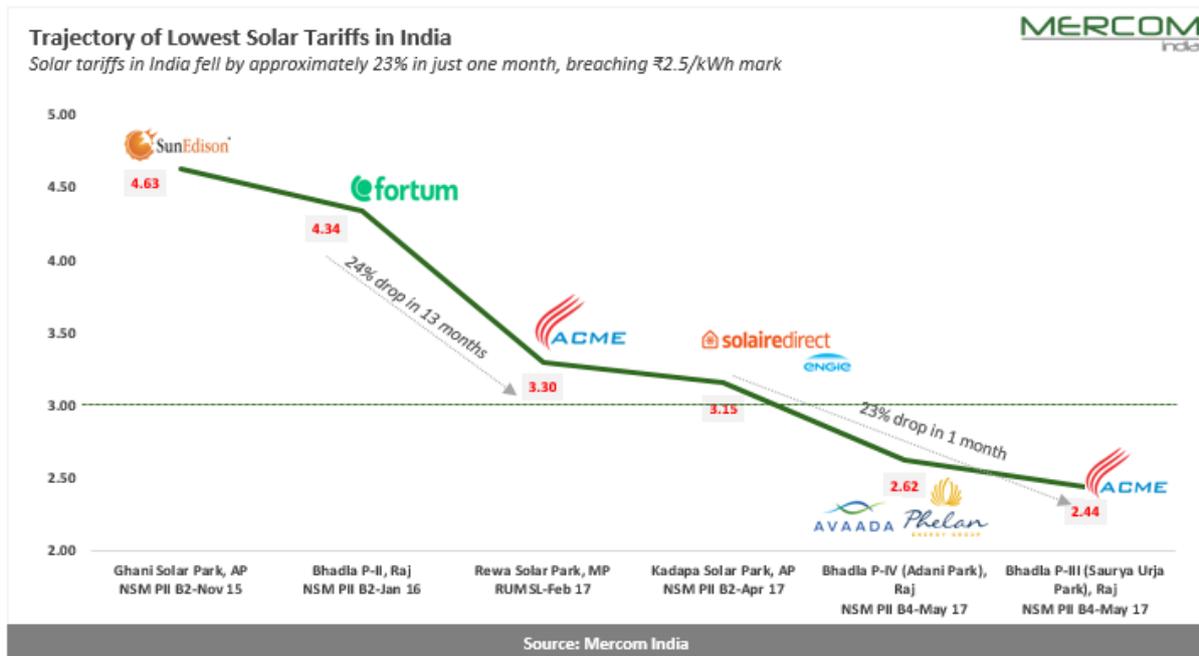
The MNRE official further stated that the sector is becoming mature and the developers know it. Lending rates have gone down and these developments have pushed tariffs lower. The tariffs are sustainable, otherwise developers wouldn’t have bid at such prices. Whether they are okay for the small developers or not, we will see eventually, added the MNRE official.

The developers that won the auction are both backed by some strong investors.

ACME Solar, part of ACME Cleantech Solutions, has now won two big record breaking auctions – 250 MW in the Rewa auction, which was touted as a game changer, and now the 200 MW Bhadla Phase III solar park project. ACME won the Rewa project at Rs.3.30 (~\$0.051)/kWh in February and Bhadla Phase III project in May at Rs.2.44 (~\$0.037) a 26 percent drop in 3 months. ACME raised Rs.5 billion (~\$73 million) last November from

Piramal Enterprises and the Dutch Pension fund, APG Asset Management NV. The investment was to buyout EDF Energies Nouvelle and EREN Energies' which each held 25 percent stake in ACME Solar.

SBG Cleantech has also won two big projects at record low tariffs in a short period of time. It won a 100 MW project in Bhadla Phase IV park at Rs.2.63 (~\$0.0409)/kWh and a 300 MW project in the Bhadla Phase III park auction at Rs.2.45 (~\$0.038)/kWh a 7 percent difference. SBG Cleantech is a joint venture between Softbank Group, Foxconn Technology and Bharti Enterprises.



The market is changing; we did not expect prices to fall so low even Rs.3 (~\$0.046)/kWh is more, stated a source at Mahoba Solar, a Adani subsidiary. This is good for the consumers who will get cheaper power and for the utilities as their profit margin will increase, but the small developers will have to rethink their strategies. The larger players are fighting for each paisa, added the source at Mahoba Solar.

Officials at SBG Cleantech, which won bids to develop 300 MW (3\*100 MW) were unavailable to comment. SBG Cleantech is the only firm to win bids in both the 250 MW and the 500 MW auction.

“Neither solar insolation nor component prices changed much in two days, but tariffs still fell 7 percent. The size of the winning project was definitely bigger but all other aspects are the same compared to the Bhadla Phase IV park. It is now down to two things: access to large pool of low cost funds and praying that module and component prices continue to go down rapidly,” said Raj Prabhu CEO and Co-founder of Mercom Capital Group.

**Source:** [http://mercomcapital.com/records-keep-falling-at-bhadla-solar-park-auctions-as-tariff-breaches-rs.2.50-\\$0.038kwh-in-the-500-mw-phase-iii-solar-park-auction](http://mercomcapital.com/records-keep-falling-at-bhadla-solar-park-auctions-as-tariff-breaches-rs.2.50-$0.038kwh-in-the-500-mw-phase-iii-solar-park-auction)