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SLDC cannot curtail renewable power at convenience, says TNERC

Economic Times : March 30, 2019

TNERC outlined these findings in a petition regarding stopping issuance of backing down or curtailment instructions to solar projects

In a significant move for the energy sector, the Tamil Nadu Electricity Regulatory Commission (TNERC) has stated that State Load Dispatch Centre (SLDC) cannot curtail renewable power at their convenience, adding that backing down of the "Must Run Status" power shall be resorted to only after exhausting all other possible means of achieving and ensuring grid stability and reliable power supply.

TNERC outlined these findings after noting the submissions of the petitioner and respondents in a petition filed regarding stopping of issuance of backing down or curtailment instructions to solar projects as the backing down is causing huge losses to the solar developers almost on daily basis.

"The backing down data furnished by the petitioners has not been disputed by the respondents. However, they were not able to explain the reason prevailing at each time of backing down beyond the general statements. It gives rise to a suspicion that the backing down instructions were not solely for the purpose of ensuring grid safety," the regulatory commission observed.

The commission also stated that it is necessary to direct the SLDC to ensure evacuation of the solar power generations connected to the state grid to the fullest possible extent, truly recognising the Must Run Status assigned to it in full spirit.

"In doing so, in view of the problems enumerated supra, the SLDC may resort to backing down in rare occasions in order to ensure the grid safety as stipulated in the Grid Code and to ensure reliable 24 x 7 power supply to the State. It is necessary to log each event of backing down whenever such instructions are issued with the reason(s) which lead(s) to that unavoidable decision. A quarterly return on the curtailments with the reasons shall be sent to the Commission. Any whimsical backing down instructions would attract penal action under section 142 of the Electricity Act on the officials concerned", read the order issued by the TNERC

New Net Metering Guidelines for Rooftop Solar Consumers in Tamil Nadu

Mercom : March 25, 2019

The order has been in effect from March 25, 2019

The Tamil Nadu Electricity Regulatory Commission (TNERC) has issued new net metering guidelines for solar rooftop consumers as part of its Solar Policy 2019.

Tamil Nadu, the fifth largest solar market in India as of 2018, announced the state's solar policy earlier this year with a goal of 9 GW in solar installations by 2023 between utility-scale and distributed generation projects. The state has targeted 40 percent (3.6 GW) of installations to come from the consumer category (residential rooftop and small-scale solar installations). The net-metering mechanism was one of the key proposals included in the solar policy that is expected to help the state achieve its installation goals.

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This new order applies to all new applicants from the eligible consumer category. Existing consumers under the net metering program will not be covered under this order.

Under the new program, an eligible consumer can install the maximum capacity of solar rooftop up to 100 percent of his contracted demand with the distribution licensee.

Eligible consumers will also have to install two meters under the solar net feed-in program. First is for measuring solar power generation and the second is to measure import and export of energy. Both the meters will have to be installed at the same location where the existing meter for recording the consumption of energy is installed.

Installation of solar generation meter is to help DISCOMs with demand forecasting, along with the calculation of total solar generation in the state. The cost of new meters provided for the net feed-in program, installation and testing charges will have to be borne by the eligible consumers. However, DISCOMs will procure, test and install the meters. The consumer will also have an option of procuring and supplying the meters.

The electricity generated by the solar rooftop power project will need to be used for self-consumption. The surplus energy that flows to the grid and recorded in the export register of the meter will be calculated at a tariff fixed by the commission and credited to the consumer's account.

Under the commercial agreement, the order says-

"The price of purchase of energy exported to the grid by the solar power generators commissioned under the solar net feed-in during a financial year will be at 75 percent of the pooled cost of power purchase notified by the Commission for the respective financial year in the orders issued on pooled cost of power purchase under Renewable Energy Power Purchase Obligations, 2010"

Or

"75 percent of last feed in tariff determined by the Commission or 75 percent of tariff discovered in latest bidding whichever is less."

Connectivity to rooftop solar systems will be restricted to 90 percent of the distribution transformer capacity at the local level. The DISCOMs will provide the connectivity on a first come first serve basis and update the status of cumulative rooftop solar capacity connected to each distribution transformer in their website.

The Commission specifies that the responsibility of operation and maintenance (O&M) of the solar rooftop project including all accessories and apparatus lies with the solar power generators. For example, a consumer should use sine wave inverter suitable for synchronizing with the distribution licensee's grid.

However, grid-connected solar PV systems with battery backup are not covered under this order. Any battery backup will be restricted to the consumer's network, and the consumer will be responsible for taking adequate safety measures to prevent battery power extending to grid causing a failure to DISCOM's grid supply.

DISCOMs will install the energy meters and commission the solar metering facility within three weeks from the date of application by the consumer. The energy generated from the solar rooftop project can be accounted towards the fulfillment of renewable purchase obligation of DISCOMs. However, the net injection of power is not eligible for renewable energy certificates.

The order has been in effect from March 25, 2019.

Other states are also mulling similar policies to incentivize rooftop solar generation as rooftop makes only 11 percent of India's total solar installation.

The Karnataka Electricity Regulatory Commission has also published a discussion paper with regards to tariff determination and other norms for rooftop solar energy projects and has invited comments from all stakeholders.

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Renewable Energy Certificates' sales down 22 per cent in 2018-19 **Economic Times : March 31, 2019**

In March, sales of RECs or green certificates declined by over 51 per cent to 11.78 lakh from 24.26 lakh in the same month last year.

Sales of renewable energy certificates declined over 22 per cent to 1.25 crore units this fiscal on IEX and PXIL as compared to 1.61 crore in 2017-18, mainly due to lower inventory (supply), according to official data. In March, sales of RECs or green certificates declined by over 51 per cent to 11.78 lakh from 24.26 lakh in the same month last year.

Indian Energy Exchange (IEX) and Power Exchange of India (PXIL) are the two power bourses in the country, which are engaged in trading of RECs and electricity.

The trading of renewable energy certificates (RECs) is conducted on the last Wednesday of every month.

Under the renewable purchase obligation (RPO), bulk purchasers like discoms, open access consumers and capacitive users are required to buy certain proportion of renewable energy or RECs. They can buy RECs from renewable energy producers to meet the RPO norms.

The proportion of renewable energy for utilities are fixed by the central and state electricity regulatory commissions.

An official said that the IEX saw a total trade of 9.34 lakh in March compared to 20.79 lakh in the same month last year.

The data shows that in 2018-19, the RECs sales dropped 4 per cent to 89.55 lakh as against 93.29 lakh in the previous fiscal, largely due to the lower REC inventory.

The official said that both non-solar and solar RECs continued to see low supply situation with buy bids exceeding the sell offer.

Similarly on the PXIL, 36.53 lakh RECs were sold this fiscal compared to 68.55 lakh in 2017-18. In March, 2.44 lakh RECs were traded on the exchange as against 3.47 lakh in same month last year.

The REC mechanism is a market based instrument to promote renewable sources of energy and development of market in electricity. It provides an alternative voluntary route to a generator to sell his electricity from renewable sources just like conventional electricity and offer the green attribute (RECs) separately to obligated entities to fulfill their RPO.

Short-term power prices drop to Rs 3.08 per kWh in February: ***Ind-Ra***

Economic Times : April 2, 2019

Short-term power prices continued to decline and landed at Rs 3.08 per Kilowatt hour (kWh) in February 2019 compared with Rs 3.23 per unit in the same month last year, research and ratings agency India Ratings and Research said in a report today.

"The decline was driven by a lower energy demand due to an elongated winter season. Available energy increased 1.6 per cent while the increase in energy required was limited to 1.3 per cent, leaving a lower power deficit of 0.4 per cent in February 2019," Ind-Ra said in its report.

It further added that the increase in available energy in February this year was driven by higher hydro power, up 25.6 per cent year-on-year (y-o-y), and renewable generation, up 19.6 per cent y-o-y, even as thermal generation declined 2.0 per cent y-o-y.

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According to the report, with an increase in hydropower, the lower reliance on thermal energy in February led to thermal plant load factor declining to 60.5 per cent, which was 62.9 per cent in the same month last year.

Coal India's monthly coal production increased 6.5 per cent y-o-y to 58.1 million tonne (mt) in February 2019, leading to a rise in the coal inventory at power stations by 64.8 per cent y-o-y. The inventory was also supported by higher production from the hydro and renewable segments, leading to lower reliance on the thermal segment.

"The increase in inventory further led to the number of power plants with sub-critical levels of coal declining to four in February 2019 from 25 in February 2018 and six in January 2019. The total coal production increased 6.5 per cent y-o-y to 527 mt in April-February 2019," the report said.

No new capacity was added in the thermal or hydro segment in February this year and capacity addition for the period from April 2018 to February 2019 also declined significantly -- 52 per cent y-o-y. India still depends on coal-based power with a capacity of 197.4 gigawatt in February 2019.

Power sector's future is very bright: Ajay Bhalla, power secretary
Economic Times : April 2, 2019

Shakti Policy has been amended to permit short-term sale of power from coal linkage, says Bhalla.

It will be a win-win for both discoms as well as generators, said Ajay Kumar Bhalla, Power Secretary, in an interview with ETNOW.

Edited excerpts:

What is your broad-based assessment of the final tariff structure for power companies? Would you say a win-win situation has been maintained?

Broadly the stability in the tariff regime has been maintained and certain improvements have been made in the normative parameters. Whatever has been the experience in the recent years on certain issues of storage of coal at the power end points and flexibilisation of the plants to accommodate renewable energy, all these aspects have been attempted to be addressed by this regulation. I feel it is quite a win-win situation for all. Like reduction in payment period, the working capital will definitely reflect on the cost of power. It will come down a bit. I am sure it will be win-win for both discoms as well as generators.

Would NTPC benefit because it is a regulated entity and they have got fixed ROEs.

ROE has been maintained. Actually, looking at the construction time etc, the effective ROE comes down and at reasonable ROE, NTPC has been able to raise resources at much lesser rate of interest. It achieves a balance. We need not worry too much about this ROE. Of course, there was an issue that after 25 years why should that much return be given. That has also been addressed in this regulation.

The other aspect which nobody is talking about is the coal availability which is a challenge for the power sector. It seems coal imports are back and they are not far away from its peak. Why is that?

Only yesterday, Coal India CMD has announced that they have crossed 600 million tonnes target. There has been growth in dispatch of more than 7.3 per cent, 7.4 per cent but yes the power demand has also been increasing. We have been on conventional. There has been about 3.5 per cent growth and overall 5.1 per cent. This year there has been some import of coal for blending purposes because the imported coal-based plants like in Mundra -- both Tata and Adani plants generated less due to certain tariff-related regulatory issues, and naturally that much quantum of power had to be met.

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I do not see it as a very serious issue. Coal India has a plan. A few years back, one billion tonne production plan was made and in early 2017, certain coal-based plants took less coal for about six months and some of these plants perhaps got delayed but the production last fiscal shows that Coal India has brought the production plans back on the table.

There would be issues of land acquisition and clearances and resettlement issues in open-cast mining. We have displaced some people. But the plans are definitely there and we regularly review them especially on transportation, connectivity and clearances and they should be able to meet the requirement.

What about PLF (plant load factor), currently and also going forward?

Yes 61 per cent is an average figure. But as capacities are getting added -- even this financial year some coal capacities have been added -- growth on conventional asset was only 3.5 per cent plus. I feel PLF of different plants could be different depending on lack of PPAs or lack of coal availability for certain IIPs. This is the overall PLF.

If you look at NTPC, PLF is always 70 per cent plus and some of the patented plants generate working 90 per cent PLF. This will improve once the demand grows but we always compare it with four-five years back when the PLF was high because the coal capacities were low. The plants were running at full capacity. So, it is not that those plants are generating at lower PLF now. New capacities have been added, which have not been able to reach full capacities and we are working separately for getting some medium-term power purchase agreements for these plants.

How big a relief could be relaxation for power norms and the way NPAs are calculated for private players?

There is stress in power sector. Each case is different and we cannot generalise too much but there were certain sectoral issues. There was cancellation of coal blocks. There was lack of PPAs. Some of the PPAs were in dispute and then there were some equity issues by the promoters themselves and some of them had bid very aggressive tariffs.

Now all the solutions cannot be found by the government but we tried to address some of these sectoral issues especially payments, coal and PPAs in an innovative manner. We went to a high-level empowered committee and we have issued orders and the Shakti Policy has been amended by the ministry of coal to permit short-term sale of power from coal linkage.

So, it is a matter of time before issues are solved. The RBI circular has put some tight guidelines on the bankers who are worried. They may lose money in one-time settlement or in the bidding but then some of the capacities which are still under construction without any EPS and all may end up in NCLT and they are already in the process of either admission or in hearing in NCLT. Whatever could be resolved has also been attempted to be resolved. It is a balanced approach. We are trying to bring the commission capacities with coal linkages to PPAs.

In case of commissioned capacities without coal linkages, we are trying to get some coal through Shakti modification. Capacities which are under construction and at a stage where small investments cannot turn them around and bring them in commissioning, perhaps have to be dealt in NCLT.

Talk about the post merger benefits of PFC and REC. Would you say that the combined entity is much better off than the two standalone entities?

At present, government shares in REC have been acquired by PFC. The process of merger is yet to kick in, We will examine that side also. The share market indicates that both the companies are doing well. There were apprehensions on the ratings, they were under watch. All those things have over and now both the companies are there. They are complementary in their functioning.

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PFC had invested more on the generation assets and REC on transmission and distribution assets, now they can sort of coordinate well. They were together funding some stressed assets so the decision making becomes easier now if those assets are getting resolved. In any case for raising resources in the international markets, both the companies together will be in a better position.

What is the situation with discoms?

I very much appreciate the concern. The position during FY19 have deteriorated. The discoms audit is delayed and the correct figures take some time to reach us. I was trying to collect some data from some of the states, we got about 50-60 per cent data of the nine month period which shows that the billing efficiency has gone up, the collection efficiency has gone up and AT&C losses also have come down marginally in the nine months and compared to 20 per cent plus last year, stand at 19 plus percent this year. But the losses in the balance sheets have gone up and the power purchase cost has also gone up. There have been increase in coal prices and railway freight and that has impacted the power purchase cost.

All that has led to ACS ARR gap increasing, though efficiency factors are kicking in. If there is increase in power purchase cost of 21 paise, the ACS ARR gap has got affected by only eight paise. That shows that the whole thing has not impacted the discoms badly. We have to look at all the factors and not only the discoms. Their balance sheets from Rs 50,000 crore plus has come down to Rs 15,000 crore in the last fiscal. In FY19, maybe it would be more than Rs 15,000 crore but not much, though improvements are there. The tariff applications have started moving in. The discoms have been approaching the regulators for revising the tariff. That culture has set in and the efficiency has also been brought in. We are looking at improvement of their O&M norms.

We are pushing metering, we are increasing the reach so their billing efficiency and quantum energy billed and all have shown definitely positive trends. I am hopeful that despite the ups and downs in different discoms, different issues of subsidies getting released and all, things would improve. Sometimes the subsidies get released in March which affects the balance sheets and will show positive by next three months, when we get the results for the whole financial year. It is a mixed bag at this moment.

Power companies are telling us that the private sector is still not very convinced about starting capex. ABB, BHEL, Alstom are harbingers of which way the power demand and power capex is moving. When do you think the real power capex will start?

There seems to be a lull at this moment but when we look at the projections of the future, we need to add capacities and if we start working on a project today, the capacity comes into commissioning after five to six years. There definitely would be need to add capacities. We have made a projection plan, CA does it very regularly but we are looking at a proper energy mix by 2030, wherein we will integrate how much maximum renewables we can integrate and what is the balance requirement.

Presently, the balancing is coming from hydro to some extent and to flexible operations of the coal plants, The regulator in its tariff regulation has also incentivised the part that if your ramp up rate is 1 per cent, you get incentivised in your returns.

We expect that more capacities will have to be added. Some brown-field expansions of NTPC have taken place. Recently two new plants have also been cleared by government for about 1,320 MW each in Buxar in Bihar and Khurja in UP. Definitely some planning is there in the pipeline and once the relevant approvals take place, those definitely will come into construction and the order books of BHEL and other suppliers would start looking up.

What would be your message to investors who have languished in terms of return expectations in power sector?

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Power companies are bound to do well. Without power, there is no development. Government has invested in the distribution infrastructure through Deen Dayal Upadhyaya Gram Jyoti Yojana as well as Saubhagya and now we are working on smart meters and metering of the whole system and bringing in smart grids to check losses to tell discoms to become more professional, because that is the paying end of the power sector.

Demand is there, per capita consumption is one-third of the world average and within the country, we have so much of variation starting from Gujarat to Bihar and all. There is a scope for use of power and we are a developing country. If GDP grows at 7-8 per cent, definitely power is one of the important factors. We need to grow at 6 per cent plus. From where this growth will come?

The renewables will grow definitely but we need to balance this energy and shareholders should not be worried about their investment. Any industrial activity always has ups and downs. There was a glut of capacity which has led to certain stress but gradually, these capacities are getting addressed.

Demand from the state is coming up. Long PPAs may not have come but we are hearing that some states are interested in that also. So, Shakti policy applications are now coming up for even long-term purchase agreements.

It will take some more time to fructify but nothing is looking dark in future rather it is looking very bright as far as power sector is concerned.

How to achieve 24x7 power for all- *Abhishek Jain*

Three steps to help rural India overcome electricity poverty and reap immense socio-economic benefits

Almost every willing household in India now has a legitimate electricity connection. The household electrification scheme, Pradhan Mantri Sahaj Bijli Har Ghar Yojana, or Saubhagya, has been implemented at an unprecedented pace. More than 45,000 households were electrified every day over the last 18 months. Against such an achievement, it is important to ask these questions: what did it take for India to achieve this target? Why is electricity access not only about provision of connections? And, how can we ensure 24x7 power for all?

The efforts under Saubhagya have come upon decades of hard work preceding it. The enactment of the Electricity Act, in 2003, and the introduction of the Rajiv Gandhi Grameen Vidyutikaran Yojana, in 2005, expanded electrification infrastructure to most villages in the following decade. But the rollout of the Saubhagya scheme, in 2017, gave the required impetus to electrify each willing household in the country.

However, over the last year, several engineers and managing directors in electricity distribution companies (discoms), their contractors, State- and Central-level bureaucrats, and possibly energy ministers have been working at fever pitch. Discom engineers have evolved in their attitude, as we saw during our on-ground research — from one of scepticism to that of determination. Their efforts to meet targets even included crossing streams in Bihar on foot with electricity poles, and reaching far-flung areas in Manipur, through Myanmar, to electrify remote habitations with solar home systems.

Beyond connections

Despite such massive efforts, the battle against electricity poverty is far from won. The erection of electricity poles and an extension of wires do not necessarily mean uninterrupted power flow to households. By tracking more than 9,000 rural households, since 2015, across six major States (Bihar, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and West Bengal), the Access to Clean Cooking Energy and Electricity Survey of States (ACCESS) report by the Council on Energy, Environment and Water (CEEW), has highlighted the gap between a connection and reliable power supply. While the

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median hours of supply increased from 12 hours in 2015 to 16 hours a day in 2018, it is still far from the goal of 24x7. Similarly, while instances of low voltage and voltage surges have reduced in the last three years, about a quarter of rural households still report low voltage issues for at least five days in a month.

Vital steps forward

In order to achieve 24x7 power for all, we need to focus on three frontiers. First, India needs real-time monitoring of supply at the end-user level. We achieve what we measure. While the government is bringing all feeders in the country online, we currently have no provision to monitor supply as experienced by households. Only such granular monitoring can help track the evolving reality of electricity supply on the ground and guide discoms to act in areas with sub-optimal performance. Eventually, smart meters (that the government plans to roll out) should help enable such monitoring. However, in the interim, we could rely on interactive voice response systems (IVRS) and SMS-based reporting by end-users.

Second, discoms need to focus on improving the quality of supply as well as maintenance services. Adequate demand estimation and respective power procurement will go a long way in reducing load shedding. Moreover, about half the rural population across the six States reported at least two days of 24-hour-long unpredictable blackouts in a month. Such incidents are indicative of poor maintenance, as opposed to intentional load-shedding. Discoms need to identify novel cost-effective approaches to maintain infrastructure in these far-flung areas. Some States have already taken a lead in this. Odisha has outsourced infrastructure maintenance in some of its rural areas to franchisees, while Maharashtra has introduced village-level coordinators to address local-level challenges. Such context-based solutions should emerge in other States as well.

Finally, the improvement in supply should be complemented with a significant improvement in customer service, which includes billing, metering and collection. Around 27% of the electrified rural households in the six States were not paying anything for their electricity. Despite the subsidies, constant loss of revenue would make it unviable for discoms to continue servicing these households in the long run. Low consumer density along with difficult accessibility mean that conventional approaches involving meter readers and payment collection centres will be unviable for many rural areas. We need radically innovative approaches such as the proposed prepaid smart meters and last-mile rural franchisees to improve customer service and revenue collection. Rural renewable energy enterprises could especially be interesting contenders for such franchisees, considering the social capital they already possess in parts of rural India.

Electricity is the driver for India's **development**. As we focus on granular monitoring, high-quality supply, better customer service and greater revenue realisation at the household level, we also need to prioritise electricity access for livelihoods and community services such as education and health care. Only such a comprehensive effort will ensure that rural India reaps the socio-economic benefits of electricity.

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