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Second unit of Kudankulam nuclear plant starts fission

Times of India ; July 11, 2016

The second unit of Kudankulam atomic power project in Tamil Nadu went critical or started nuclear fission on Sunday at 8.56pm, officials of Nuclear Power Corporation of India Ltd said.

"Criticality achieved at 8.56pm," HN Sahu, station director of first and second units, told IANS on Sunday. Sahu on Saturday told IANS that the unit was expected to attain criticality between 6pm and 10pm on Sunday.

This is the second 1,000MW pressurized water reactor to go critical in the country. The first unit at Kudankulam went critical in July 2013.

The unit will start commercial generation in four to six months time. Prior to that tests have to be conducted and then the unit will be connected to the Southern power grid. The approach towards criticality started on Friday with the gradual removal of the control rods.

Asked about the conduct of off-site emergency safety drill prior to the commissioning of the reactor, NPCIL chairman and managing director SK Sharma had told IANS: "The second unit is part of an operating station (site where a nuclear power plant is already functioning). In such cases off-site emergency drills are conducted once in two years."

The first 1,000MW unit of Kudankulam atomic power project, which is located in Tirunelveli district, is already functional.

Sharma said there are three types of emergency drills that are done at Indian nuclear power plants: plant, site and off-site. "The emergency drills at the plant are done every quarter and the site emergency drill every year," he had said.

According to Sahu, the last off-site drill was conducted in January 2015.

For NPCIL, the two units of Kudankulam project are expected to contribute handsomely to its topline and bottomline.

The first unit experienced several hiccups since starting commercial production in December 2014 but seems to have stabilized now, generating about 940MW daily on an average. The first unit supplies power to Tamil Nadu (562.5MW), Puducherry (33.5MW), Kerala (133MW), Karnataka (221MW) and Andhra Pradesh (50MW).

The total outlay on the two units of Kudankulam project has been over Rs 17,000 crore.

Once the second unit at Kudankulam starts power generation to its full capacity, the total atomic power capacity in Tamil Nadu would go up to 2,440MW.

Already, the NPCIL has two 220MW units at Kalkpakkam near here under its Madras Atomic Power Station.

Strong winds lift power generation to a new high

The Hindu: July 9, 2016

TANGEDCO has started selling surplus power to other States

WINDS OF CHANGE
 Installed wind energy capacity in the State is 7,598 MW

- Maximum generation possible: **5,000 MW**
- The highest wind energy used by the State was **12,000 MU** in 2012-13
- All-time high wind energy absorbed in a day: **94.648** million units (MU) on July 5. The absorption was almost one-third of the consumption of **305.633** MU
- Tamil Nadu has a Renewable Purchase Obligation of **9** per cent
- 60** MW being exported to a company in Odisha from July 4
- 60** MW being exported to a power utility in Goa from July 6
- State government is seeking Centre's nod to establish a green power corridor to evacuate renewable energy without disturbing the common power grid



Wind mills located near Pollachi in Tamil Nadu. — FILE PHOTO

From a clear power deficit situation a few years ago, the Tamil Nadu Generation and Distribution Corporation (TANGEDCO) has claimed not only that it has achieved a position of surplus, but that it has also started supplying power to other States.

A senior official of TANGEDCO said a feasibility study was started from November last year to use wind energy to the maximum without going for back down of wind power generation. As part of this strategy, TANGEDCO planned to sell surplus wind energy to other States and this plan was put in to practice from Monday (July 4). In this regard, a Renewable Energy Management Centre (REMC) was opened in the State Load Despatch Centre (SLDC).

The official said the plan to sell surplus wind energy was to help other States fulfil the Renewable Purchase Obligation norms. About 120 mega watt (MW) of surplus wind power was being exported to two States — 60 MW of electricity to a company in Odisha and 60 MW to the power utility in Goa. The steadying of the peak electricity demand of 13,500 MW in the State and windy weather were the two factors that contributed to this, he added.

TANGEDCO officials are confident of using the wind energy without backing down for at least another two months as the windy weather would last till September. The senior official citing the sustained generation of wind energy of 3,500 MW to 4,000 MW from this month and TANGEDCO absorbing an all-time high of 94.65 million units (MU) on July 5, said the electricity department was hopeful of crossing the 12,000-MU mark, which was the highest wind energy used in a year in the State. TANGEDCO utilised the highest wind energy of 12,000 MU in a year in 2012-13.

The officials of the SLDC, which is the nerve centre of the electricity grid in the State, had been taking cautious steps to accommodate the "infirm" wind power without affecting the grid system.

The official said: "Despite opening REMC where wind is forecast in advance for coordinating with the SLDC to utilise maximum wind power, the error rate in wind power forecasting still poses a problem for the grid management engineers and needs to be fine tuned properly."

The State government is seeking the Centre's nod to create a national-level green power corridor for exclusively evacuating renewable energy.



TN ready to sell 1,000MW wind power

Times of India: July 10, 2016

In the wake of a surge in wind power generation in the state, Tamil Nadu government has sought the Centre's intervention to increase the inter-state transmission capacity to sell the harvested renewable energy to other states that have not met the renewable power purchase obligation (RPO) prescribed by the Central Electricity Act.

Chief minister J Jayalalithaa, in a letter to Prime Minister Narendra Modi on Saturday, said Tamil Nadu was ready to sell as much as 1,000MW wind power to other states, but inadequate transmission capacity in the grid remained a hurdle. "While dedicated infrastructure would take some time to be created, in the mean time, the Power Grid Corporation may be directed to allocate dedicated transmission capacity to transfer the surplus wind energy available in Tamil Nadu to other states this season (till September). I would be grateful for early action in this regard," said Jayalalithaa.

She also called upon Modi to instruct the Union ministry of power to speed up work on the inter-state green energy corridor. Tamil Nadu is in the process of setting up one such corridor and the work is almost over. Increased evacuation of wind energy this year can largely be attributed to this corridor, which is operational in major wind corridors like Kavalkinaru and Kayathar in southern Tamil Nadu.

As of now, the state is selling 60MW wind energy to Goa for a month and another 60MW to Odisha at '4.4 per unit. Tamil Nadu is routing power to Goa via NTPCVidyut Vyapar Trading Agency.

There are other states like Uttarakhand which are ready to purchase up to 500MW each, but are unable to do so owing to lack of transmission capacity. "Uttarakhand has offered to give hydro power in return to us during April-May next year," said a Tangedco official.

Tamil Nadu, in recent days, has been generating about 4,000MW wind energy against an installed capacity of 7,600MW.

On an average, about one-third of the state's daily power requirement of 300 million units is met by wind energy, said sources in the state power utility. Even private power generation companies in the state are now free to sell power to other states as the government had lifted restrictions imposed on them a month ago.

'Cheaper electricity is not all that easy'

Business Line: July 10, 2016

Pramod Deo, former Chairperson, Central Electricity Regulatory Commission (CERC) is direct and forceful. He minces no words to put things in perspective. Business Line recently caught up with Deo on the sidelines of a training programme organised by the IPPAI Regulatory & Policy Research Institute in collaboration with the India Smart Grid Forum.

He shared his views on a number of issues. Edited excerpts from the interview.

The success of UDAY (Ujwal DISCOM Assurance Yojana) hinges on States undertaking regular tariff hikes, wherever required.

But, according to ICRA, the average tariff hike for 2016-17 has been only 5 per cent. Does this suggest that we are off the UDAY track?

In 2016-17, Tamil Nadu, Kerala and West Bengal went to the polls. So, you could not have expected them to revise power tariffs. What matters is whether they do it next year. To expect that States would hike tariffs, particularly when they have such an event (elections), is like asking somebody to commit political suicide.



For other States, getting their balance sheets in order and following yearly tariff hikes to reflect the full cost of running their business is important.

The discoms have to also improve their efficiency, for which they will require network strengthening, which will mean incurring capital expenditure. This will finally add to the tariff in later years because the fixed cost gets built into your tariff.

So, to say that tariffs will go down is difficult, unless you are talking only about commercial losses, which can be controlled and do not require any capital expenditure. But, the discoms are government-owned entities and have certain limitations. So, increasing the efficiency dramatically becomes difficult. The employees who are hand in glove with big consumers in pilferage have their own political links.

What do you think of UDAY?

UDAY gives the discoms an opportunity to clean up their balance sheets. There is talk that people will be getting cheaper electricity. But, that is not easy and it will be a long process because the coal linkages of power plants have to be reassigned. Only then will it be possible. Seventy to eighty per cent of the cost of power comes from fuel cost. What you need to see is the price line of all commodities and how power tariffs have moved relative to that.

CRISIL had done a study a few years ago that showed that the price index of power tariffs is actually lagging behind the general price index.

Also, certain performance improvement goals have been given to the state discoms. It is now for the State government to see that these goals, even if not fully achieved, are not lost sight of.

Tariff hikes are a politically sensitive subject. Do the State Electricity Regulatory Commissions (SERCs) really have the power to take tariff decisions independent of political influence, if they so want to?

SERCs are supposed to be independent. But, a lot also depends on how active consumer organisations are. A case will always be made out by the discoms (when they file a tariff petition with the SERC) on how justified their demand for a tariff hike is.

But, it has to be critically examined and the consumer organisations can question this.

Maharashtra, for instance, has very active and knowledgeable consumer organisations. But many States do not.

The tariff petition filed by the discom must undergo proper technical scrutiny. Consumer organisations can play an important role here. Under the law, every regulatory commission has to appoint designated consumer representatives for their respective States. But, training these consumer bodies is a big challenge.

So, the discoms have been asking for tariff hikes but the SERCs haven't been approving them?

The discoms make inflated demands knowing that these will be slashed by the SERCs. It should not be like that, it must be based on certain objective principles. The SERCs are under political pressure to not propose tariff increase for certain categories of consumers, such as agriculture, public drinking water schemes. If the State government does not give upfront subsidy committed by it, the regulator should go ahead with the proposed higher tariff.

So, the SERCs work out the cost of power and the discoms are allowed to recover it either through tariff or subsidy?

Normally, the regulation should be such that the SERC should not have to go to the government to check on whether the latter wants to give subsidy or not.

The SERC should declare the tariff and then the government should decide what it wants to do (allow hiked tariffs or provide some subsidy in lieu of tariff hike). But, many States have regulations where the SERCs have to make a reference to the State government on this issue.

That gives the government an opportunity to pressurise the regulatory commission.

In the Tata Power and the Adani Power compensatory tariff case, the CERC and the Appellate Tribunal for Electricity (APTEL) came out with completely different orders. Doesn't this undermine their credibility?

The regulators come out with speaking orders, that is they have to give the reason for their decision.

Now, in the Tata-Adani case, APTEL accepted the plea of 'force majeure', whereas CERC's logic was that there is no force majeure but there is a case for 'mutually agreed compensatory tariff'.

The argument given by APTEL is that nobody could have foreseen such upheaval in Indonesian coal prices (which affected the companies' cost of power production).

But APTEL rejected CERC's power to grant compensatory tariff. Now, whether the arguments given by CERC or APTEL are correct or not shall only be decided by the Supreme Court.

Actually, this should not reduce their credibility. Credibility gets reduced if your order is absurd. What is important is what logic has been used and whether that is plausible.

There is a common thread in both the judgements — you cannot run a power plant making monthly losses. The reasons on the basis of which you are compensated can be different.

Is India really power surplus?

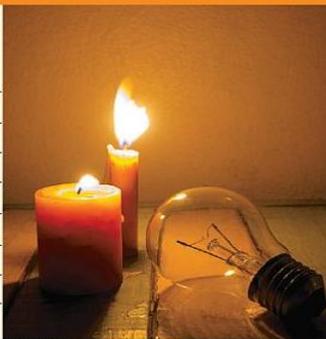
Business Line: July 10, 2016

While data show a shrinking deficit, reality is a large number remains without a connection, especially in rural areas

According to a recent report by the Central Electricity Authority, the country is expected to become 'power surplus' in 2016-17. Data too show that the all-India 'power deficit' has been easing. From 8.7 per cent in 2012-13, the shortfall was down to 2.1 per cent in 2015-16.

While this is good news, it needs to be taken with a pinch of salt.

Dis-empowered		
	Percentage of households with no electricity connection	
	Rural*	Urban**
Bihar	87	33
Uttar Pradesh	71	19
Assam	66	16
Jharkhand	63	12
Odisha	52	17
Meghalaya	46	5
Manipur	45	18
Madhya Pradesh	43	7



*As on May 2016 **As per Census 2011 Source: <http://www.ddugjy.in/> and Census 2011



Powerless

For, the numbers show the extent to which power supply falls short of the demand by those connected to the grid. 'Connected' is the word to watch. With nearly six crore rural households, comprising a third of rural households, not having an electricity connection, the reported numbers under-estimate the country's real demand for electricity.

Many urban households, too, have no electricity connection.

Also, the supply of electricity to farmers (which is subsidised or free) is limited to few hours every day.

It is these limited hours of supply that are taken into account while calculating the power requirement of agricultural customers to arrive at the overall deficit or surplus.

"The deficit is only capturing the unmet demand of the people connected to the grid. However, people who are yet to be connected and those with poor supply quality are not being taken into account," says Ashwini Chitnis, Senior Research Associate, Prayas (Energy Group), a not-for-profit organisation working in the energy sector.

"In an absolute sense, by which I mean the availability of 24x7 power supply to all, we still have a deficit," says VP Raja, former Chairman, Maharashtra Electricity Regulatory Commission.

The true picture is captured by India's per capita electricity consumption: at 957 kWh (kilowatt hour) in 2013-14, it was less than one-third the world average of 3,104 kWh in 2013.

Is there an improvement?

The narrowing deficit does point to improving supplies and, therefore, reduced load-shedding for those with electricity connections.

On the supply side, additional generation capacity, better availability of domestic coal and stronger transmission network have bumped up power availability. On the other hand, industrial slowdown and the strained finances of Discoms have curtailed demand.

It's still dark

But for States where access to electricity is poor, the declining deficit that the Centre is harping about does not mean much.

Take, for instance, Odisha, Mizoram and Tripura, which are expected to be power surplus in 2016-17 going by CEA data. But as of May 2016, the percentage of un-electrified rural households varied 22 and 52 per cent, with Odisha at the top end.

With these States being largely rural, poor electricity access for rural households implies poor access for households, in general.

"Since the potential electricity demand of these people does not get registered on the system, the deficit number is artificially low," says Balawant Joshi, Founding Director, Idam Infrastructure Advisory, a power sector consultancy firm.

It's even worse for the significantly rural UP, Bihar and Jharkhand. As many as 87 per cent of rural households in Bihar, 70 per cent in UP and 63 per cent in Jharkhand have no electricity connection.

Bright spots

There are, however, some States such as Gujarat and Maharashtra where the access to power is almost universal and the deficit, according to the CEA, is also close to zero.



Tamil Nadu is yet another State with almost universal access and a power deficit of 0.7 per cent in 2015-16. According to Joshi, the commissioning of the Tuticorin thermal power plant and the Kudankulam nuclear power plant in the State has made a difference.

Defaulter firms may be barred from bidding for power generation and transmission projects

The Economic Times: July 11, 2016

Companies that have defaulted in setting up any government infrastructure project are likely to be barred from bidding for power sector generation and transmission projects, a senior government official said.

The proposal has been incorporated in the bid documents for ultra mega power projects (UMPPs) that are likely to be taken up for discussion by the Union Cabinet soon. It is also likely to be replicated in the new bidding format for power transmission projects, the official said. The clause that bars companies from securing more than three UMPPs has been retained.

An expert committee formed to review bid rules for power transmission projects has recommended insertion of the debarring clause to the power ministry.

"There was no debarring clause in the existing bidding framework and standard bidding documents (SBD) with regard to the parties who have earlier defaulted," says the recommendations of the committee, uploaded on the power ministry's website.

"The committee was of the view that parties who have earlier defaulted on similar projects must not be allowed to participate in further projects.

It was also discussed that such a clause has been proposed in the new UMPP document which has been developed after detailed deliberation and stakeholder consultations by the expert committee constituted for revision of the SBD for location specific power generation projects."

Of all the mega transmission projects for which tariff-based competitive bidding was held, only two projects could not be implemented. The project developer, Reliance Infrastructure, had claimed that regulatory clearances led to delay in implementing the projects secured in 2009.

The debarring clause bars those companies from participating in the auction whose managerial personnel have been charge sheeted or convicted on matters relating to security and integrity of the country.

Firms convicted by any court or against whom adverse orders have been passed by any regulatory authority casting doubt on their ability to undertake project are also likely to be restrained from bidding. The prospective bidders will have to submit details of all investigations pending against them and their key managerial people.

The power ministry and state-run auctioneer MSTC will soon launch a bidding platform to shift from the present manual auction process to determine the lowest bidder for power transmission projects.

Save Energy. Save Money. Save the Planet

Please see the website at www.tecaonline.in for previous issues of TECA News letter