

# TECA – NEWS CLIPPING

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## TANGEDCO floats tender for 500 MW solar power

The Hindu : October 21, 2016

Proposing to procure 500 MW of solar power through reverse bidding in order to meet its Renewable Purchase Obligation (RPO) requirement, Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) has floated a tender with an upper limit of Rs. 5.10 per unit.

According to the tender document floated on Thursday, TANGEDCO has proposed to facilitate investors by procuring the energy generated from these plants through a long-term Energy Purchase Agreement up to a capacity of 500 MW.

The Tamil Nadu Electricity Regulatory Commission (TNERC) has fixed the RPO targets at 2.5 per cent for 2016-17 and 5 per cent for 2017-18. "To meet RPO targets, approximately 1,200 MW of solar power is required for 2016-17 and approximately 2,400 MW of solar power is required for 2017-18," the document stated.

## UDAY may cast shadow on State's finances

The Hindu: October 23, 2016

### THE PROS AND CONS

Tamil Nadu is likely to join the scheme by December



The Tamil Nadu government will have to take over more than Rs. 30,000 crore of TANGEDCO's debt.

TANGEDCO set to save **Rs. 3,000 crore** annually on interest cost by joining UDAY

- As per power ministry data, Discoms which have joined the scheme have seen interest cost fall by over Rs. 2,000 crore in Q1 FY17.
- While UDAY will benefit TANGEDCO, it is likely to impact State finances as interest liability and debt may increase due to issue of bonds.
- States which have opted for UDAY have seen an increase in liabilities. As a percentage of Gross State Domestic Product (GSDP), Rajasthan has seen 8.6 addition to its liabilities. UP, Bihar and other States too have seen increase in liability.

- TANGEDCO needs to bring down aggregate technical and commercial losses. So far, States under UDAY have seen mixed results on this front.



Tamil Nadu's decision to join the Centre's Ujwal Discom Assurance Yojana (UDAY) is likely to impact the State's finances, according to some experts, as interest liability and debt would increase because of issue of bonds under the scheme.

After a meeting between Union Power Minister Piyush Goyal and State Electricity Minister P. Thangamani in New Delhi on Friday, Tamil Nadu had agreed, in principle, to join the scheme. The State is likely to join the regime by December, so that it starts issuing bonds before the end of March next year.

The Centre had approved the UDAY scheme in November last year to achieve financial turnaround of State-owned power distribution companies. The scheme envisages that the State take over 75 per cent of discom debt in two phases and issue bonds backed by the State government as guarantee for the remaining 25 per cent. The scheme requires that States take over the future losses of discoms from the financial year 2016-17 onwards in a gradual manner.

Besides, it mandates state discoms to achieve a turnaround through regular tariff increase and wants States to keep the interest payment on bonds within the Fiscal Responsibility Budget Management Act (FRBM), which stipulates that the States should keep their fiscal deficit within 3 per cent of the Gross State Domestic Product. Tamil Nadu had reservations about the conditions in the scheme, which seemed to be sorted out.

"Except for FRBM condition, the government had accepted relaxations like no quarterly revision in tariffs among others," said a senior official.

Tamil Nadu government will takeover more than Rs. 30,000 crore of TANGEDCO's debt and will save Rs. 3,000 crore on interest annually from the scheme.

"The UDAY scheme will put the State's finances under stress, especially when there is a revenue deficit," said Jayanta Roy, senior vice-president, ICRA Ltd, a rating firm.

Tamil Nadu had forecast a revenue deficit for the fourth straight year. In the revised budget for 2016-17, the government had estimated a revenue deficit of Rs. 15,854.47 crore.

"One of the features of UDAY scheme is that the discom debt moves to the State balance sheet.

The State needs to service interest payments on the bonds. This would inflate the fiscal deficit situation, and would be one of the major concerns in the short term," Mr. said.

A recent analysis by Yes Bank of the States which had joined the UDAY scheme showed that the scheme had added to the liabilities of the States.

As a percentage of Gross State Domestic Product (GSDP), Rajasthan has seen 8.6 per cent addition to its liabilities on account of UDAY.

Uttar Pradesh (3.4 per cent), Chhattisgarh (0.5 per cent), Punjab (3.7 per cent), Bihar (0.5 per cent), Jharkhand (3.5 per cent), and Haryana (4.8 per cent) all have seen an increase in liabilities on account of the scheme, the data showed.

According to data from power ministry, interest cost for discoms which opted for UDAY fell by \$ 330 million (over Rs. 2000 crore) in the first quarter of FY2017.

However, the main benefits of the scheme accrue only when the discoms manage to improve efficiency and reduce the aggregate technical and commercial losses (AT&C).

According to brokerage firm Edelweiss, so far from the States which had opted for UDAY, AT&C loss reduction data is mixed with losses of Jharkhand and Haryana have lowered and Uttar Pradesh, Rajasthan and Punjab have seen a spike.



## **Demand from AP, Karnataka propels power purchase in southern region**

**The Hindu: October 21, 2016**

The volume of power bought by Southern region in the Indian Energy Exchange increased 160 per cent year on year in September 2016, driven by higher demand from Andhra Pradesh and Karnataka, data from the exchange reveals.

Indian Energy Exchange, regulated by the Central Electricity Regulatory Commission, is a power trading platform similar to a stock exchange. The exchange has 4,000 participants from across India, more than 1,000 private generators and 3,500 open access consumers.

Data from the exchange shows that among the States in the region, Tamil Nadu and Kerala sold more power, while Andhra Pradesh and Karnataka bought more power.

Tamil Nadu and Kerala put together sold 77 million units in September 2016 compared with 13 million units in the comparable period last year.

Both the States in total bought 70 million units in September 2016 compared with 88 million units in the same period last year.

Andhra Pradesh and Karnataka bought 642 million units and sold 259 million units respectively in September 2016.

In the comparable period last year, they bought 184 million units and sold 265 million units.

### **Wind energy boost**

"Tamil Nadu had good power availability helped by wind power generation and supply from Kudankulam. That is why the buying volume was low. Because of higher power availability, the prices were also low," an exchange official told The Hindu. The official also said the deficits and surplus power trades in the exchange were matched within the southern region in some cases. "We don't monitor sales from the exchange. The private producers whom we discontinued from May 31 might have traded on exchanges. The government also amended Section 11 of the Electricity Act to allow sale of power to other States," a senior TANGEDCO official said.

Southern region power rates on the exchange were Rs. 2.41 per kilo watt hour during September 2016, down from Rs. 6.18 per kilo watt hour in the same period last year. In September 2016, northern region rates stood at Rs. 2.73 per unit, while rates of North-East, East and West stood at Rs. 2.35 per unit.

*Tamil Nadu and Kerala sold more power, while AP and Karnataka bought more power*

## **Turning India's power surplus into a boon**

**Live mint-October 24, 2016**

Investment in the power sector could be made more profitable by a slew of measures that increase the consumption of electricity

Low consumption of power in the country, which has resulted in low plant load factor and surplus of coal at the pithead and at the power plants, has been a matter of concern for the last few months. A good monsoon has lowered agricultural consumption of electricity and cheaper hydropower has replaced thermal power in the grid as bountiful rains ensured ample waters in the reservoirs. As a result, some analysts and experts have been questioning the additional capacity that we are adding to the grid. We are adding capacity not only in the traditional thermal and hydro but also in the renewable sector, in which we have a target of 175 GW of capacity by 2022.



India's per capita consumption remains among the lowest in the developing world. This is a pointer to the fact that power consumption is going to grow in the future and the current situation is only reflective of the low purchasing power of the consumers at present, apart from issues of connectivity and reliability that are, however, being addressed at a fast pace. The woes of distribution companies (discoms), which are not buying power because of their debts and inability to recover costs from consumers, are being overcome through the Ujwal Discom Assurance Yojana (UDAY).

A low plant load factor threatens the viability of power plants and we have to look for creative solutions to deal with the current situation. This situation is not peculiar to India. Countries have overcome this situation by having competing facilities in two-three fuels, with the grid switching over from one fuel to another depending on the price of the fuel and the market demand. Coal competes with fuels such as natural gas and nuclear and the consumer is offered different options. In a country like India, where capital has other competing demands, investment in the power sector could be made more profitable with the adoption of a slew of measures that increase the consumption of electricity. Electricity offers elasticity of use and could be utilized to replace fuels in other sectors.

Ecuador, which has invested in hydropower in the last few years, has also become power surplus. Ecuador is overcoming this situation by embarking on a programme of replacing gas stoves with electric stoves for cooking in households, thus bringing down the consumption of natural gas, which it imports. We can learn from this and encourage the use of electricity for cooking during the surplus season—for this, a special tariff may be offered, which could be lower than the comparative LPG price. This is an easy solution, as apart from the electric stove in the household, no other infrastructure will be required to implement it. Electricity could also replace imported kerosene. This will also have an impact on our overall LPG and kerosene imports, free LPG for consumption in rural areas and help faster implementation of the Pradhan Mantri Ujjwala Yojana.

The other measure we should take is a fast switchover to electric vehicles. In the city of Guilin, China, which I visited in 2012, the majority of two-wheelers being used are electric vehicles. China restricts the use of traditional two-wheelers in several cities in order to reduce pollution. As a result, China is the global leader in the electric two-wheelers market, with an **estimated stock of 200 million units**. We have a target of having six million electric vehicles by 2020. This should be upped and power companies could be guided to take a special interest in their promotion. Cities like Ahmedabad, Vadodara and Pune, which are known for their liking for two-wheelers, could become the hubs for the adoption of electric vehicles. Electric charging facilities for vehicles can be provided in major cities and on highways. Lower tariff could be offered for 'off-peak' recharge of vehicles. The use of electric buses in public transport should also be encouraged. China is again a global leader in this area, with a fleet of more than 170,000 electric buses. Smart cities and cities planned under the proposed industrial corridors should incorporate infrastructure for electric vehicles in their plans. Indian Railways could fast-track its electrification programme so that it lowers its diesel consumption.

If these measures are undertaken, they would have many beneficial effects. Adoption of electricity for cooking instead of LPG, LNG or kerosene would lower our imports of these fuels. Similarly, a jump in the use of electric vehicles will lower the rise in demand of petroleum imports. Faster electrification may even lower consumption of refined petroleum products, thereby contributing to the target of lowering imports of these products by 10% set by Prime Minister Narendra Modi. Lower demand by India, the fourth largest importer of crude oil, will have a salutary effect on the market price of crude oil and will contribute to enhancing the energy security of the country. Adoption of electric vehicles will lower the pollution level in cities, apart from helping to meet our commitments in the 2015 Paris climate change agreement.



And like Ecuador, increasing export of power will be another way to overcome the temporary excess in our grid. Last year, when Colombia faced a power shortage because of lower generation by its hydropower plants (due to El Niño), Ecuador sold power to it. We have already made good progress in this area. In 2013, we started exporting 500 MW of power to Bangladesh, which has been augmented further by commencing export of another 100 MW from Palatana, Tripura, this year. Power exports to Nepal are set to increase following the completion of the construction of the Muzaffarpur-Dhalkebar transmission line, once the transmission infrastructure on the Nepalese side is strengthened. Nepal may need more power, in the short run, which could be supplied by India. In the long run, Nepal will become a supplier of hydro-based power to India. In the case of Sri Lanka, an undersea cable will allow us to export power to them. We have made a good beginning by commencing export of 3 MW to the border towns of Myanmar, which could be scaled up by constructing a better transmission infrastructure. A pan-Asia-Pacific grid in the long run will help balance the surplus and shortages in the region.

Thus the power surplus situation can be converted into a boon. It could lower the demand for imported petroleum products and increase the consumption of domestically produced coal—a 175 GW renewable energy target by 2022 will be a welcome addition to our energy mix and help replace fossil fuel further.

### **UDAY success to bring huge benefits for solar sector in India**

*Economic Times: October 24, 2016*

***Offtake risk perception will come down and concerns related to non-payment of dues by DISCOMs should disappear by next year, the report said***

The Ministry of Power's Ujjwal DISCOM Assurance Yojana (UDAY), a financial and operational reform scheme for distribution companies (discoms), will bring several important benefits for the solar sector, solar sector research agency Bridge to India said in a report.

"First, offtake risk perception will come down and concerns related to non-payment of dues by discoms should disappear by next year in our view," the report said.

Second, availability and cost of private capital is expected to improve significantly with a cascading impact on competitiveness of solar power, it added.

"Finally, improving discom finances will address growing concerns around grid curtailment by improving demand for power (currently many discoms back down the grid rather than buying more power because they make losses on incremental sale of power to rural and residential consumers) and increasing investments in upgradation of transmission and distribution infrastructure," Bridge to India said.

The report further said the Indian government has addressed two very critical challenges for the renewable sector. The solar parks policy has already addressed the issue of land acquisition to a large extent. Successful implementation of UDAY will help resolve the long-standing issue of DISCOM bankability and pave way for long-term growth of the sector.

The UDAY scheme aims to address debilitating financial health of most state power discoms leading to offtake concerns for private power generators and stress in the overall banking sector.

So far, 18 states including some of the most distressed states – Uttar Pradesh, Bihar, Rajasthan, Haryana, Punjab and Jammu & Kashmir – have signed up for the scheme with Tamil Nadu also expected to sign up shortly.

According to the Ministry of Power, UDAY has already addressed 62% of the Discom debt existing at the end of 2014-15.



Preliminary data compiled by the Ministry of Power shows that bonds worth Rs 1.73 trillion (\$26 billion) have already been issued by 11 states and the number is expected to increase as larger states such as Tamil Nadu and Maharashtra issue bonds. 13 states have filed for tariff review petitions in 2016-17 and most states have shown an improvement in distribution losses.

Difference between cost of supply and revenue per unit of electricity has reduced by more than half in some of the worst performing states – Haryana has reduced the deficit to Rs 0.23 per unit in March 2016 (Rs 0.65 per unit in FY15) and Uttar Pradesh reported a decline to Rs 0.41 per unit (Rs 1.17 per unit).

## **Power sector debt worth Rs 1.34 trillion: Crisil**

**The New Indian Express: October 23, 2016**

Crisil, Director Sudip Sural said, that the gross NPAs in the sector have increased to 4.4 per cent in financial year 2015-16 and but restructured standard assets continue to remain steady at 14 per cent.

Nearly Rs 1.34 lakh crore worth of debt on operational and under-construction power projects is at risk, says ratings agency Crisil. As per Crisil estimates, around 17,000 MW of operational power projects with a debt of Rs 70,000 crore and additional 24,000 MW under-construction projects with a debt exposure of around Rs 64,000 crore are at high risk.

"These operational projects are those, which are facing the consequences of aggressive bidding for coal supplies or facing huge cost overruns, and those with gas-supply issues," Crisil Senior Director Sudip Sural said.

He said over the period, the credit growth to the sector will moderate to 5 per cent over the next three years as compared to an average of 18 per cent witnessed in the last five years.

"This is primarily because the discoms debt which has been the key components of this exposure, is going to go out of the banking system over a period of time and move to the fold of the state government because of the UDAY scheme," Sural said.

Also, fresh investments in the thermal generation sector will remain muted, while on the other hand the capacity addition in the renewable space will give some fillip to the credit growth, he said.

As far as delinquencies are concerned, Crisil noted, that while the gross NPAs in the sector have increased from 1.3 per cent to 4.4 per cent in financial year 2015-16, the stressed assets as measured by gross NPAs and restructured standard assets continue to remain steady at 14 per cent.

"They have not seen an increase primarily on account of the movement of Rs 75,000 crore out of this category on the account of UDAY scheme. So, essentially on the restructured assets quantum have come down," Sural said.

"But even with the reduction it continued to be at elevated level in the sector," he added.

Crisil further observed that in the discoms space banking sector debt is expected to come down significantly over the next 3 years with UDAY scheme making increasing impact.

"What we will see is that state governments will take over the principal financiers to discom. As per our estimates as of March 2019, of the roughly Rs 4.6 lakh crore exposure to discoms Rs 3.4 lakh crore would be coming in from state governments," he noted.

**Power situation in India, and how gensets will play a role in 'Make in India' -by Sanjay Jadhav, President of Sterling and Wilson Powergen**



India's power sector is one of the most diversified in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources such as wind, solar, and agricultural and domestic waste.

Power is one of the most critical components of infrastructure crucial for the economic growth and welfare of nations. The existence and development of adequate infrastructure is essential for sustained growth of the Indian economy.

India's power sector is one of the most diversified in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources such as wind, solar, and agricultural and domestic waste.

Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required. In India, the demand for electricity has always been more than the supply. In this rapidly changing scenario diesel generators have come to play an important role of providing power surety. India as a country is on a fast track to growth; however, its power concerns are still real. This is where diesel generators bring in on demand electricity to power India's rising dreams and aspirations.

Indian power sector is undergoing a significant change that has redefined the industry outlook. Sustained economic growth continues to drive electricity demand in India. In fact, in the recent past, the demand vs supply in the Power segment has improved significantly in the domestic as well industrial segments with a special renewable energy source mainly **Solar Farms**. However Diesel generator will not lose its ground and will continue to play an important role in back up power as this is the quickest source to get quality in the event of blackout .The selection criteria due to the application may change but Diesel Generator sets will remain the main source of the Power back up. "All Smart cities will have Smart Diesel Generators Back up Power". Diesel Generators play an vital role during peak power demands

***The author Sanjay Jadhav is President of Sterling and Wilson Powergen Pvt. Ltd.***

## **Renewable energy firms worry about back-down by power discoms**

Live Mint : October 21, 2016

Rising instances of discoms unplugging generating capacity from grid and delaying signing of PPAs

Clean energy companies and their investors are worried about rising instances of state power distribution utilities (discoms) unplugging their generating capacity from the grid and delaying both payments and the signing of power purchase agreements (PPAs).

Two of India's largest renewable energy companies, ReNew Power Ventures Pvt. Ltd and Tata Power Renewable Energy Ltd (TPREL), a subsidiary of Tata Power Co. Ltd, have been hit by such unplugging, also called back-down at their plants in multiple states, company officials said. Projects of other companies including Adani Green Energy Ltd and Hero Future Energies have also been hurt due to back-down and delays in signing PPAs, they added.

Some states resort to backing down wind and solar projects, jeopardizing investments already made in the projects, said Rahul Shah, chief executive of TPREL.

"Discoms in Maharashtra, Tamilnadu, Madhya Pradesh and Rajasthan have also been delaying payments to generators of wind and solar power by as much as 8-10 months, which puts their cash flows under tremendous pressure. These are negative signals for



developers and investors who are evaluating the Indian market for investment in new renewable energy capacity," Shah said.

According to ReNew Power's estimates, discoms in Maharashtra, Rajasthan and Madhya Pradesh owe wind energy producers over Rs4000 crore in payments. A ReNew spokesperson said about 500 megawatt (MW) of its solar capacity and a smaller size of wind capacity is stranded in Jharkhand due to delays in signing PPAs.

A check of awarded projects shows 1200 MW of solar capacity of ReNew Power, Adani Power and ACME Solar and about 600 MW of wind capacity is stuck for the lack of PPAs in Jharkhand. Adani Power and Hero Future did not respond to emails seeking comment.

Many discoms are in poor financial shape and have started going back on their commitment to sign PPAs with solar power producers, multiple people in the renewables business said. In solar projects, which are won through reverse bidding process, a PPA is signed ahead of completion of the project, usually for a period of 25 years.

A back-down can happen due to availability of cheaper power elsewhere, lack of transmission infrastructure, absence of demand, or inability of the grid to buy power. Grids usually reserve the right to unplug power because of the variations in the amount of power generated. This practice, called power back-down, leads to losses of billions of units of green power.

Several companies have filed petitions against a state utility in Rajasthan on account of this, an official of Rajasthan Electricity Regulatory Commission said on condition of anonymity.

"Investors are losing confidence," said Seema Changlani, director of Beont Capital, which helps Indian companies set up projects and attract new investments. "At times, the grid refuses to purchase renewable power in favour of cheaper thermal power. Investors finance projects on the basis of PPAs and absence of PPAs by discoms can hurt IRRs of these projects."

Back-down and delay in payments have become a chronic problem, Dilip Nigam, adviser, ministry of new and renewable energy (MNRE) said on the sidelines of an event in Mumbai on Wednesday. "Discoms are backing down on renewable energy in the name of security of the grid and we have been taking up the issue separately. Renewable energy should have a 'must-run status'."

India has a total wind capacity of 27.4 gigawatt (GW) and solar capacity of about 9 GW. It has set itself the target of adding 100 GW of solar and 60 GW of wind capacity by 2022.

The government has set a renewable purchase obligation target for discoms, but this target is not being met. "This raises concerns over rising solar capacity and ability of the discoms to buy all of it. This (problem) is becoming bigger by the day," Vinay Rustagi, managing director, renewable energy focused consultancy Bridge to India said.

The MNRE wrote to the Central Electricity Regulatory Commission in August highlighting the issue of back-downs. Tarun Kapoor, joint secretary, MNRE wrote in that letter that if any backing down has to be done, thermal power projects should be asked to back down so that some fuel is saved.

"This (loss of energy from backing down) can make solar power unattractive particularly when projects are being allotted through competitive bidding and tariffs have come down drastically," he wrote. "They should be paid full tariff if they are forced to back down in rare cases."

Solar energy tariffs have fallen from Rs15 over four years ago to below Rs5 per unit over the past 12 months, in part due to aggressive bidding in reverse auctions. Tariffs are



expected to fall to Rs3.50 per unit in the next three years on account of falling cost of equipment and better technology, *Mint reported* on 26 July.

# Save Energy. Save Money. Save the Planet

*Please see the website at [www.tecaonline.in](http://www.tecaonline.in) for previous issues of TECA News letter*