

TECA - NEWS CLIPPING

(Energy Conservation : It Doesn't Cost. It saves)

10.04.2018

T.N. power sector ready to face the heat

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Summer is here, and if what has gone by thus far is any indication, the season is going to be harsh.

The power demand is expected to peak, possibly to its all-time high, but officials of the Tamil Nadu Generation and Distribution Corporation (Tangedco) say things are under control. Though the daily average electricity demand throughout the State this April has reached 15,100 mega watt (MW), against an average of only 14,600 MW during the past two years, officials are convinced they will be able to meet demand to the extent of 15,500 MW, this summer, thanks to the supply position.

A senior Tangedco official said that during the past 10 days, the demand had been consistently hovering at around 15,100 MW, with the peak touching 15,287 MW on April 6 and 15,225 MW on March 29. The Tangedco's confidence comes from certain facts: thermal stations (both the State and Central electricity plants) have been functioning efficiently at more than 90% plant load factor; thermal stations of long-term power producers have chipped in with more than 3,000 MW daily; and renewable energy sources have been pitching in. The Tangedco has total power generation capacity to the tune of 17,500 MW, through thermal, hydro, gas and nuclear sources. Renewable energy While normally wind power is treated as 'infirm' energy (available to the tune of 8,000 MW), better forecasting through the Renewable Energy Management Centre has helped Tangedco use the alternative to bridge the demand-supply gap. The other renewable source that has helped the electricity department is solar power, the installed capacity of which now stands at 2,000 MW in the State..

India to attract Rs 11,55,652 crore investment in power generation through 2022

The Economic Times : April 9, 2018

The total fund requirement of Rs 11,55,652 crore for 2017-22 includes Rs 8,52,804 crore investment in projects likely to be commissioned during this period and Rs 3,02,848 crore expenditure needed with respect to advance action for projects likely to be commissioned in 2022-27.



India is likely to attract a massive investment of Rs 11,55,652 crore in power generation sector in the five-year period between 2017 and 2022 in setting up projects across thermal, hydro, nuclear and renewables segment.

"A total capacity addition of 58,384 Megawatt (MW) from conventional sources has been envisaged for the period 2017-2022, consisting of 47,855 MW of coal-based power stations, 406 MW of gas-based power stations, 6,823 MW of hydropower stations and 3,300 MW of nuclear stations," Central Electricity Authority, the power ministry's planning wing, said in its National Electricity Plan (NEP) report.

Fund requirement for Generation projects (Mode-wise) during 2017-2022

(₹Crores)

Year	Thermal	Hydro	Nuclear	Renewables	Total
2017-18	76,781	15,622	9,479	1,19,931	2,21,813
2018-19	73,376	19,465	9,728	1,38,218	2,40,787
2019-20	52,915	23,461	8,088	1,43,422	2,27,885
2020-21	55,846	26,431	11,912	1,44,218	2,38,406
2021-22	63,991	29,546	16,127	1,17,096	2,26,761
TOTAL	3,22,908	1,14,524	55,334	6,62,885	11,55,652

In addition, the government is also targeting ramping up the country's renewable energy capacity to 1,75,000 MW by 2022. Of this, 1,17,756 MW is expected to be set up during the period through 2022. The report also said that no additional fund will be required for gas-based generation capacity as the construction of these plants has been completed and could not be commissioned so far due to non-availability of domestic gas.

The total fund requirement of Rs 11,55,652 crore for 2017-22 includes Rs 8,52,804 crore investment in projects likely to be commissioned during this period and Rs 3,02,848 crore expenditure needed with respect to advance action for projects likely to be commissioned in the next five year period (2022-27). Of the Rs 8,52,804 crore to be spent through 2022, Rs 1,42,566 crore would be needed for central sector projects, Rs 92,889 crore for state sector projects and Rs 6,17,349 crore for private sector projects. In this estimation, it is assumed that all the renewable projects will be implemented by private developers, the CEA said.

Total fund requirement for Generation projects during 2017-2022

(₹Crores)

	2017-18	2018-19	2019-20	2020-21	2021-22	Total
For projects likely to be commissioned during 2017-22	2,19,509	2,22,030	1,92,582	1,71,208	47,475	8,52,804
Advance action for projects likely to be commissioned during 2022-27	2,304	18,757	35,303	67,198	1,79,286	3,02,848
Total	2,21,813	2,40,787	2,27,885	2,38,406	2,26,761	11,55,652

In order to assess the fund requirement for generation projects, CEA considered the year-wise phasing of expenditure. It estimated the cost per MW for the year 2017-18 based on present day cost and escalated it further at an annual escalation rate of 4 per cent.



"However, in view of the recent trend, the capital cost per MW in case of solar, wind and biomass-based power projects has been pegged at present day level without any escalation in subsequent years," the report said.

According to CEA's estimate, for the total Rs 11,55,652 crore investment, developers will have to infuse equity to the tune of Rs 2,98,435 crore and arrange for a total debt of RS 8,57, 216 crore. The sources, available to the developers for debt funding include scheduled commercial banks, financial institutions like Power Finance Corporation (PFC), Rural Electrification Corporation (REC), Life Insurance Corporation (LIC), Bonds, foreign currency loan from World Bank, ADB, KfW, EXIM Bank and also from foreign equipment manufacturers.

"It is also expected that funds including foreign funds from private players would also be invested through Infrastructure Investment Trusts (InvIT). The Subordinate Debt or grant from the government may also be available to some projects to be developed by PSU or States," CEA said.

The government also estimates that an investment of around Rs 9,56,214 crore will go into setting up the targeted 1,65,220 Mw generation capacity between 2022 and 2027. This consists of 46,420 MW of thermal projects, 12,000 MW of hydro projects, 6,800 MW of nuclear projects and 1,00,000 MW of renewable energy projects. This estimate does not include investment related to advance action for projects likely to be commissioned in the next five-year period (2027-32)

India's hydro power generation grew 3 per cent last financial year

The Economic Times : April 6, 2018

Despite less rains in winter, other centre owned major hydro companies namely SJVNL and NEEPCO posted increase of 2.5 % and 15% in generation in the current financial year compared to the previous year

Hydro power generation in India grew over 3 per cent in 2017-18 after three-consecutive years of lean generation marred by below normal rains and less snowfall. Dry winter has affected the overall generation in the last quarter this year as well and snagged the generation at the country's largest hydro company, National Hydro Power Corporation by 1.7 per cent compared to the last year.

Less snowfall in North and scanty rains across country in period between January-March this year is likely to affect generation in the first quarter of next financial year as well. "The dependence on coal based power will be more till arrival of monsoon," a senior official at Punjab State Power Corporation Limited said. During summers, the agrarian states including Punjab require additional power to cater to demand for irrigation.

Despite less rains in winter, other centre owned major hydro companies namely SJVNL and NEEPCO posted increase of 2.5 % and 15% in generation in the current financial year compared to the previous year. BBMB, another centre owned power-cum-irrigation major recorded 2.7 per cent increase in generation in the current financial year compared to the last year.

As low as 60 per cent less rain in January and February this year has reduced the overall generation by 11 per cent in March in the country. The generation had increased by less than a percent in FY 17 while it had recorded drop of 6 % in FY 16 and 4 % in FY 15 compared to respective corresponding period.

In 2017-18, the generation grew to 126.1 per cent billion units compared to 122 billion units in the previous financial year.

The increase in generation this financial year is buttressed by high growth power generation in state owned utilities. The power utilities in Punjab (PSPCL) recorded growth of 20%, UP (UPJVNL) 26%, Kerala (KSEB) 28%, Himachal Pradesh (HPSEB) 28 %, Tamil Nadu (TNGDCL) 22% and Orissa (OHPC) 26 %, Jammu& Kashmir 7%, Sikkim (TUL) 1300 % and Telangana (TSGENCO) 23% in the current financial year.

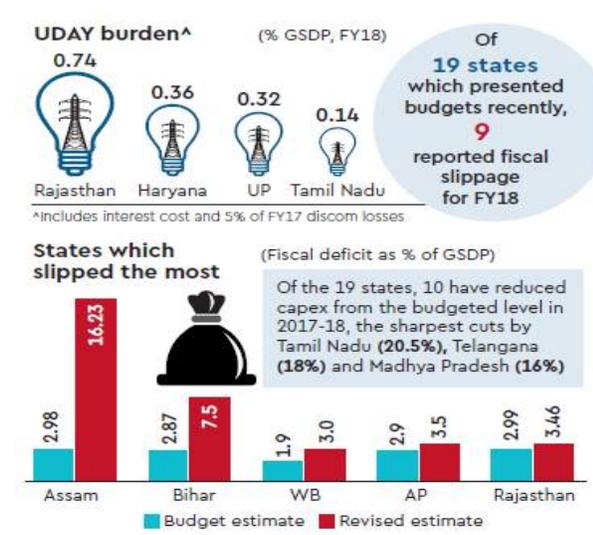
Power out! Narendra Modi government's UDAY obligations start to bite into states' finances

Financial Express : April 9, 2018

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The state governments in aggregate were expected to revert to well below 3% fiscal deficit in FY18, but an analysis by FE of 19 state budgets presented recently suggests they may not have. Nine of these states have revised their fiscal deficits for the just-concluded financial year to be higher than projected a year ago, with the slippage ranging from a marginal 0.1 percentage point to an odd 13.25 percentage points (pps). Six states project their deficits to be higher than the FRBM threshold of 3% of GDP even in FY19, and many others might also incur deficits above 3% in the year that has just begun. While a potential stress on spending, especially revenue expenditure, in the run-up to the 2019 general elections is a downside, an additional risk factor is the rising power sector costs on account of obligations under the scheme for revival of electricity distribution companies. In FY16 and FY17, a fiscal headroom of up to 0.5 pps was available under the UDAY scheme for revamp of electricity distribution entities (UDAY bonds, according to the Economic Survey, had an impact of 0.5 and 0.6 pps of GDP on the deficits of 26 states in FY16 and FY17 respectively). While that leeway was not available for FY18, interest costs on UDAY bonds, coupled with the obligation to take over 5% of the discoms' FY17 losses, had cost some states considerably. As UDAY's technical parameters like AT&C loss reduction are not met by most states, the discoms continue to bleed.



The UDAY costs of Rajasthan was a substantial 0.74% of its gross state domestic product in FY18, which pushed its fiscal deficit (revised estimate) to 3.46% of GSDP against the

original target of 2.99%. The impact of UDAY obligations on Haryana's finances in FY18 was 0.36 pps and its fiscal deficit was 2.83%. Uttar Pradesh (0.32 pps) and Tamil Nadu (0.14 pps) too saw significant UDAY burden last year. The UDAY scheme allowed extra fiscal headroom to a maximum of 0.5% over and above the normal FRMB limit of 3% for FY16 and FY17. As the UDAY burden was set to largely get removed in FY18, the states targeted aggressive deficit cuts for the year, but most of them have failed to meet those targets. Worse, the slippage is despite 10 of the 19 states reducing their capital expenditure from the budgeted level. Among the states reviewed, the ones set to miss their deficit targets for the current fiscal by the widest margins are Assam (13.25% pps), Bihar (4.63 pps) and West Bengal (1.05 pps). Though Jammu & Kashmir also presented its FY19 budget recently, the hill state is not included in the analysis as it being conventionally an outlier for its special category status and limited own resources. J&K's FY18 fiscal deficit is now estimated at 5.7% and the projection for FY19 is 6.1%. For now, interest costs, jacked up by UDAY bonds, is the principal power-sector liability for the states but unless the discoms manage to turn around, their losses would turn out to be increasingly onerous. Under the UDAY scheme, the states are expected to take over previous year's discom losses in a graded manner from FY18: (5% of FY17 losses in FY18, 10% FY18 losses in FY19, 25% FY19 losses in FY20 and 50% of FY20 losses in FY21).

The overall interest expenditure of the 19 states rose 16% in FY18 and is projected to rise 8% in FY19, largely due to the taking over of the discom debts. Under UDAY, 16 state governments had taken over around Rs 2.32 lakh crore debt of their discoms in FY16-FY17 period; this amounted to about 75% of these entities' debt and issued non-SLR bonds with maturity period of 10-15 years and a moratorium on repayment of principal up to 5 years. Rajasthan, which was the top issuer of Uday bonds (Rs 72,090 crore), is incurring annual interest spending of about Rs 6,000 crore on these bonds, the highest by any state. Uttar Pradesh (Rs 4,100 crore), Haryana (Rs 2150 crore) and Tamil Nadu (Rs 2,000 crore) also have large interest burden from UDAY bonds. UDAY costs will multiply with principal repayment to begin in FY22. Even though high interest cost on UDAY bonds will continue to have a major impact on state finances for several years, the declining discom losses could come handy for many states. As per preliminary data, the losses of Rajasthan discoms have declined from Rs 5,208 crore in FY17 to around Rs 1,930 crore in FY18. Similarly, the annual losses of UP discoms are seen to have fallen from Rs 6,619 crore to Rs 4,845 crore during the period. Though discom losses have been contained by most of the 16 UDAY states except Haryana, the pace of reduction is hardly satisfactory.

UP discoms incurred a loss of Rs 6,619 crore in FY17 and Rs 4,845 crore in FY18 while Rajasthan power utilities' losses stood at Rs 5,208 crore and Rs 1,929 crore respectively in the two years. In case of Haryana, the losses came down from Rs 627 crore in FY16 to Rs 387 crore in FY17, but rose again to Rs 897 crore till December FY18. Uday mandates discoms to bring down their aggregate technical and commercial (AT&C) losses to 15% and eliminate any gap between the discoms' costs of power supply and revenue realised (ACS-ARR gap) by 2018-19. Only six states and one Union Territory had reported meeting their respective AT&C loss targets for FY17. AT&C losses in Bihar, Jharkhand and Uttar Pradesh are still very high at 36.8%, 36.3% and 30.9% respectively. Madhya Pradesh's AT&C losses are currently at 31.6%, up from 25% in August, 2016, when it joined the UDAY scheme. Failure to attain 15% AT&C loss levels would mean additional woes for the discoms, as power ministry is set to mandate that AT&C losses exceeding 15% can't be considered for tariff determination, in what could widen the ACS-ARR gaps, and potentially increase financial losses for discoms. Financially weak discoms have also contributed to the current stress in the power sector as private gencos are waiting for pending payment of more than Rs 8,000 crore from these state-owned entities. Outperforming the Centre, Indian states had achieved creditable fiscal consolidation for a few years till FY12 (when their combined deficit stood at 1.93% of the GDP), but have since turned less prudent; the combined deficit



widened to 2.69% in FY15 and the UDAY scheme for power discoms extended the fiscal gap to 3.03% in FY16 and further, to 3.67% in FY17.

After the storm of 2017, India's wind power sector is settling down

Quartz : April 8, 2018

India's wind energy sector has just capped a rough year.

Amid a major overhaul of the wind energy tariff-determination mechanism, multiple policy issues, and flat power demand, capacity addition took a big hit in the last financial year.

New windmill installations fell to a five-year low between April 2017 and March 2018, according to data from the Indian Wind Turbine Manufacturers Association (IWTMA). The country saw an addition of just 1,762 megawatts (MW) of capacity, a sharp fall from the record high of 5,400 MW in the preceding year.

India's total wind energy capacity now stands at 34,042 MW, a little over half the Narendra Modi government's target of 60,000 MW by 2022.

The fall was largely due to faulty implementation of a major policy change by the government. Starting June 2016, it let firms bid for projects at competitive prices rather than have a regulator fix the tariffs. Yet, there weren't as many auctions for projects, resulting in muted capacity addition.

Subsequently, wind power producers faced the threat of various state electricity utilities backtracking on power purchase agreements.

Then there was the confusion over the generation-based incentives (GBI) scheme, where firms are paid a certain amount for every unit of wind energy generated. "For the new financial year, suddenly, the GBI was withdrawn, and then mid-year again some money was allocated. This caused a (slowdown) and was a big blow for wind," said Amit Kumar, a partner at consulting firm PwC who tracks the renewables sector.

The government's obsession with solar power, too, played a role, as policymakers focused away from wind. Meanwhile, wind power tariffs crashed to record lows of Rs2.43 per unit in December 2017, casting doubts over long-term project viability.

Looking up

However, the worst may now have passed.

For one, the policy uncertainties have been cleared.

States like Maharashtra and Gujarat have already come out with auctions and more are in the offing, both at the state and central levels. The ministry of new and renewable energy has committed to auctioning 10,000 MW of projects in 2018 and another 10,000 MW in 2019.

Tariffs are also firming up and analysts don't expect them to fall further and hurt project viability. In auctions conducted by Maharashtra last month, they rose to Rs2.85 per unit from a record low of Rs2.43 in December 2017.

"Last year...wind turbine manufacturers had spare capacity and were ready to supply at lower rates. That was a factor in low tariffs," said Gautam Bafna, an analyst at CARE Ratings. The excess capacity was a result of the slowdown in new windmill installations, which have since picked up.

Coal shortage at power plants may push up spot prices in summer

Times of India : April 8, 2018



Coal shortage is still affecting the efficacy or capacity utilisation (Plant Load Factor) of independent power projects in the country, which may lead to a spike in spot prices of electricity on exchanges this summer, according to experts.

"Earlier last year, the shortage of coal prices resulted in surge in spot power prices at energy exchanges to as high Rs 11 per unit and the rate may increase again with the onset of summers when demand touches its peak," power sector experts said.

According to the latest Central Electricity Authority (CEA) data, the Plant Load Factor (PLF) of the independent power projects (IPPs) was 52.54 per cent in February 2018 compared to 59.54 per cent a year ago.

However, as per data, the PLF of central sector projects rose to 76.59 per cent in February from 72.93 per cent.

Similarly, the PLF of state sector projects increased to 61.76 per cent in the month from 54.41 per cent a year ago.

The experts noted that the IPPs have been reporting lower PLF than state run plants which indicates mounting pressure on private developers who are unable to operate at a higher capacity to remain viable.

They are of the view that the share in electricity generation of the central government owned NTPC has been on the rise on account better access to coal, while about 50,000 MW of IPPs with an investment of Rs 2.5 lakh crore are under tremendous stress.

The experts opined that the trend of lower PLF or capacity utilisation by IPPs is likely to continue on account of challenges faced by them and government run generation companies will thrive.

"Due to coal shortages, delayed payments from discoms, volatile imported coal prices and lack of offtake agreements, IPPs will fail to make most during the summer when electricity demand is likely to make new records," they added.

"Power purchase cost of distribution companies is likely to go up as generation from IPPs is going down amidst rising electricity demand. Electricity is already traded at over Rs 5 on IEX (Indian Energy Exchange) as discoms are competing to procure power in peak hours. The discoms are unwilling to compensate IPPs for their actual cost of coal," they added.

According to Indian Energy Exchange (IEX) power trading data, the average price of spot power on IEX rose 24 per cent to Rs 4.02 per unit in March over the previous month.

IEX had said that the average Market Clearing Price (MCP) discovered in the day-ahead market at Rs 4.02 per unit was 24 per cent more than the Rs 3.23 per unit price in February and 57 per cent above Rs 2.56 per unit in March last year.

IEX had also said that the increase in spot market price was largely on account of aspects such as increase in demand associated with seasonal variation and inadequate availability of coal with the thermal generators.

The CEA's coal stock report on April 5, 2018 stated that as many as 18 non-pit head thermal power plants have coal stock for less than four days (super critical situation) while 11 such plants have coal stocks for less than seven days (critical).

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