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## **INDIAN POWER SECTOR – ELECTRICITY DISTRIBUTION**

**Distribution sector reforms  
imminent with rising discom debt  
and dues to gencos**

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## OUTLOOK: NEGATIVE

*Credit profile of state-owned discoms in most states is constrained by weak operating efficiencies, inadequate tariffs in relation to cost of supply and large regulatory asset position*

*Slow progress in implementation of the liquidity scheme leading to overall dues from discoms to power generating and transmission companies remaining high at Rs. 1.27 trillion as of December 2020*

### **Implementation of reforms and operational efficiency improvement remains key to achieve turnaround in discoms finances**

The outlook remains negative for the state-owned distribution segment, given the continued weakness in the financial position of most of the state-owned distribution utilities (discoms). This is because of a mix of issues including high level of technical & commercial (AT&C) losses, inadequate tariffs in relation to their cost of supply and delays in receiving subsidy from the state governments. This apart, the discom finances have been adversely impacted by the sharp decline in revenues from the commercial and industrial (C&I) customers in Q1 FY2021, because of lockdown restrictions. This, along with the lack of tariff revisions, is estimated to widen the revenue gap for discoms at the all-India level by Rs. 300 billion in FY2021. While the discoms would be able to claim the revenue gap from the decline in the volume sales under the cost-plus tariff principles at the time of true-up, the timely realisation of the same remains to be seen in the subsequent tariff orders. Notwithstanding an expected demand recovery in FY2022 and the likelihood of upward tariff revisions to liquidate the large regulatory asset position, the discom losses are likely to remain significant at more than Rs. 750 billion, given the inadequate tariffs, high distribution losses and additional interest cost on the loans availed under the liquidity support scheme.

This is reflected in the ratings assigned by ICRA for state-owned discoms, wherein ratings for most state-owned discoms except for discoms in Gujarat and few discoms in Karnataka, are constrained because of inadequate tariffs in relation to the cost of supply and higher than regulator approved distribution losses, leading to large accumulated losses. The increase in RA and adverse impact of Covid-19 on revenues and collections led to a revision in the outlook to Negative from Stable for two state discoms. However, the credit profile of the privately-owned discoms remains healthy supported by superior operating efficiencies, favourable demographic profile and timely pass-through of cost variations to consumers.

The large accumulated losses on the books of the discoms along with the revenue gap in FY2021 led to a build-up in dues from discoms to power generation companies during FY2021, which increased from Rs. 0.99 trillion as on March 2020 to about Rs. 1.27 trillion as of December 2020, based on the data from the PRAAPTI portal. In this context, the Government of India, under the Atmanirbhar Bharat package, has announced a liquidity support of Rs. 900 billion (now increased to Rs. 1.25 trillion) for the state power discoms, in the form of loans against receivables, from the Power Financial Corporation (PFC) and the Rural Electrification Corporation (REC). However, the progress under the scheme remains slow with only about Rs. 460 billion disbursed so far against the sanctioned amount of Rs. 1.25 trillion, given the conditions involved in the scheme related to liquidation of outstanding dues from state governments and the plan to reduce operating and financial losses by the discoms. As a result, the overall dues from discoms to power generating and transmission companies remain high.

*The gross debt level for state-owned discoms at an all-India level is likely to cross Rs. 6.0 trillion in FY2022 with the loans availed under the liquidity package and significantly higher than the pre-UDAY level of Rs. 4.0 trillion*

*State discoms can employ a mix of measures including use of prepaid smart meters to improve billing & collection efficiency, distributed solar projects to lower cross-subsidisation to agri-consumers and graded tariff hikes to reduce the losses*

Further, the non-state government debt on the books of the discoms have increased to Rs. 3.87 billion as on March 2019 from Rs. 2.59 billion as of March 2017, which reduced from Rs.3.61 billion as of March 2015 following the debt takeover by the state governments under the UDAY scheme. Also, the gross debt for state-owned discoms increased to Rs. 4.78 billion as on March 2019 from Rs. 4.04 billion as on March 2015. Apart from the capex-related debt, the increase in debt levels in these states is towards funding the losses, RA and receivables from the state government (subsidy) and state government bodies (electricity bills). The gross debt level for the state-owned discoms is estimated to have crossed Rs. 5 trillion in FY2020 and is likely to touch Rs. 6 trillion in FY2022, with the loans availed from the PFC and the REC under the liquidity package. Such high level of debt is unsustainable for the discoms, in ICRA's view.

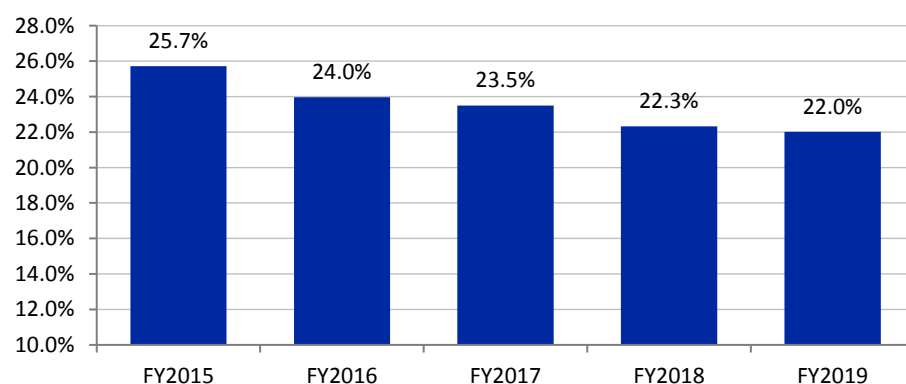
In contrast to the weak performance of the state-owned discoms, the performance of the privately-owned discoms remains healthy over the years. This is supported by superior operating efficiencies as reflected from the low distribution losses and healthy collection efficiencies, as seen in the distribution licensees in Mumbai, Delhi, Ahmedabad and Kolkata. Given the less-than-satisfactory progress shown by most of the state-owned discoms in improving the operational and financial performance of discoms, the Union Government proposed privatisation of the discoms as a measure to revive the distribution segment. In line with this, the Government of India announced the privatisation of discoms in Union Territories (UTs) in May 2020. Further, the Ministry of Power has recently notified the draft bidding guidelines for privatisation of distribution licensees. However, there is significant resistance to privatisation from some of the states and the employee unions, with petitions filed against the privatisation of discoms in UTs before various courts. Given these challenges, the Government is now proposing to delicense the distribution segment by allowing multiple operators in a distribution area and thereby move towards a market-based approach to reform the distribution segment. This would require amendments to the Electricity Act as well as a suitable policy and regulatory measures to outline the division of wires and supply business and tariff determination process in case of multiple operators. Also, the regulations must provide a mechanism on sharing of AT&C losses, subsidy payments, cross subsidy charges and additional surcharge. While the delicensing would be a significant positive for the consumers by providing them with a choice of suppliers along with improving customer service, it would require a strong political will and support from the state governments.

The state owned discoms in the interim, could look at multiple measures to achieve a reduction in loss levels including reduction in distribution losses through use of smart meters, use of distributed solar projects for supply of power to agriculture consumers and graded tariff hikes without any tariff shock to the consumers. The Union Budget for FY2022 announced that a revamped reforms-based result-oriented scheme would be launched for discoms with an outlay of over Rs. 3 lakh crore to be spent over five years. A major part of this outlay is expected to be towards smart meters and upgrading distribution infrastructure. This investment can be recovered through savings in distribution losses over a period. For instance, a 1% reduction in distribution losses would lead to a savings of Rs. 50 billion per annum on all India basis on a marginal cost basis. Further, use of distributed solar power projects for supply to agriculture consumers would entail significant savings to discoms through reduction in power purchase cost (PPC) and lower distribution losses. Apart from the improvement in operating efficiency, a graded increase in tariff rates would enable the discoms to lower the loss levels.

## PERFORMANCE OF STATE DISTRIBUTION UTILITIES REMAINS WEAK DESPITE THE VARIOUS BAILOUT SCHEMES OVER THE PAST TWO DECADES

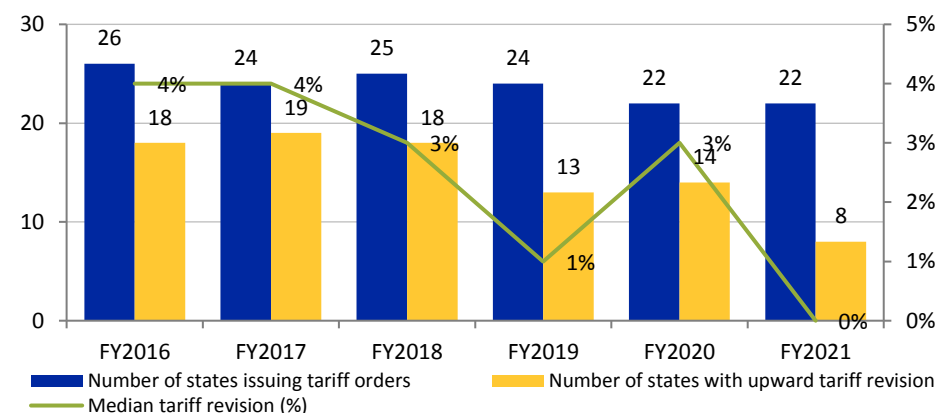
The electricity distribution segment remains the weakest link in the power sector value chain owing to longstanding issues of the state-owned discoms related to weak operating efficiencies, inadequate tariffs and subsidy in relation to cost of supply, delays in receiving subsidy and delays in pass-through of cost variations to consumers in the form of higher tariffs. The Government has so far launched four support packages over the past two decades to revive the distribution segment. The latest has been a liquidity relief scheme announced in May 2020 and prior to that, Ujwal DISCOM Assurance Yojana (UDAY) was launched in November 2015. The UDAY scheme involved a debt takeover by the state governments (Rs. 2.32 lakh crore bonds were issued by state governments and discoms towards debt takeover), focus on improvement in the operational efficiencies of discoms and a reduction in the cost of power purchase. While the discoms were able to bring down their book losses with the debt refinancing, the progress in meeting the targets set for AT&C losses remained less than satisfactory. The AT&C loss level at the all-India level remained high at 22.0% in FY2019, against the target of 15.0% by FY2019 set under the UDAY scheme. This is owing to inefficiencies in metering, billing and collections. Also, the delays in issuance of the tariff orders and inadequacy of the tariff revisions persisted in some of the key states. The delay in issuance of the tariff orders was prominent in key states like Rajasthan, Tamil Nadu and Uttar Pradesh, which accounted for a bulk of the debt taken over by state governments under the UDAY scheme. Moreover, the tariff hikes proposed by the discoms and approved by the SERCs for the past four years across the states have remained lower than what was agreed under the UDAY MoUs, as reflected from the low median tariff hike. The exception being the discoms in Haryana, which have been able to turn around and report profits in FY2018 and FY2019, by reducing the AT&C losses and raising tariffs by 5.0% in FY2018.

**EXHIBIT 1: Trends in AT&C losses at all India level**



Source: ICRA research, PFC report on performance of discoms

**EXHIBIT 2: Trends in no of states issuing annual tariff orders and median tariff revision**

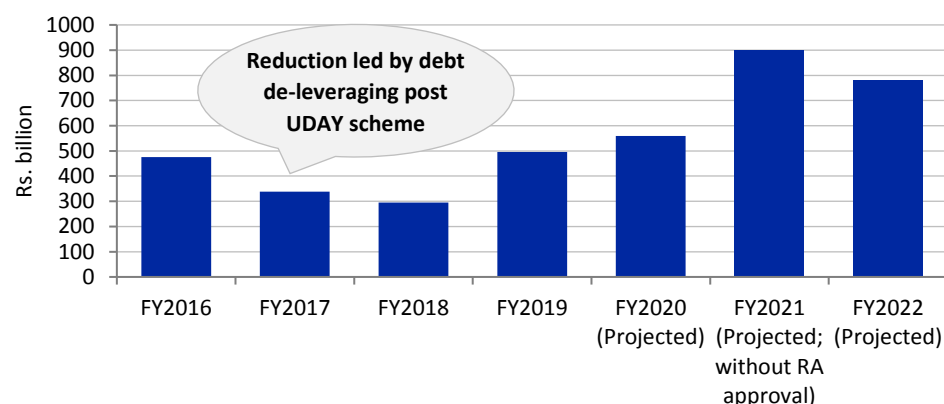


Source: ICRA research, PFC report on performance of discoms

Within the various states, the losses are relatively high for discoms in the states of Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Telangana and Uttar Pradesh, accounting for more than 90% of the all India discom losses. On the other hand, the performance of the discoms in Gujarat remains healthy with sustained profitability. Also, the discoms in the states of Haryana, Maharashtra and Karnataka have reported profits at a net level in FY2019. The continued high losses for discoms in turn resulted in an upward trend in dues from discoms to

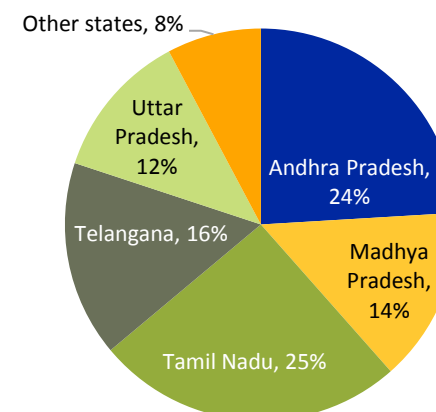
power generation companies. While the provision of a letter of credit (LC) or advance payments by discoms to IPPs/GENCOs has been made mandatory w.e.f. August 1, 2019, the implementation of the same has been mixed so far and does not address the issues pertaining to recovery of old receivables.

**EXHIBIT 3: Trends in book losses for discoms at all India level**



Source: ICRA research, PFC report on performance of discoms

**EXHIBIT 4: Mix of book losses for state discoms in key states in FY2019**



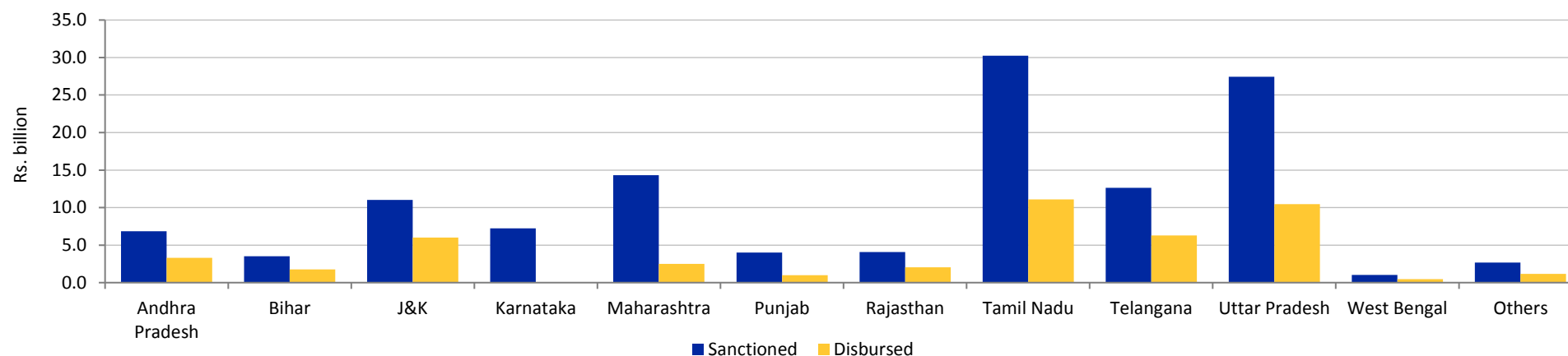
Source: ICRA research, PFC report on performance of discoms

Further, the imposition of lockdown restrictions in Q1 FY2021 amid the Covid-19 pandemic has adversely impacted the electricity demand (down by 16.2% in Q1 FY2021 on a YoY basis) from the C&I customers and in turn the revenues and collections for discoms. This, along with the lack of tariff revisions for discoms across most states for FY2021, is estimated to widen the revenue gap for discoms at the all-India level by more than Rs. 300 billion. While the discoms would be able to claim the revenue gap from the decline in the volume sales under the cost-plus tariff principles at the time of true-up, the timely realisation of the same remains to be seen in the subsequent tariff orders. In the interim period, this decline in revenues and collections for discoms during FY2021 led to a further build-up in dues from discoms to power generation companies from Rs. 0.99 trillion as on March 2020 to about Rs. 1.27 trillion as of December 2020, based on the data from PRAAPTI portal. In this context, the Government of India, under the Atmanirbhar Bharat package, announced a liquidity support of Rs. 900 billion (increased subsequently to Rs. 1.25 trillion) for the state power discoms, in the form of loans against receivables, from the Power Financial Corporation (PFC) and the Rural Electrification Corporation (REC). These loans are to be backed by state government guarantees and are to be used to clear the pending dues to power generating companies, as on June 2020.

**However, the progress under the liquidity relief scheme remains slow with only about Rs. 460 billion disbursed as on January 27, 2021 against the sanctioned amount of Rs. 1.25 trillion, given the conditions involved in the scheme related to liquidation of outstanding dues from state governments and the plan to reduce operating and financial losses by the discoms. As a result, the overall dues from discoms to power generating and transmission companies remain high - at Rs. 1.27 trillion as of December 2020 - as per the data from the PRAAPTI portal.** Notwithstanding an expected demand recovery in FY2022 and the likelihood of upward tariff revisions to liquidate the large regulatory asset position, the discom losses are likely to remain significant at more than Rs. 750 billion, given the inadequate tariffs, high distribution losses and additional interest cost on the loans availed under the liquidity support scheme.



**EXHIBIT 5: State discom-wise funding sanctioned and disbursed under the liquidity scheme as of January 2021**



*Source: ICRA research, Ministry of Power*

While the losses arising from the higher-than-regulator-approved distribution losses are not allowed to be passed on to the consumers, the revenue gap arising from inadequate tariffs or from higher-than-projected power purchase costs are allowed by the regulator at normative efficiency level at the time of the true-up. Given the lack of tariff revisions in some of the key states over the past few years as well as delays in pass-through of the variation arising from true-up of past years, there is a sizeable build-up of regulatory asset (RA) on the books of the discoms aggregating to Rs. 0.78 trillion. A majority of the RA is for discoms in the states of Rajasthan, Tamil Nadu and West Bengal. Moreover, the regulators in Andhra Pradesh, Uttar Pradesh and Telangana have not approved any RA, despite the large losses reported by the discoms in these states due to lack of tariff revision over the past few years. The RA position would further increase, given that the tariff orders have not been issued in some of the states like Tamil Nadu and West Bengal since FY2019 and given the revenue loss expected in FY2021 due to a sharp decline in electricity demand amid the Covid-19 pandemic. While the tariff policy requires the regulators to ensure a time-bound recovery of RA i.e. over a three-year period, the regulators in many of the states have not stipulated any recovery mechanism for the RA leading to large accumulated losses on the books of the discoms. This apart, the implementation of fuel & power purchase cost adjustment framework (FPPCA) for timely pass-through of cost variations through tariff, is not being implemented across most states, with the exception being Gujarat and limited implementation in states like Karnataka, Maharashtra, Madhya Pradesh and Rajasthan. This in turn also leads to a build-up of RA on the books of the discoms and delays in recovery of cost variations from consumers.

**Exhibit 6: Regulatory asset position across key states**

State DISCOMs	Regulatory Asset (Rs. billion)	No of years since issuance of tariff order approving tariff hike	Remarks
Andhra Pradesh	Nil	~3 years	While the state discoms has been reporting significant losses over the years, the SERC has not created any regulatory asset.
Karnataka	14.5	< 1 year	RA position as of March 2021; approved to be recovered over FY2022 and FY2023
Maharashtra	123.8	< 1 year	RA position as of March 2020; Approved to be recovered during FY21-25
Rajasthan	414.9	< 1 year	Unfunded revenue gap as of March 2019; carrying cost allowed by the commission in the tariff order for FY2020. However, the recovery of the regulatory asset has not been stipulated by the commission.
Tamil Nadu	104.0	~6 years	As on March 2017, as per tariff order dated August 2017; the SERC has not issued tariff order thereafter
Telangana	Nil	~4 years	While the state discoms has been reporting significant losses over the years, the SERC has not created any regulatory asset.
West Bengal	126.0	4 years	As on March 2019; No tariff order for FY2019 and FY2020; true-up orders awaited from FY2014. As a result, further build-up of regulatory assets is likely; mode of recovery of the same remain uncertain
<b>Total</b>	<b>783.2</b>		

Source: ICRA research, tariff orders issued by SERCs

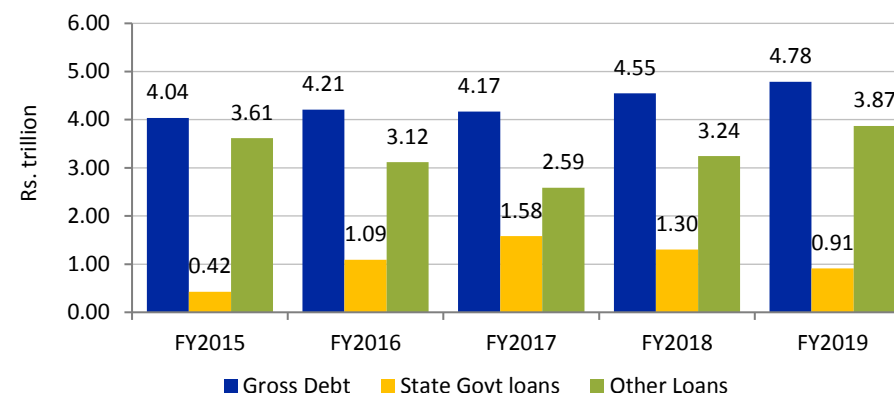
## DISCOM DEBT ESTIMATED TO CROSS 6 TRILLION IN FY2022

While the non-state government debt of the state-owned discoms witnessed a sharp decline from Rs.3.61 billion as of March 2015 to Rs. 2.59 billion as of March 2017 following the debt takeover by state governments under the UDAY scheme, the non-state government debt levels have again increased to Rs. 3.87 billion as on March 2019. Also, the gross debt for state-owned discoms increased to Rs. 4.78 billion as on March 2019 from Rs. 4.04 billion as on March 2015.

The increase in debt levels is driven by discoms in the states of Tamil Nadu, Uttar Pradesh, Kerala, Madhya Pradesh and Telangana. Apart from capex-related debt, the increase in debt levels in these states is towards funding the losses, RA and receivables from state government (subsidy) and state government bodies (electricity bills). The large loss levels have also resulted in a negative net worth of Rs. 806 billion as of March 2019 for state-owned discoms at the all-India level. Further, the leverage ratio (total debt to OPBDITA) for the state-owned discoms at the all-India level remains high at 23.9 times in FY2019 and coverage ratios remain weak with interest coverage ratio of 0.4 times in FY2019.

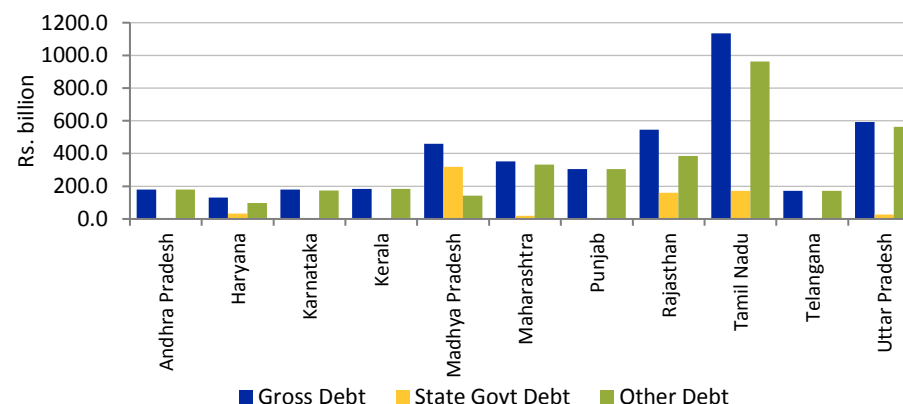
**The gross debt level for state-owned discoms is estimated to have crossed Rs. 5 trillion in FY2020 and is likely to touch Rs. 6 trillion in FY2022**, with the loans availed from PFC and REC under the liquidity package announced by the Government of India in May 2020 to clear the outstanding dues to the power generating companies. Such high level of debt is unsustainable for the discoms. The risk is particularly high for discoms in the states of Tamil Nadu, Uttar Pradesh, Rajasthan, Telangana, Madhya Pradesh, Andhra Pradesh, Telangana and Punjab, which together constitute nearly 75% of the gross debt for discoms at the all-India level. Along with a reduction in the debt level, a significant improvement in operating efficiencies and reduction in the gap between the tariff and cost of supply remains important for the discoms to achieve a sustainable improvement in finances.

**EXHIBIT 7: Trends in gross debt position for state-owned discoms at all India level**



Source: ICRA research, PFC report on performance of discoms

**EXHIBIT 8: State-wise discom debt as of March 2019**



Source: ICRA research, PFC report on performance of discoms

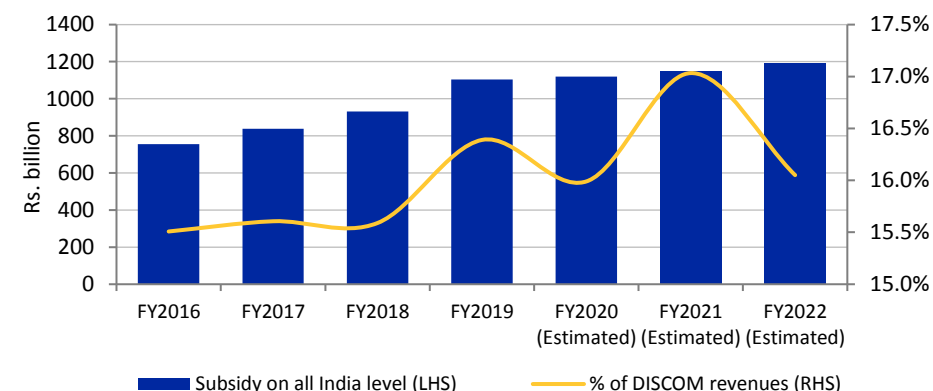


## SUBSIDY DEPENDENCE REMAINS HIGH FOR STATE-OWNED DISCOMS

The subsidy dependence for discoms is estimated to remain high at more than Rs. 1.2 trillion constituting 16% of the discom revenues at the all-India level, given the continuing free power supply to agriculture pump sets in most states and highly subsidised supply to certain sections of domestic consumers. This in turn exposes the discoms to delays and inadequacy of subsidy payments from the state governments. The subsidy dependence has been increasing over the years, owing to the lack of tariff revision despite an increase in the cost of supply. The subsidy dependence remains relatively high for discoms in the states of Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telangana and Uttar Pradesh. The discoms remain exposed to delays in realisation of subsidy from the respective state governments and the inadequacy of the subsidy in relation to the cost of supply.

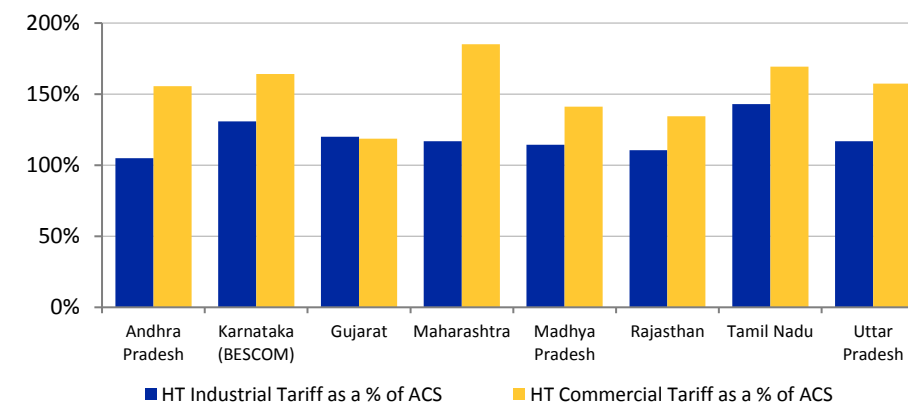
Apart the subsidy support from the state government, the tariffs to domestic and agriculture consumers are also cross-subsidised by higher tariffs to industrial and commercial consumers. The National Tariff Policy stipulates that the regulators and discoms should progressively rationalise the tariffs to keep the retail tariffs across consumer categories within +/-20% of the average cost of supply. However, as seen from the exhibit here, the cross subsidisation remains at more than 120%, especially with respect to the tariffs charged to the commercial customers. While the cross-subsidisation is below 120% for HT industrial consumers in few states, the cross-subsidisation remains at or more than 120% across all the states. The average billing rate for the HT industrial customers remains above Rs. 7-8 per unit across the states and the average billing rate for commercial consumers remains above Rs. 9-10 across most states. This in turn adversely impacts the competitiveness of the tariff offered by the discoms against the tariff offered by third party power generators under the open access route, especially in the context of declining tariffs for solar power generation. A reduction in cross-subsidy/tariff rationalisation would require the discoms to either increase the tariff charged to domestic and agriculture consumers or recovery higher subsidy from the state government.

EXHIBIT 9: Trends in subsidy dependence for discoms at all-India level



Source: ICRA research, PFC order on performance of state discoms

EXHIBIT 10: Tariff cross-subsidisation level by industrial and commercial consumers across key states



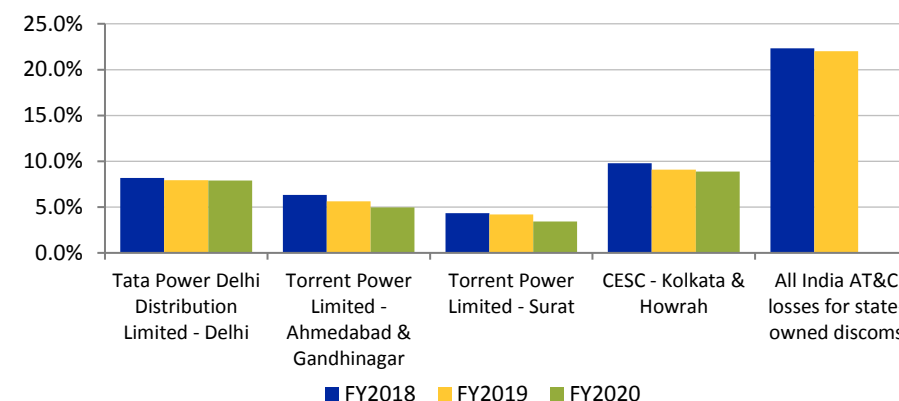
Source: ICRA research, tariff orders by SERCs

## SUPERIOR OPERATING EFFICIENCY DEMONSTRATED BY PRIVATE DISCOMS

In contrast to the weak performance of the state-owned discoms, the performance of the distribution utilities owned by private corporates remains healthy over the years. This is supported by superior operating efficiencies as reflected from the lower-than-normative distribution losses and healthy collection efficiencies. As shown in the exhibit here, the distribution losses in the licence area operations of Tata Power Delhi Distribution Limited (TPDDL) (Delhi), Torrent Power Limited (TPL) (Ahmedabad, Gandhinagar & Surat) and CESC Limited (Kolkata & Howrah) have remained less than 10% against the all-India AT&C loss level of more than 20%. In fact, the distribution losses for Torrent Power Limited remain at less than 5.0% in the Ahmedabad, Gandhinagar and Surat areas in FY2020. These utilities have been able to lower the distribution losses over the years supported by improving the metering, billing and collection mechanism, along with upgrading the distribution infrastructure.

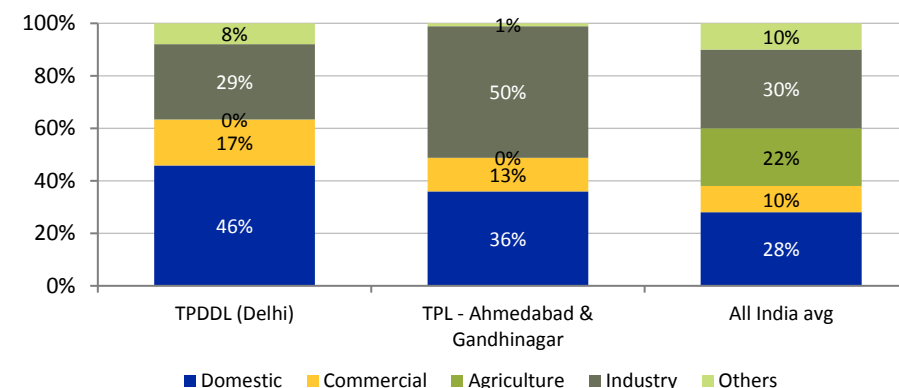
However, one must note that these utilities primarily operate in the urban areas, thus, benefiting from a favourable customer profile comprising domestic, commercial and industrial consumers. As can be seen from the exhibit here, the consumer mix for TPDDL is concentrated towards domestic, industrial and commercial consumers in that order. Similarly, the consumer mix for TPL is concentrated towards industrial, domestic and commercial consumers. Moreover, these discoms have very low exposure to agriculture consumers. On the other hand, the consumer mix at an all-India level is distributed across domestic, industrial and agriculture consumers. As a result, the cross subsidisation requirement and subsidy dependence remains relatively low for these privately owned discoms. Also, these discoms have been able to pass on the variations in cost structure to consumers in a timely manner compared to the state-owned discoms, under the cost-plus tariff principles of the distribution business, thereby enabling continued profitable operations.

**EXHIBIT 11: Trends in distribution losses for private discoms vs all India AT&C loss level for state-owned discoms**



Source: ICRA research, tariff orders and annual reports

**EXHIBIT 12: Consumer mix for key private discoms vs all India average**



Source: ICRA research, Tariff orders and annual reports

## PRIVATISATION OF DISCOMS TO FACE CHALLENGES, GIVEN THE LIKELIHOOD OF RESISTANCE BY THE STATE GOVERNMENTS; DELICENSING OF DISTRIBUTION SEGMENT ALSO BEING PROPOSED TO ENCOURAGE THE PRIVATE SECTOR PARTICIPATION

Given the less-than-satisfactory progress shown by most of the state-owned discoms in improving the operational and financial performance of discoms, the Union Government proposed privatisation of the discoms as a measure to revive the distribution segment, along with other measures like direct benefit transfer for subsidy and smart metering programme. In line with this, the Government of India announced privatisation of discoms in Union Territories (UTs) in May 2020. Thereafter, tenders were issued for privatisation of discoms in UTs of Daman & Diu (D&D), Dadra & Nagar Haveli (DNH) and Chandigarh. Torrent Power has emerged as the highest bidder for majority stake in discoms of D&D and DNH, quoting a bid of Rs. 555 crore for a 51% stake, as per industry sources. The discoms in these two UTs have high operating efficiencies with distribution losses remaining below 5.0% and a proportion of C&I customers remaining above 90%. In the recent past, the state government of Odisha had privatized its four discoms through the public private partnership (PPP) model to The Tata Power Company Limited. Under this bid, Tata Power will hold 51% stake in the new licensee and the balance 49% is owned by the Government of Odisha. Given the high prevailing AT&C losses of more than 30%, the loss reduction remains one of the key objectives of the privatisation process. The exhibit here shows the AT&C loss trajectory commitment provided by the winning bidder for one of the discoms in Odisha, wherein the losses are projected to reduce from prevailing level of more than 35% to less than 15% over a 10-year period. Apart from the AT&C loss reduction, the bidders quoted the premium over the reserve price for acquiring the 51% stake in the new licence. The comparison of the quoted equity value for 51% stake in the new licensees of DNH plus D&D and Odisha is provided in the table below. One can note that the equity value per unit sale in the distribution area is much higher in case of the DNH and D&D discoms against the Odisha discoms, considering the superior operating efficiency and profitable operations in DNH and D&D areas.

**Exhibit 13: Comparison of the quoted bids for discoms under privatisation**

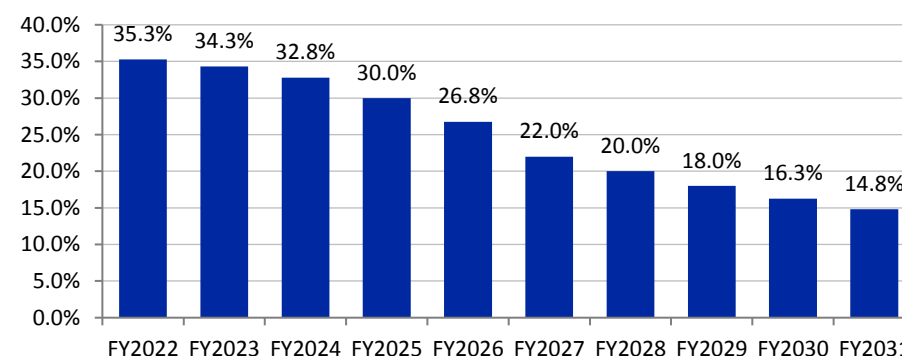
FY2020	DNH	D&D	Odisha
Annual Sales (Million units)	6288	2496	19584
Distribution losses (%)	3.5%	4.1%	29.4%*
Proportion of HT industry sales (%)	93.2%	83.3%	46.6%**
Bid quoted for 51% stake in the new licensee (Rs. crore)	555.0		752.25
Equity value per unit sales with FY20 as base year in Rs. /unit	1.24		0.75

Source: ICRA research, Tariff petition filed by discoms in DNH and D&D and investor presentation by Tata Power

\*Estimated AT&C loss for FY2020

\*\*HT/EHT sales for all consumer categories combined

**EXHIBIT 14: AT&C loss trajectory committed by the winning bidder for one of the discoms in Odisha**



Source: ICRA research, vesting order issued by the regulator

Further, the Ministry of Power has recently notified the draft bidding guidelines for privatisation of distribution licensees. These guidelines propose that the bidders should be provided with a clean balance sheet free of accumulated losses or unserviceable liabilities. Also, given the emphasis on improvement in operating efficiency, the guidelines propose AT&C loss trajectory as the bidding parameters for discoms having AT&C losses of more than 15% currently. This is also reflected in the recent bid issued by Odisha. However, the accuracy of the baseline data related to metering, billing and current loss levels remains important. Also, the liabilities retained in the opening balance sheet by the bidding authority also plays an important role in attracting the bidders. Further, clarity is required on the mechanism of subsidy payments from the state government, post privatisation, given the delays and inadequacy of the subsidy witnessed in the past.

#### **Overview of the draft bidding guidelines for privatisation of discoms**

- The distribution licensee will be awarded for a period of 25 years
- 100% equity stake can be offered for sale in case of utilities in urban areas or where the tariff covers for the cost of supply and the subsidisation requirement is nil or limited. For utilities having areas with urban-rural mix or utilities having subsidy dependence or utilities with strategic national security importance, Government may retain 26% stake
- Employees of the existing distribution licensee shall be transferred to the new entity. Further, the concerned state/ UT government shall be responsible for all terminal liability obligations of such employees till their transfer date. The new entity shall fund necessary contributions towards terminal liabilities on a prospective basis from the date of their transfer. The existing utility/Government will remain responsible for the terminal liabilities of the already retired employees.
- Existing PPAs can be assigned to the new entity, in case the retail tariffs cover the cost of supply with the utility expected to remain viable or likely to turn turnaround in the near future; limited dependence on subsidies from state Government
- In case of significant gap between the tariffs and cost of supply, the PPAs may be retained with a state-owned entity, which then signs bulk supply agreement with the new distribution utility to provide supply at subsidised rates for a specified period
- In case of discoms having high AT&C losses above 15%, the bid parameter can be the AT&C loss trajectory for the first five years and the fixed parameter can be consideration for sale of equity shares of the distribution utility.
- In case of discoms having AT&C losses below 15%, the bid parameter can be the premium for sale of equity shares of the distribution utility and the AT&C loss trajectory for next five years can be specified in the RFP document as a fixed parameter (which will also be considered for tariff determination by the regulator).

However, there is resistance to privatisation from some of the states and the employee unions, as seen from the protests and filing of a petition by the employee union of Chandigarh UT before the Hon'ble Supreme Court against privatisation. Also, the tendering process for the UT of DNH and D&D has been suspended by the High Court of Bombay in March 2021 based on a PIL filed. Given these challenges, the Government is now proposing to delicense the distribution segment by allowing multiple operators in a distribution area and thereby move towards a market-based approach to reform the distribution segment. This was announced in the Union Budget for FY2022 and was also highlighted by Hon'ble Power Minister. The existing state-owned discoms would continue to operate under this structure and in parallel to the other private power suppliers. This would require amendments to the Electricity Act as well as a suitable policy and regulatory measures to outline the division of wires and supply business, including a mechanism to compensate the existing discoms for the distribution infrastructure and tariff determination process in case of multiple operators. Also, the regulations must provide a mechanism on sharing of AT&C losses, subsidy payments, cross subsidy charges and additional surcharge. While the delicensing would be a positive for the consumers in the long run by providing them with a choice of suppliers along with improving operating efficiencies and customer service, the implementation of this initiative would require support from the state governments.

## WAY FORWARD – MIX OF MEASURES INCLUDING SMART METERING, DISTRIBUTED SOLAR PROJECTS AND TARIFF HIKES

The state-owned discoms in the interim, could look at multiple measures to achieve a reduction in loss levels including reduction in distribution losses through use of smart meters, use of distributed solar projects for supply of power to agriculture consumers to lower the cross-subsidisation and raising tariffs in a gradual manner without any tariff shock to the consumers.

### Focus on Operating Efficiency

- Installation of prepaid smart meters, feeder separation in rural areas, upgrading distribution systems and improving billing & collection mechanism
- **A 1% reduction in distribution losses would lead to a savings of Rs. 50 billion per annum on all India basis on a marginal cost basis. The savings would further increase over the long-term.**

**Smart meters programme under way in Uttar Pradesh and Bihar; replacement of conventional meters with smart meters at all-India level would require an investment of about Rs. 1.2 trillion**

### Distributed solar power projects for supply to agriculture feeders

- For instance, meeting 10% of the supply to agriculture consumers at all India level through the distributed solar power projects at Rs. 2.5 per unit is estimated to lead to an annual savings of ~Rs. 30 billion on a marginal cost principal, which is about 2.5% of the subsidy provided to discoms at all-India level. The solar capacity required for meeting this demand would be ~14 GW

**In a recent bid held in Andhra Pradesh for setting up solar power projects on build-operate-transfer basis, to be utilised for agriculture consumption, the discovered tariff was in the range of 2.47 -2.58/unit for 6.4 GW.**

### Introduction of multiple licensees / Privatisation of discoms

- This would augment competition in the segment - improve operating efficiencies and customer service
- Requires amendments to Electricity Act; policy and regulatory action are critical to achieve the desired results

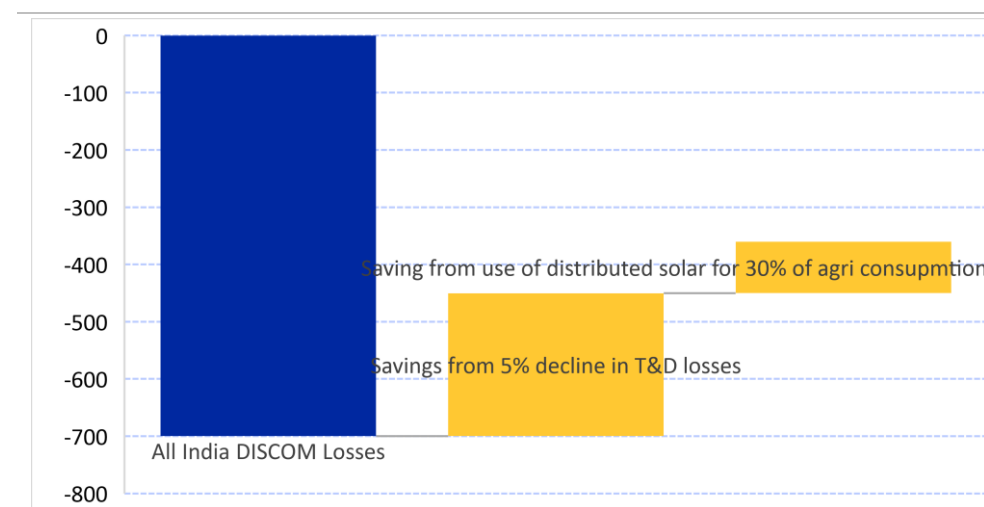
**While these measures are a positive for the sector, timely implementation remains very crucial. Along with policy & regulatory changes, political will and support from states remains important.**

## OPERATIONAL IMPROVEMENT REMAINS KEY TO LOWER LOSSES

As illustrated in the exhibit here, a 5% reduction in distribution losses along with the use of distribution solar projects for supply to agriculture consumers to the extent of 30% of their consumption requirement is expected to yield savings of close to Rs. 350 billion. This assumes solar power tariff of Rs. 2.5 per unit, in line with the tariff discovered for such a programme in Andhra Pradesh. Also, a similar programme is being implemented by Energy Efficiency Services Limited (EESL: joint venture of four power sector PSUs of Government of India) in the states of Maharashtra and Goa. EESL is setting up small scale solar power plants on the surplus land available with the state power utilities, with the objective to supply this power to agriculture feeders. Apart from savings in power purchase cost (PPC), the distributed solar projects would also yield savings through lower T&D losses. The installation of smart meters at the all-India level would require an investment of Rs. 1.2 trillion. The Union Budget for FY2022 announced that a revamped reforms-based result-oriented scheme would be launched for discoms with an outlay of over Rs. 3 lakh crore to be spent over five years. A major part of this outlay is expected to be towards smart meters and upgrading distribution infrastructure. This investment can be recovered through savings in T&D losses over a period.

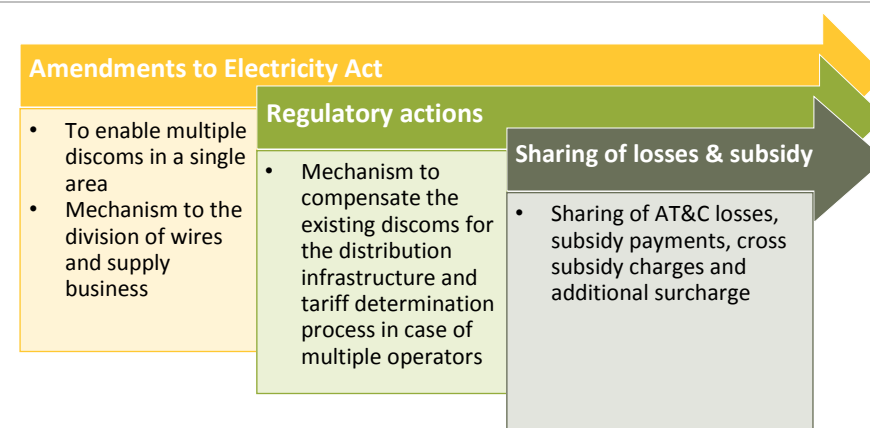
Apart from the operating efficiency improvement and savings in PPC, a graded increase in tariff rates would enable the discoms to lower the loss levels. Considering the annual discom losses of Rs. 600-700 billion on an ongoing basis, the above-mentioned measures along with graded tariff hikes would enable the discoms to break even at a net level. One must note that the savings from the use of distributed solar projects for supply to agriculture consumers are assumed to be retained by the discoms and not passed on to the state government in the form of savings in subsidy. This apart, the state governments and discoms would have to work towards reducing the cost structure by retiring old thermal plants in the state sector having high cost of generation. Apart from these actions, if the Government can implement multiple distribution companies leading to a market-based approach, it would benefit the consumers through better service offering and ultimately lower tariffs in the long run.

**EXHIBIT 15: Illustrative scenario to reduce all India discom losses through operational improvements and distributed solar projects**



Source: ICRA research

**EXHIBIT 16: Key milestones for delicensing distribution business**



Source: ICRA research

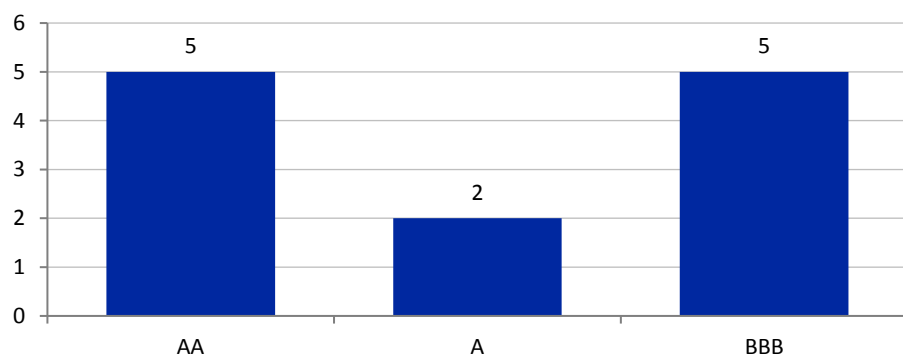


## RATING TRENDS

### Credit profile of state-owned discoms in most states constrained by weak operating efficiencies, inadequate tariffs in relation to cost of supply and large regulatory asset position

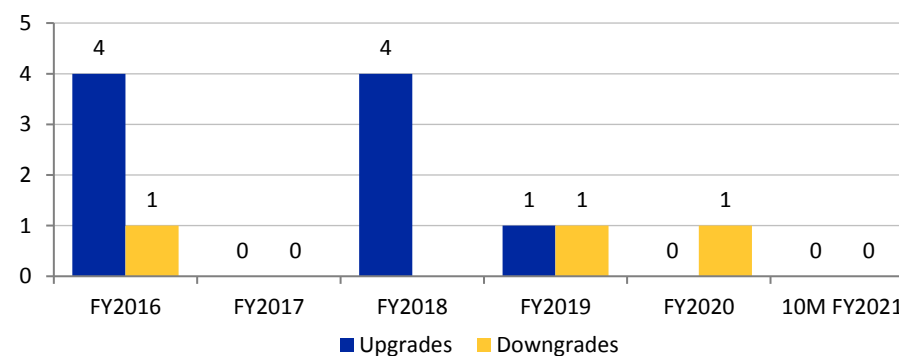
- ICRA has 12 ratings in the power distribution segment comprising 11 state-owned discoms and one private distribution utility. Within the 11 ratings for state-owned discoms, four ratings are based on the guarantee from the respective state government.
- All the ratings in the power distribution segment are in the investment grade. The ratings in the AA category constitute four discoms in Gujarat and one private discom in Delhi, supported by healthy operating efficiencies, cost reflective tariffs and timely pass-through of cost variations to consumers.
- The ratings in A category constitute one discom in Karnataka on a standalone basis and the state-owned utility of Tamil Nadu backed by the state government guarantee. The ratings in the BBB category constitute two ratings for Karnataka discoms on a standalone basis and three ratings for discoms in Rajasthan backed by state government guarantee. The unsupported ratings for the utilities in Tamil Nadu and Rajasthan are in the non-investment grade. Despite the monopolistic nature of the business, the ratings for state-owned discoms (except in Gujarat and few discoms in Karnataka) are constrained because of inadequate tariffs in relation to the cost of supply leading to large accumulated losses and regulatory asset position and higher than regulatory approved distribution losses.
- Over the past six years, the sector witnessed nine upgrades primarily for the discoms in Gujarat and one discom in Karnataka. On the other hand, the downgrades have remained low at three, which is related to the state-owned discom of West Bengal, wherein the rating has been withdrawn now. While there are no upgrades or downgrades in this segment in 10M FY2021, the outlook on the long-term rating for two discoms in Karnataka was revised to Negative, considering the built-up in receivables and regulatory assets along with the adverse impact of Covid-19 on collections in Q1 FY2021.

**EXHIBIT 17: Rating distribution of ICRA-rated power distribution utilities (no of ratings)\***



Source: ICRA research; \*four ratings based on guarantee from state governments

**EXHIBIT 18: Trends in upgrades and downgrades for ICRA-rated power distribution utilities**



Source: ICRA research

## ABOUT ICRA

ICRA Limited (formerly Investment Information and Credit Rating Agency of India Limited) was set up in 1991 by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment Information and Credit Rating Agency.

Today, ICRA and its subsidiaries together form the ICRA Group of Companies (Group ICRA). ICRA is a Public Limited Company, with its shares listed on the Bombay Stock Exchange and the National Stock Exchange.

### **Alliance with Moody's Investors Service**

The international Credit Rating Agency Moody's Investors Service is ICRA's largest shareholder. The participation of Moody's is supported by a Technical Services Agreement, which entails Moody's providing certain high-value technical services to ICRA. Specifically, the agreement is aimed at benefiting ICRA's in-house research capabilities, and providing it with access to Moody's global research base. The agreement also envisages Moody's conducting regular training and business seminars for ICRA analysts on various subjects to help them better understand and manage concepts and issues relating to the development of the capital markets in India. Besides this formal training programme, the agreement provides for Moody's advising ICRA on Rating-products strategy, and the Ratings business in general.

### **The ICRA Factor**

Our services are designed to

- Provide information and guidance to institutional and individual investors/creditors;
- Enhance the ability of borrowers/issuers to access the money market and the capital market for tapping a larger volume of resources from a wider range of the investing public;
- Assist the regulators in promoting transparency in the financial markets;
- Provide intermediaries with a tool to improve efficiency in the funds raising process.

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