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## Is tariff rationalization key to sustainable future of discoms badgered with losses?

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**ON-POINT**

Is tariff rationalization key to a sustainable future of discoms badgered with losses? Why multiple distribution reforms have not been able to ensure the objective of cutting down on AT&C loss levels across the country?

**ON – POINT QUERY:** For a sustainable power sector, distribution utilities need to depart from being the “Achilles Heel” and secure sustained reduction in their loss levels. Will rationalization of tariff prove crucial to aid discoms solve the loss riddle leading to a sustainable power sector?

“Tariffs” are the way by virtue of which power distribution utilities earn their revenue and basically rely upon meeting the expenses and network expansion costs. Well, when one looks at the business model upon the discoms operate this makes perfect sense isn't it. So where is a fallacy in the system which leaves the discoms badgered with losses? Does the answer lie in the context of the business the discoms are in, which deals with prioritizing consumer interests or in the intent of authorities who are more hinged towards designing a politically palatable system?

Tough, to be in a space that renders absolute clarity without bias but for sure to an extent the context and intent of authorities are to bear some share of responsibility which refrains the discoms operating financial condition to be sustainable. Sounds bizarre isn't it, but sadly is a fact which the discoms are still struggling to cope with. So, how come tariff rationalization will ease the situation and render a financially sustainable future for the ailing discoms? The obvious for that needs to be understood which perhaps is never questioned or looked upon. In a country of 29 states, India doesn't involve a mandate for the state discoms to alter the cost of supply on annual basis also, to add to the woes are the obligatory net metering for which the payouts which happen either on the average cost of supplies for electricity or on simply the cost of supplies. This only happens for 7 to 8 states of the total 29 states, so why aren't the discoms truing up the tariffs. The average of cost of generation has gone relatively up, (though the cost of RE generation has gone down but for thermal power, the cost has seen a spike) courtesy of the appreciation in fuel cost and technology improvements to reduce emissions in the country. But have we seen an in tandem revision of the tariff by the discoms on a subsequent basis? Let's find out and learn as to how tariff rationalization and truing up can truly ease-out the co-existence of discoms.

Let's kick off understanding what are the levers which contribute to the economic woes of discoms. Since, Indian power sector being a regulated one and therefore the discoms as well which deals in supplying essential items to the consumers which is sans the freedom of fixing selling price based on current cost. Though, regulators are not completely at fault, purely for the fact that they are being curtailed to function with full autonomy only to address the politics quotient involved. For, instance let us focus on Delhi wherein the Government of NCT has declared free electricity for domestic consumers up to 200 units of their monthly consumption leave aside the subsidies rendered to the agricultural consumers in the state. Result which follows is the operational discoms in the region being saddled with **₹ 36,000 Crores** of power purchase costs already incurred to be recovered. Discoms pay for the cost of electricity generated in the hope to get the revenue through supply of power to the end consumers and in case they do not pay it to the generation companies their supplies are impacted leading a precarious situation for them as the context of their business sets in. The situation of discoms are turning bad to worse courtesy poor operational ethics and lack of available modus to recover sustained revenue and thus piling of AT&C losses for most of them.

One of the interesting feed comes from UDAY Portal which resonates with the main reasons for AT&C loss levels of discoms and even more so for the one's wherein these loss levels are on the higher side. For the fact that AT&C loss levels compose of intermittent aggregate technical & commercial losses. The technical losses are accounted for the network losses which averages around 4% for India on national basis. By no means this is justifiable, however when compared to global standards its marginally higher only. This brings the focus upon the lion's share contributor which is nothing, but the commercial losses attributed towards poor billing & collection efficiency of the operating utilities. To top that the subsidies that exist for agricultural load put extra pressure on C&I consumers leading to them either choosing for setting up of captive facilities or opting OA mechanism. The success of either choice of C&I consumers is also debatable, having said so we don't purposefully delve in there. Focusing upon the burden of cross subsidies shall be important to understand the mix of AT&C losses rising apart from the operational issues of discoms. Yet another fact which the UDAY portal brings to light is the difference in ACS and ARR levels for most of the distribution utilities over ₹0.50/kWh thereby leading to AT&C losses high. True, ideally for the gap in ACS and ARR to be higher shall lead to higher AT&C losses purely for the fact that commercial loss levels are higher. But there is catch for this analogy to be one dimensional and there are certainly more axes to it. Let's take an example for Tamil Nadu discom TANGEDCO which has an **ACS – ARR gap of ₹ 2/Unit and interestingly the AT&C loss levels at 13.4%** only which is completely indifferent to the very logic of factor leading to the higher AT&C losses. Naturally, what follows up is as to what led to the higher ACS-ARR gap despite such low levels of AT&C losses or perhaps vice-versa?

The answer lies in the methodology for calculating the ACS - ARR gap which in India has now been followed uniformly post 2017 on input energy, although billed energy is even better matrix. First, let's learn as per the input energy methodology how we define ACS & ARR and thus the gap.

#### Exhibit 01: Input Energy Based Methodology for ACS – ARR Gap Calculation

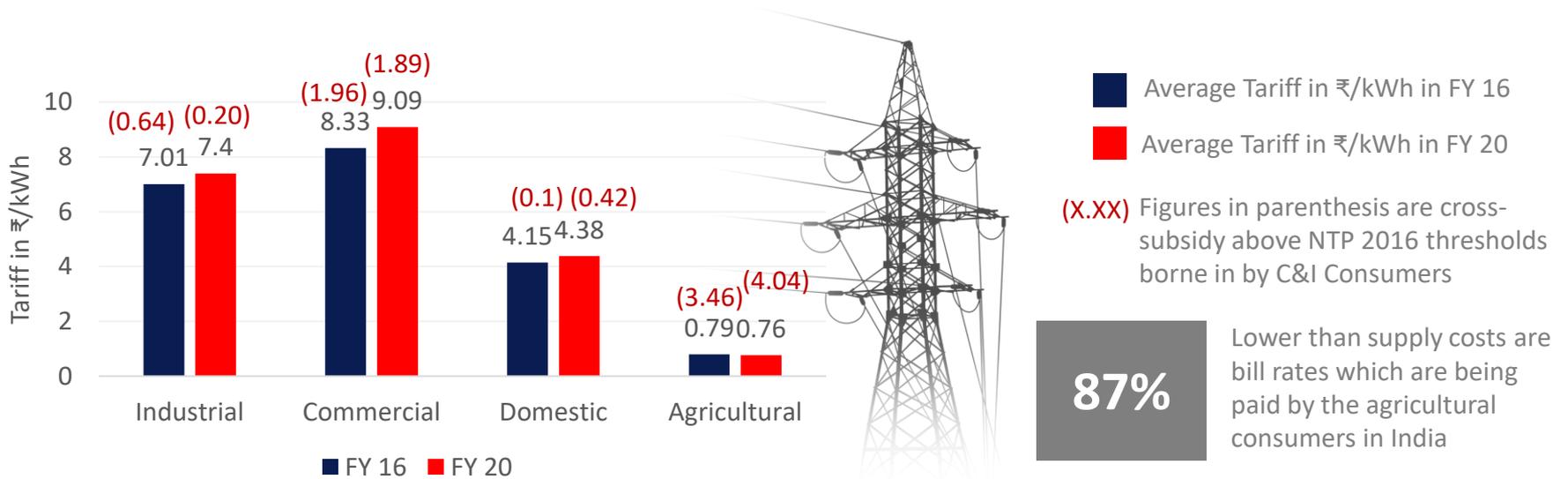
Revenue Gap (₹/kWh)	Average Cost of Supply – Average Realizable Revenue (Subsidy Received Basis) (ACS – ARR)
Particulars	Formula
ACS → Average Cost of Supply (in ₹/kWh)	Total Expenditure (Amount)/ Total Input Energy* (Units)
ARR → Average Realizable Revenue (Subsidy Received Basis) (in ₹/kWh)	{Revenue from sale of power (on subsidy received basis)** + Other Income}/ Total Input Energy (Units)
<b>Note:</b> <ul style="list-style-type: none"> <li>*Total Input Energy (Units) here means Input Energy before adjusting Transmission Loss, Inter-state sale or energy traded</li> <li>**Revenue from sale of power excluding subsidy booked plus subsidy received.</li> </ul>	

Source: CEA, eninrac research

For TANGEDCO either the ACS has not seen the said raise means the truing up of tariff has not been there or the subsidy received tune is dismal clubbed with the inter-state sale of power as well, otherwise the AT&C loss cannot stay at 13.4% only. Let's shift the focus from Tamil Nadu to Uttar Pradesh, which fits in exactly to the discussed analogy i.e., an ACS –ARR gap of ₹ 0.66/kWh with AT&C loss levels over 42%. While truing up is an issue that has some regulatory binding apart from obvious political will, what we can work onto is a progressive manner in improving upon the rationalization structure of power tariff in India under a phased manner. This shall lead to a building opportunity loss for discoms as the market distributions have already pushed the C&I consumers bearing a cross-subsidy burden of close to ₹ 80,000 Crores. The National Tariff Policy 2016 puts limits on cross-subsidies at 20% of the average cost of power supply. This, however, is far from application in the country as there are certain facts that show otherwise.

While the cost of power supply at the national level is around ₹6 per unit, average tariffs for commercial and industrial users are higher by 52% and 23%, respectively. On their part, domestic and agricultural consumers pay bills at rates 27% and 87%, respectively, lower than supply costs.

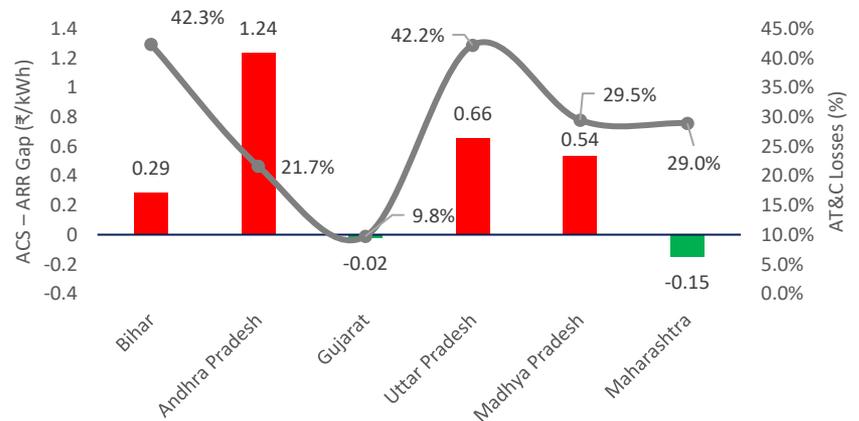
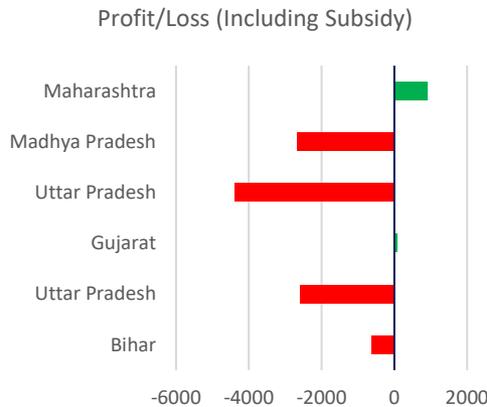
Exhibit 02: Market Distortions – Courtesy Cross Subsidy Mechanisms in India for Power Discoms



Source: eninrac research, State Discoms, UDAY Portal & IISD

Exhibit 03: Food for Thought – Data Indicators from UDAY Portal

It seems an imperative now to look on to the ways the discoms are actually calculating for their said AT&C loss levels and the ACS – ARR gaps. Purely for the fact that UDAY portal shows a different perspective altogether which arguably exists because shoddy ways of computation adapted by utilities.



Source: eninrac research, State Discoms & UDAY Portal



The life of a man consists not in seeing visions and in dreaming dreams, but in active charity and in willing service

- Henry Wadsworth Longfellow

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