Action plan on Financial Turnaround
Rajasthan Discoms

June 2020

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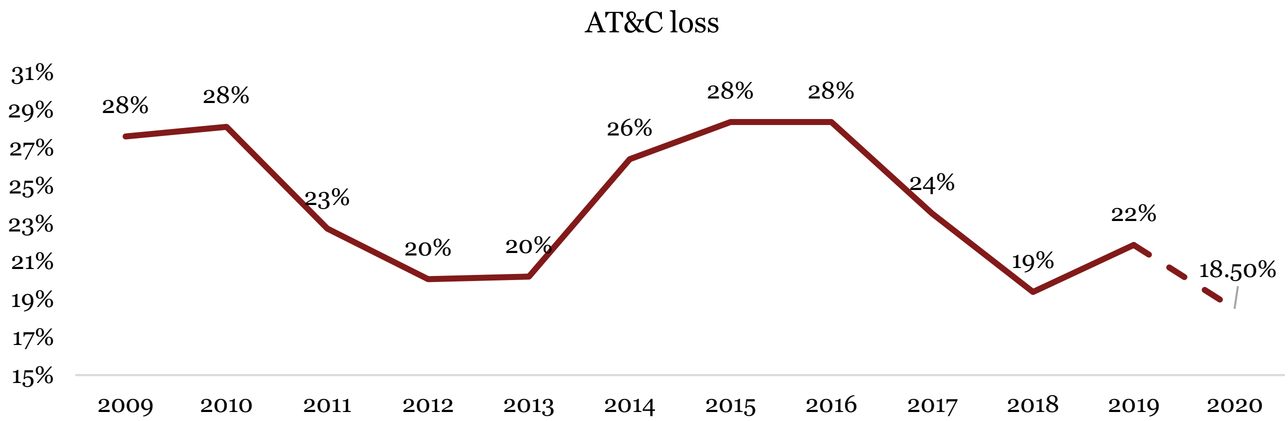
1. Introduction

The State of Rajasthan has been amongst the forerunners in initiating various reforms in the power sector which can be gauged from the fact that the Government of Rajasthan brought about a slew of reforms from the late 90's culminating in implementation of Power Sector Reforms Program. The reforms in the power sector aimed to facilitate and attract investments, bring about improvements in the efficiency of delivery system and create an environment for growth for the overall benefit of the people of the state. As a result of comprehensive reforms, the power sector in the state of Rajasthan has made significant progress over the last decade in terms of increased generation capacity and strengthening of network infrastructure leading to an improved power supply position. Most consumers are already being provided 23-24 hours of average daily supply and the state has completed 100% household electrification.

The Discoms understand importance of reducing the AT&C losses in order to ensure that the state power sector remains viable. Discom have already undertaken several steps for reducing the losses in the past and **have been able to reduce AT&C losses from peak of 28% in 2016 to 22% in 2019**. Losses at the end of March 2020 are expected to be around 18.50%.



Financial position of Discoms

Prior to UDAY, the Discoms were in a precarious financial position. With a revenue deficit of Rs 11,241 Cr in FY 2015-16, the accumulated losses had reached to the level of approximately Rs. 100,000 Crores. Due to relief from the interest servicing cost due to UDAY, Discoms managed to reduce the financial loss to Rs 4,816 Cr in FY 2016-17.

However, post UDAY, the financial position of Discoms has been stressed due to the following reasons:

- Interest charged on UDAY loans by GoR from 2017-18
- No tariff hike claimed by Discoms in FY 2018-19 due to non-envisaged interest cost burden
- Non-achievement of AT&C losses by Discoms
- Non-receipt of Tariff Subsidy (Agriculture) from the GoR including FSA
- Non-issuance of Bonds for residual debt (25%) resulting in higher than envisaged interest cost
- Non-funding of losses of Discom as per UDAY MoU by GoR
- Insufficient equity from GoR for capex; Results in less than ideal debt-equity ratio and Regulatory disallowance

Due to these reasons the discoms incurred a loss of Rs. 9,393 Cr in FY 2018-19 with total accumulated losses reaching Rs 89,854 Cr.

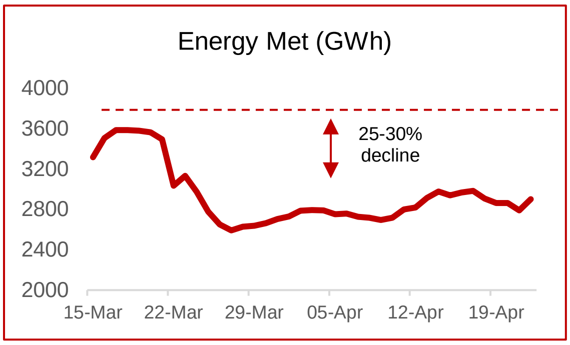
Such loss with restriction on working capital loans under UDAY have led to outstanding with generators, primarily state gencos.

Particulars as on 14.05.2020 (in Rs Cr)	Principal	LPS	Total	%
CPSE genco	1615	75	1690	5%
CPSE transco	744	25	769	2%
IPPs	2330	142	2471	7%
RE	1647	185	1833	5%
State Genco	16079	7197	23275	69%
State Transco	3587	155	3742	11%
Total	**26002**	**7778**	**33780**	**100%**

GoI Schemes under 'Aatma Nirbhar Bharat'

Impact of COVID-19

Towards the end of March 2020, the pandemic struck the country forcing the Central Government to announce a nation-wide lockdown which has led to shut down of all but essential commercial activities across the country. Consequently, the electricity demand from Commercial and Industrial (C&I) categories and railways (due to suspension of passenger trains) has reduced significantly.



Source: POSOCO, PwC Analysis

According to the data published by Power System Operation Corporation of India (POSOCO), there has been a compression of daily power demand to the tune of 25% to 30% due to Covid in the country, primarily driven by closure of C&I establishments which constitute 50% of the demand. Due to the reduced demand (approx. by 800 MUs per day), the Utilities in the country are staring at a net revenue loss of at least Rs 16,000 Cr (considering a tariff of Rs 8/ unit and savings in power procurement costs (variable charges) of Rs 3/ unit) for a period from 23 Mar '20 till 3rd May '20.

Further, besides the revenue loss due to reduction in demand, the Discoms in the country will also be negatively impacted due to the factors mentioned below:

1. Waiver of fixed charges for C&I consumers during the COVID period announced by some states such as Gujarat, Haryana, Karnataka, Andhra Pradesh, Punjab etc.;
2. Deferment of fixed and energy charges for agriculture and domestic categories;
3. Deferment of fixed charges for C&I categories
4. Loss of cross-subsidy due to reduction in demand from subsidising categories (C&I);
5. Increase in sale to subsidised (Domestic) categories;
6. Meter reading on average basis instead of actual reading and delay in billing due to lock down;
7. Waiver of Late Payment Surcharge from consumers;
8. Exemption from disconnection in case of non-payment of bills by retail consumers during COVID period;
9. Poor cash collection due to closure of offline collection centres (As per a recent PwC survey of 25 Utilities, nearly 80% of the revenue collection is through offline mode);
10. Delay in subsidy due to stress on state budget and poor collection from Govt department.

The impact of COVID'19 will extend to the upstream entities, particularly generating stations, as discussed below:

1. Ministry of Power had directed the generators and transmission companies to continue supplying 24x7 power notwithstanding discoms' inability to pay.
2. Discoms are exploring the options to waive off the fixed/ capacity charges for the non-scheduled capacity by invoking the Force Majeure clauses given in the Power Purchase Agreements.

3. Rate of LPS, charged by generator for delay in payments by Discoms, has been reduced by the CERC in accordance with the direction given by the Central Government under section 107 of the Act. The SERCs are also issuing similar Orders.

The generators might get some relief due to non-insistence of advance payments for coal and railway freight by Coal companies and Railways but their cash flow will get significantly impaired.

To overcome some of the challenges due to COVID-19, the GoI announced a series of measures aimed at infusing liquidity into the Discoms such as the Rs 90,000 Cr long-term transition loans to the Discoms through PFC and REC to pay off the generator dues.

Additional borrowing beyond FRBM limit

The Government of India has provided the facility to state governments to borrow beyond the FRBM limit, i.e. 3% of the total SGDP. The additional borrowing is allowed upto 2% beyond the FRBM limit subject to the following conditions. 1% additional limit subject to 4 reform measures to be taken by state governments. The weightage of each reform measure is 0.25%, i.e., each reform measure would entail an additional borrowing limit of 0.25% beyond the FRBM limit.

The 4 reform measures are as follows:

a) Implementation of One Nation One Ration Card System

b) Ease of doing business reform

c) Urban Local body utility reforms

d) Power Sector Reforms

The remaining 1% additional limit shall be allowed on the basis of two installments of 0.5% each.

a) The first installment of 0.5% shall be provided immediately to all states unconditionally

b) The second installment of 0.5% shall be provided upon submission of undertaking by states to implement at least 3 out of the 4 reforms as mentioned above.

The power sector reforms, which carry 0.25% weightage, have been divided into three major activities that are as follows:

i. **AT&C loss reduction (**weightage of **0.05%**): the assessment of AT&C loss reduction shall be based on self-declaration by state government in January 2021.

ii. **Reduction in ACS-ARR gap (**weightage of **0.05%**): the assessment of ACS-ARR gap reduction shall be based on self-declaration by state government in January 2021. Further, in the calculation of ACS-ARR gap, the amounts remaining unpaid by State Government/local bodies shall be deducted from the revenue.

iii. **Introduction of Direct Benefit Transfer scheme for farmers (**weightage of **0.15%**): The state government should put in place a scheme whereby from the FY 2021-22, cash is transferred to the farmers through DBT instead of free electricity being provided to them. Whereas charges of the electricity are paid to the Discoms by farmers directly from the amounts given to them. To become eligible, the state should:

- Formulate the DBT scheme
- Implement the same at least in one district by 31st December 2020.

In order to avail the benefits of increase in FRBM limits, the Discoms have prepared an action plan for reducing AT&C losses, ACS- ARR Gap as well as introduce DBT which are detailed in the subsequent sections.

2. ACS-ARR gap reduction for financial turnaround

The gap between Average Cost of Supply (ACS) and Average Revenue Realization (ARR) has been one of the key issues in the power sector since a long time.

The key components of ACS and ARR of Discoms is as below.

(A) Cost components

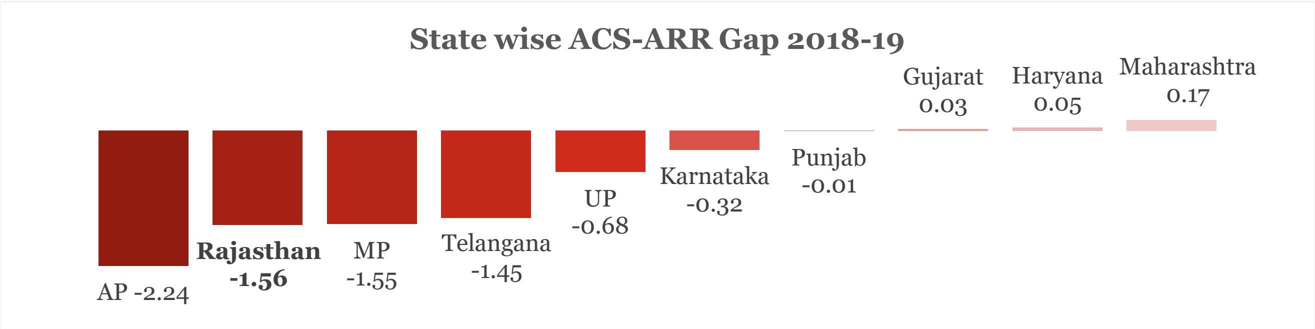
1. **Power Purchase Cost**
   - Cost of power from Generators
   - Transmission and SLDC charges
2. **O&M Expense**
   - Employee Expense
   - Administrative & General Expense
   - Repair & Maintenance Expense
   - Terminal Benefits
   - Insurance Expense
3. **Depreciation**
4. **Interest and Finance Charges**
   - Interest on working capital
   - Interest on term loans
   - Interest on unfunded gap
5. **Other Debits**

(B) Revenue components

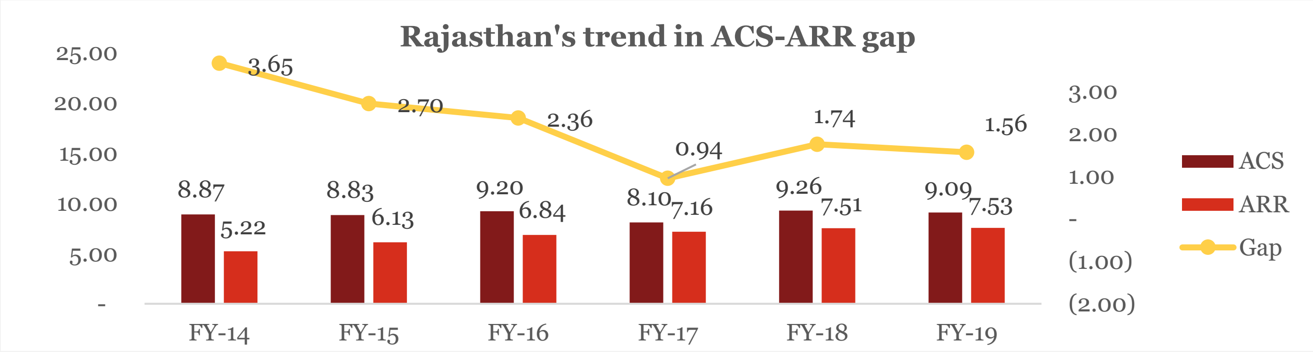
1. **Revenue from sale of power**
2. **Non-tariff Income**
3. **Income from open access consumers**
   - Wheeling charges
   - Cross Subsidy Surcharge
   - Additional Surcharge
4. **Subvention from Government**
   - ED retention
   - Subvention on compounding charges

Sum of all **cost components divided by the energy sold** gives us the **average cost of supply (ACS).** Similarly, the sum of all **revenue components divided by the energy sold** gives us the **average revenue realization (ARR).**

State wise comparative shows that the ACS-ARR gap for Rajasthan DISCOMs in FY 2018-19 was in the highest bracket.



From the trend of ACS-ARR gap for Rajasthan Discoms shown below, it is clearly evident that while the gap between ACS and ARR has been on a reducing trend since FY 2013-14, the Discoms are yet to achieve the target of zero ACS – ARR gap as stipulated under UDAY scheme.



In order to achieve the above objective, the measures to reduce ACS-ARR gap can be broadly classified into two heads based on target components:

1. **Cost components** covering Power purchase, O&M and Interest & Finance charges
2. **Revenue components** covering Tariff measures, Asset monetization and GoR support

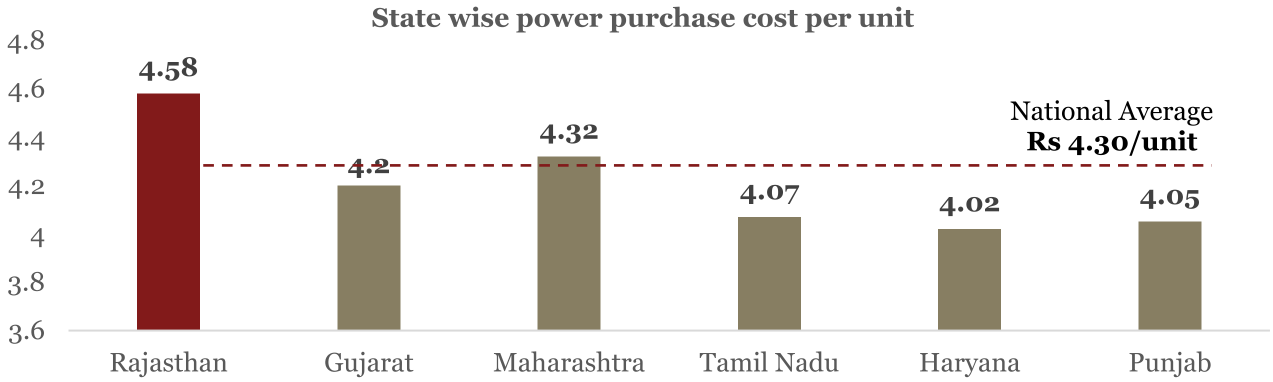
2.1. Cost components

2.1.1. Power Purchase Cost Optimization

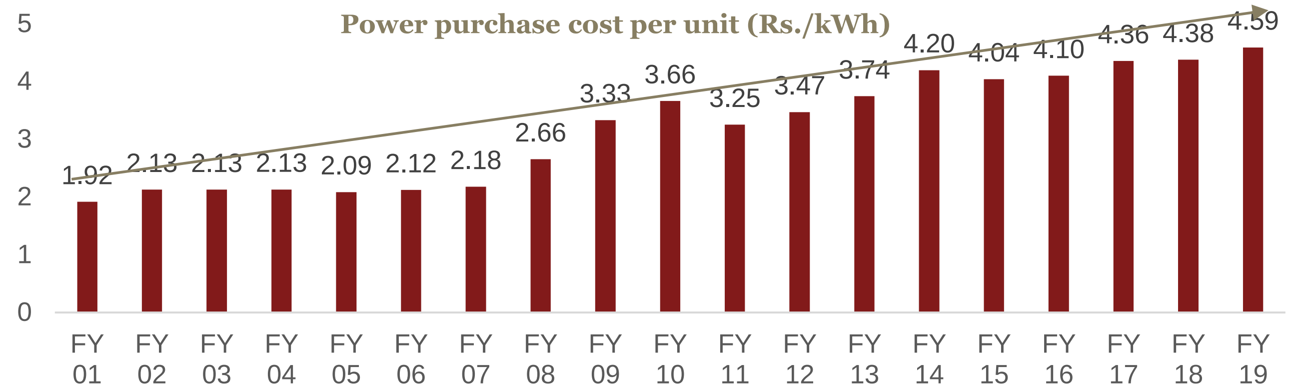
Since, the major component in the cost structure of Discoms (~70%) is power purchase costs, optimization of the same envisages significant impact on ACS-ARR gap.

Rajasthan state faces various inherent challenges due to which the cost of power purchase of Rajasthan Discoms is higher than other nearby states. A few key challenges are:

- Lack of hydel and coal resources within the state
- High transportation cost of coal
- Limited hydro power opportunities in the state



The power purchase cost of Rajasthan Discoms has been steadily increasing at a CAGR of 5% in the last two decades.

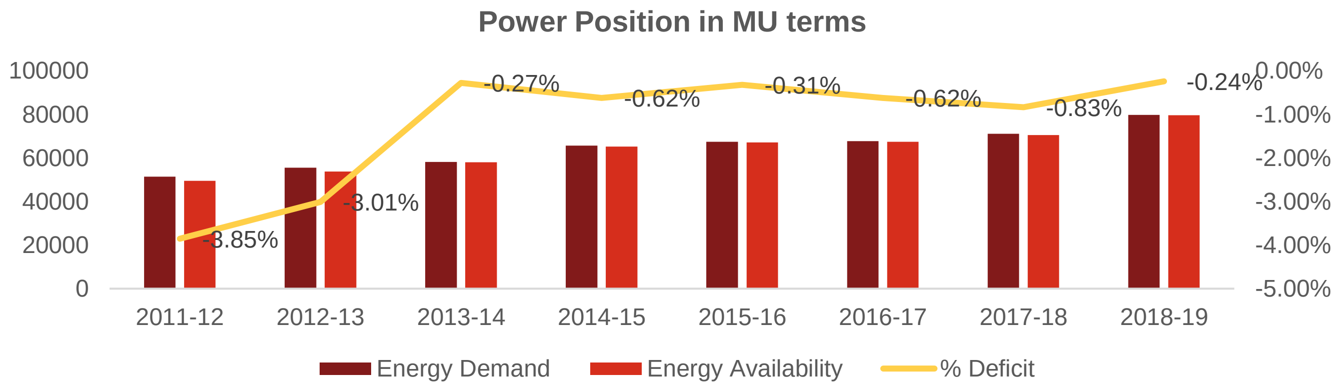


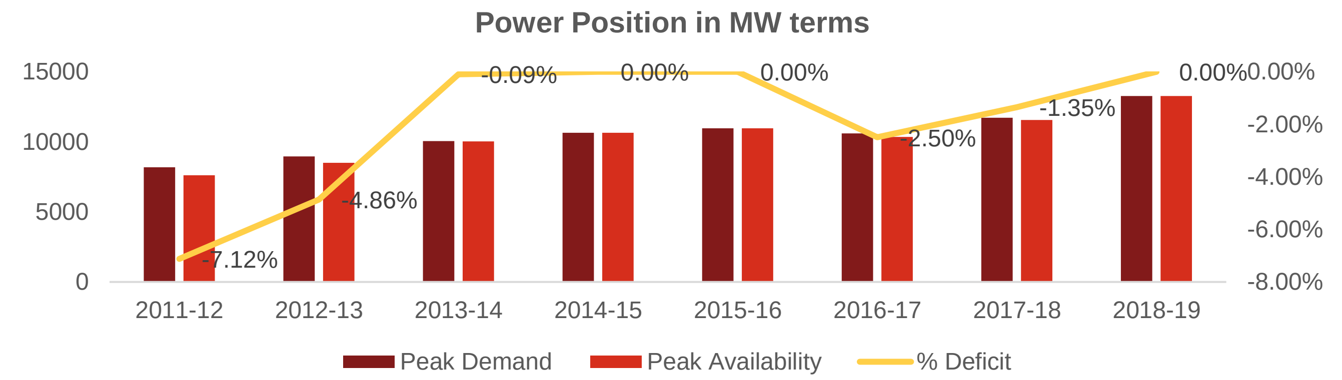
Thus, several key measures are being taken to optimize power purchase costs and pass on the benefit of the same to consumers.

A few key measures that are planned to be continued in this regard is as follows.

a) *Power Purchase Management*

A snapshot of power supply position of Discoms over the years is provided below.





Historically Rajasthan has been a power deficit state till FY 2013-14. However, FY 2014-15 onwards, the state has been able to meet its power deficit and has been a power surplus state**.** When the situation turned from power deficit to power surplus, the focus of Discoms have been towards following of MoD principle to optimize power purchase costs.

Further, the Discoms bear fixed costs of generating stations without taking energy from them due to backdown/box-up of plants due to excess capacity.

In such a scenario, Discoms plan to adopt following practices to benefit from surplus energy availability:

- Plant wise assessment of optimization potential vis-à-vis must run plants, back down potential plants based on plant wise parameters like, technical minimum, contractual minimum, network constraints, ramp-up/ramp-down flexibility, etc.
- Based on hourly load curve of previous year and identified plant wise optimization potential, preparation of utilization plan for existing PPAs for:
  - Base demand - long term PPAs / PPA with less optimization potential
  - Peak demand - short term PPAs / PPA with higher optimization potential
- Evaluate power demand and market trends in order to purchase power for peak demand (including under-drawing power available through long term PPAs when variable cost is higher than bilateral or exchanges rates).
- Keeping a check on accurate assessment and declaration of TTC (Total Transfer Capability) / ATC (Available Transfer Capability) for above.
- Extensive adoption of real time market mechanism to get power at more competitive price.

b) Better forecasting and scheduling of power

Discom is also undertaking measures for accurate load forecasting so that impact of over drawl and under drawl on power purchase cost can be minimized.

The UI charges paid by Discoms over the last is as below.

Year	FY-16	FY-17	FY-18	FY-19	FY-20
UI Charges (Rs Cr)	187.67	118.83	259.84	302.11	224.75

Thus, there is scope for saving Rs. 218 Cr on an average if UI charges are avoided through accurate forecasting and scheduling of power.

At present, due to increased penetration of intermittent renewable energy sources in the power portfolio of Discoms, the scheduling and forecasting of power is challenging.

However, to overcome these challenges, Discoms / RUVNL in coordination with SLDC is in the process of implementing a web based system for online updation /reporting of various key parameters of RE forecast to be made available to facilitate 15 minute scheduling of RE, Available Capacity in each 15 minute time block, forecasting accuracy reports on all the RE interface points.

c) Imbalance management

Section 4 of RERC (Power Purchase and procurement process of distribution licence) Regulations, 2004 specifies:

"(2) The criterion of power purchase will in general follow the principle of least cost commensurate with the power system stability. System voltage, frequency profile and system losses."

Distribution Utilities are mandated to procure power from the least cost source. Contractually, once power from a Generator is scheduled, Fixed Cost is to be borne irrespective of whether power is consumed or backed down.

In this regard, Discoms / RUVNL is adopting following steps for strict enforcement of merit order dispatch:

- Generators are placed in decreasing order of Variable Cost referred to as Merit Order so that in case of backdown, generators in sequence of Highest to Lowest variable cost can be backed down
- No special dispensation has been given to the state-owned power plants of RVUNL, which have also been included and placed in the merit order. RVUNL has been asked to prepare variable cost for each unit separately rather than the whole of power plant so that inefficient units are lower in the merit order. Also, this will avoid indirect cross subsidization by DISCOMs for imbalances from state generators.

d) Taking up 'change in law' cases with high financial impact

- Rajasthan Discoms are actively pursuing 'change in law' cases with high financial impact on the power purchase cost to pass on the benefit of the same to consumers and in turn reduce the ACS-ARR gap.
- At present, one such case which is pending for final decision is the change in law compensation claimed by Adani Power Rajasthan Limited (APRL) for the period May'13 to Mar'19. The cost impact of the case, provided the final decision is favorable towards Discoms, amounts to **Rs. 6,281 Cr**.

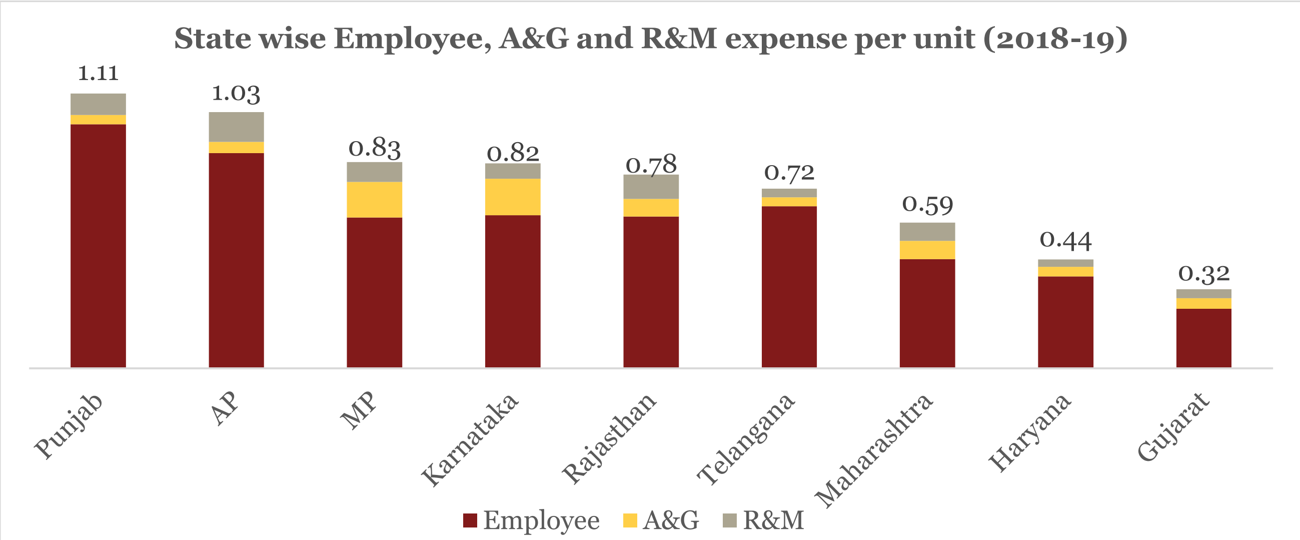
2.1.2. O&M Expense Optimization

Operation and maintenance expenses are fixed costs in nature for Discoms i.e. the O&M expenses are borne by Discoms regardless of the sale of power to consumers. The major components of O&M expenses are as below.

Type of expense	Description
Employee expenses	• Includes salaries, TA, DA, arrears and other expenses pertaining to employees • Fixed in nature

Type of expense	Description
Administrative & General Expense	• Includes expenses pertaining to office facilities like telephone expenses, postage and courier charges, rent, vehicle expenses, retainership expenses of ex-employees, advertisements, etc.
Repair & Maintenance Expense	• Expenses pertaining to repair and maintenance of fixed assets of Discoms
Terminal Benefits	• Includes the cost borne by Discoms towards terminal benefits of its employees • Fixed in nature
Insurance Expense	• Cost of insurance of warehouse goods • Fixed in nature

A state wise comparison of major component heads of O&M expenses is shown below:



Based on above snapshot, level of expense with reduction scope for Rajasthan Discoms is briefed below:

- **Employee expenses** : Existing expense on higher side of average expense per unit Significant scope for optimization exists
- **Administrative & General Expense** : Limited scope of reduction exists
- **Repair & Maintenance Expense** : Scope for reduction exists

In order to optimize O&M expenses, the following measures have been envisaged by Discoms.

a) Reduction in employee expenses

For reduction in employee expenses, Discoms to follow two-way approach:

- Reduction in number of employees through organization structural changes
- Increase in productivity by adoption of KPI based performance monitoring of employees

b) Reduction of administrative and general expenses

Administrative and general expenses can be reduced by the following measures:

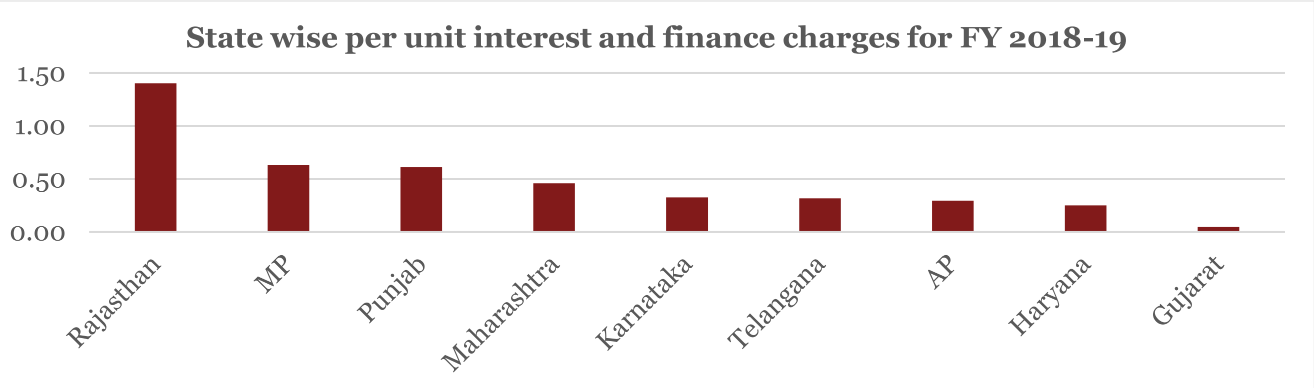
- Encouraging digital modes of working to reduce paperwork through technology bases solution like e-office
- Optimized use of office infrastructure and services to derive maximum benefit

c) Reduce repair and maintenance expenses

Since the Discoms manage a huge physical network spanning across the entire state, the repair and maintenance expenses is significant. Through increased private sector participation in the form of Distribution Franchisees, the R&M expense of Discoms can be curbed. The maintenance of assets in the area awarded to DF shall be borne by the DF, thus leading to significant savings for Discoms. At present there are already 4 DFs operating in Rajasthan, in areas of Ajmer, Bikaner, Kota and Bharatpur.

2.1.3. Reducing interest and finance charges

Interest and finance charges is the second largest component in the cost structure of Discoms. A state wise comparative of per unit expense for FY 2018-19 is shown below:



At present, the high interest cost of Rajasthan Discoms is attributable to the following reasons.

- Interest burden of loans taken over under UDAY scheme by Govt of Rajasthan
- Insufficient equity infusion by GoR in capex schemes leading to skewed debt-equity ratio
- High interest rate of some existing long-term loans
- Huge regulatory assets leading to interest cost on unfunded gap

Thus, the Discoms plan to reduce interest costs by the following measures.

a) Maintaining adequate debt-equity ratio

Ensuring timely and adequate equity infusion from state government would ensure that the Discoms do not take up long term capex loans to fund the equity shortfall in capital expenditure schemes. This would reduce the interest burden of Discoms due to such loans.

b) Funding to liquidate regulatory assets

Discoms are exploring options to fund their huge regulatory assets, amounting to Rs. 41,022 Cr, through:

- Loans from banks/FIs
- Proposing to include regulatory surcharge to be recovered from consumers in ARR petition

c) Exploring cheaper options to raise capital

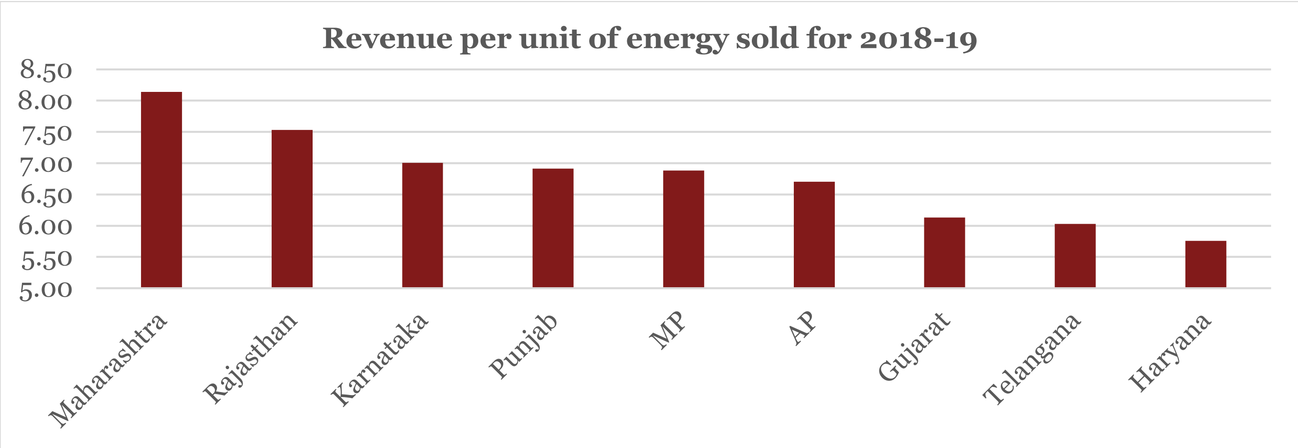
Discoms are exploring cheaper sources to raise capital through loans from banks/FIs. A few other options being explored are:

- **Green funding**
  - Organisations like IREDA are offering low interest rate loans to pay outstanding of RE generators
  - Interest rates are as low as 9%

- **Infrastructure Investment Trust (InVit) funding**
  - Invit will help in freeing up funds from RVPNL as RVPNL has steady cash flows
  - These funds can be used to by the Discoms to reduce its interest cost

2.2. Revenue component

Discoms business is more consumer oriented as compared to other stakeholders of the value chain, therefore timely taken measures for enhancement of revenue are equally important in order to overcome high ACR-ARR gap. A comparative with other states clearly indicates that the revenue per unit of energy sold for Rajasthan Discoms is already at a good level.



However, in order to overcome the gap from the ACS, it becomes imperative to have timely measures to avoid the financial crunch.

2.2.1. Tariff measures

a) Timely filing of tariff petitions

Due to delays in release of tariff orders, the Discoms pay a huge price in terms of decrease revenue collections, especially in those years wherein a tariff hike is approved. Thus, ensuring timely filing of ARR and tariff petitions would ensure that the Hon'ble RERC has ample time to follow the due process and release the orders timely.

Along with petition for ARR and tariff revision, regular pass through of fuel cost adjustment is also being done and attention is being paid to timely preparation and finalization of accounts.

Also, 100% metering is targeted by Discoms to avoid inaccurate energy billing which have a direct impact on revenue.

b) Tariff Rationalisation

As per the National Tariff Policy 2016, the tariff structure of Rajasthan Discoms need to be rationalized on the following parameters.

- **Making fixed charges reflective of fixed costs**
  - As per the guidelines of Ministry of Power (MoP) and the Hon'ble Commission i.e. Fixed charges should be reflective of actual fixed cost of Discoms in their ARR.
  - It is pertinent to mention that most of the cost components of the Discoms' ARR are fixed in nature such as O&M costs, interest costs, depreciation, fixed cost of PPAs, etc. It is only the energy charge of power procured which depends on the energy sold to consumers.

  - At present, the recovery from fixed charges for FY 2019-20 at the prevailing tariff level is ~13% of the total revenue for FY 2019-20, which is lower than the fixed cost of Discoms for FY 2019-20 which is ~52% of the total ARR.
  - So, in order to balance the same, increase in fixed charges was proposed by Discoms in tariff petition for FY 2019-20.
- **Keeping cross subsidization under +/-20%**
  - As per NTP 2016, the cross-subsidization levels in tariff need to be maintained under +/-20% of the average cost of supply.
  - At present, the NDS category is cross subsidized to ~+35% of average cost of supply. This can be rationalized to bring it under 20% limit as per NTP.

c) Timely tariff hikes

Although the cost components have been increasing year on year, the tariff hikes have been inconsistent and insufficient to meet the revenue gap of Discoms. Ensuring timely and sufficient tariff hikes would ensure adequate recovery from consumers and in turn reduce the ACS-ARR gap of Discoms.

2.2.2. Asset monetization

a) Sale of spare land

Discoms are evaluating various options for increasing their cash flow including sale/lease of spare land available and not in use.

b) Other measures

Discoms have also undertaken other measures like sale of unserviceable assets or equipment to generate additional income. Various measures like posting of advertisements on energy bills are also planned to improve the cash position of the Discom.

2.2.3. Sustained government support

In order to ensure that the Discoms are financially stable and not overburdened with high losses, government support in the form of financial aid is essential. Discoms are supported by the Govt of Rajasthan through the following means.

- Tariff subsidy for agriculture, BPL and small domestic consumers
- Subvention through ED retention and compounding charges
- Equity stake in various capital expenditure schemes