



# Distribution

White elephant in the room...light at end of tunnel?

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Ever since the power sector has been thrown open for investments, the distribution segment has been one eternal problem that has concerned investors. The sector faces a plethora of issues, including political interference, low cost recovery, huge losses, poor operational performance, weak regulatory compliance, to name a few. Over the years, these issues have translated into major operational and financial inefficiencies in distribution companies (discoms). As of March 2015, the accumulated losses of state discoms were approximately INR 3.84<sup>1</sup> lakh crores with over 20 states having Aggregate Technical and Commercial (AT&C) losses over 20 per cent. A number of attempts have been made in the past to manage these issues, but the situation has only worsened with time. These developments have jolted investor concerns in the power sector. The ever-increasing losses are considered as the single most factor that impede investments in the sector.

*Ujjwal Distribution Assurance Yojna (UDAY) is a bold and innovative step to revive the situation.*

Like previous efforts, UDAY starts with a financial bailout to address the past and with ambitious targets for securing the future. It also co-opts all schemes of the Government into the framework. The two differences that stand out are (a) focus on service goals towards access, quality and reliability, laying out a clear pathway to operational and financial efficiency; and (b) strong Centre-state engagement and interaction to affect outcomes, where the fiscal health of states would ultimately reflect the

distribution situation, as losses become part of the states' fiscal deficit after two years. As of October 2016, 17 states<sup>2</sup> have signed MOUs. Of these, over seven states have already issued bonds. A reduction in interest rates have led to a sharp reduction in losses on the books of these utilities.


While the above-mentioned developments are underway, the key will be to make the underlying reforms long-lasting and sustainable, particularly goals related to AT&C loss reduction, better cost management and cost reflective tariff regimes. It is a must to ensure that this vision is taken to its logical conclusion. In many cases, this requires a completely different order of interventions beyond executive orders into field actions on a massive scale. This also requires programme management capabilities of a different scale to cover time-bound goals related to metering at different levels, feeder segregation, feeder improvement, people engagement goals, etc. Unless these aspects are adequately addressed, the gains could turn out to be only transitory.

In the medium-term, the vision also needs to stretch beyond viability issues to improved systems, higher automation, better service standards and reliability, managing higher renewable energy influx, etc.

1. Major states which contribute to these losses are Rajasthan, Jharkhand, Uttar Pradesh, Jammu & Kashmir, Bihar

2. Press Information Bureau; <http://pib.nic.in/newsite/PrintRelease.aspx?relid=151523>; 24th October 2016; India today; <http://indiatoday.intoday.in/story/states-issue-bonds-worth-rs-1-lakh-cr-to-tackle-discom-debt/1/632788.html>; 24th October 2016





We believe that going forward, the key actions should centre around three dimensions – **Viability, Sustainability and Modernisation**. These are discussed below:

## Viability

Key areas that require attention include:

### Discipline in energy accounting

A good quality and reliable data and energy accounting system is at the core of utility transformation. The process entails consumer indexing, metering (Consumer, Distribution Transformer and Feeder level), and use of reliable and automated systems for collection of accurate base line data and measurement of sales, billing, collections, and hence, AT&C loss. Currently, discoms in many states have failed to establish energy discipline in their system resulting in high AT&C loss levels<sup>3</sup>. The turnaround of performance needs to be pursued on a mission mode to prevent the power sector from breaching the fiscal limits prescribed under the Fiscal Responsibility and Budget Management (FRBM) Act.

### Cost management

Power purchase cost contributes more than 70 per cent of the total cost of service for the discom and needs to be managed well. In the current scenario, power portfolio optimisation is required not only in the long-term but also for meeting the medium and short-term power requirements. Such decisions regarding portfolio optimisation increasingly need to be based on robust demand forecasts (including short-term forecasts), a strong understanding of available supply options, contractual structures, and emerging power market dynamics. Such complex multi-criteria decisions often require optimisation and forecasting tools that help in selection of the most optimal portfolio mix in the short, medium and long-term.

### Regulatory strengthening

Even as regulation has evolved in the last 15 years, the outcomes in delivering a financially healthy utility sector have been mixed. The primary belief that the independent regulatory commissions

would de-politicise decision-making in areas like tariff setting has been challenged. It is only in the last few years, post the landmark judgment OP1 of 2011 by the Appellate Tribunal for Electricity, that certain discipline in periodic tariff revisions has been observed. Over the last few years, the backlog on tariff revisions has been addressed. However, the governance process needs further strengthening to ensure better compliance. Aspects such as frequency and adequacy of tariff revisions, financial and operating autonomy of regulators, selection process, etc. need to be looked at. Strengthening the regulatory processes for better prudence also remains a critical priority. Better methodologies and processes for examination of capex, demand forecasting and power purchase planning are much needed by the regulatory institutions.

### Private sector participation

Innovative means to involve the private sector, including international players, needs to be encouraged. Privatising distribution after modifying it to the Indian context was a hope but has been at the back-burner. The franchisee model, which was adopted at a rather slow pace, has faced myriad issues with only limited success. There is a need to look at this model afresh as an incremental approach may not help in establishing the right framework. A renewed distribution franchisee model, along with focused implementation of UDAY, together may help to achieve results over the next two to three years to get this segment out of its current morass.

### Governance around power sector lending

Financial institutions that lend to the power sector play an important role in enabling and sustaining the turnaround of the sector. Public sector banks and institutions such as Power Finance Corporation Limited (PFC) and Rural Electrification Corporation (REC) are the largest lenders to the state electricity boards (SEBs) with more than 75 per cent of the cumulative debt exposure (INR 3.3 lakh crores out of a total of around INR 4.4 lakh crores as of 2015)<sup>4</sup>. PFC and REC have also seen an increase in gross NPA ratios. Continued lending to non-performing discoms needs to be controlled, and lending linked to improvement milestones need to be encouraged.

3. States like Uttar Pradesh, Bihar, Rajasthan and West Bengal have loss levels way higher than the all India average. Most of these states have several divisions where loss levels are beyond 40 per cent. Even better performing states have several division with loss levels in the range of 15-30 per cent. (Source: Towards Ujwal Bharat UDAY: The Story of Reforms; [http://ujwalbharat.gov.in/sites/default/files/Towards\\_Ujwal\\_Bharat.pdf](http://ujwalbharat.gov.in/sites/default/files/Towards_Ujwal_Bharat.pdf); 24th October 2016)

4. [http://www.business-standard.com/article/economy-policy/power-sector-financing-pfc-rec-might-have-to-overhaul-portfolio-116051901834\\_1.html](http://www.business-standard.com/article/economy-policy/power-sector-financing-pfc-rec-might-have-to-overhaul-portfolio-116051901834_1.html)

## Sustainability

The key areas that require attention include:

### Managing large influx of renewable energy (emerging role of Distribution System Operators (DSOs))

With increased adoption of renewable energy especially rooftop solar PV and battery storage, discoms will need to manage supply and demand on a more dynamic basis. This expanded role will be over and above their traditional role of operating, maintaining and developing the distribution system. This change in role will require upgradation of capabilities and revamping of the Traditional Areas Load Dispatch Centres (ALDCs) into more vibrant and modernised Distribution System Operators (DSOs). This will also be critical to roll out retail-level reforms in the following years.

### INDC commitments and impact on cost of power

As part of its Intended Nationally Determined Contributions (INDC) submission, India has pledged to reduce the emissions intensity of its GDP by 33 per cent to 35 per cent by 2030 from 2005 level, as well as achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030<sup>5</sup>. Increased procurement of clean power, thermal plants procuring emission reduction equipment to meet the new emission norms, steep increase in coal cess, at least in the near-term, are likely to result in escalation in the cost of power. Discoms as key off-takers need to manage the power portfolio well to minimise the impact of such transition.

### Markets of the future

Competitive markets encompassing bilateral and exchange traded products account for only about 10 per cent of the overall energy in the country. In spite of available capacity, a significant volume of possible trade is curtailed due to lack of product depth, inflexibility in trading arrangements and adequate commitment of the market agents to buy or supply. To truly harness the power of the market and reliably serve the demand, further innovation in the electricity markets is essential such as ancillary services markets, shorter term power purchase agreements (PPAs), financial products, futures, hedges, etc. These are also essential to support RE integration.

## Modernisation

The key areas that require attention include:

### Digital enablement

Digitisation is one of the most potent tools for driving accountability and efficiency in utilities. Global utilities have evolved to become more smart and agile, responding to consumer needs and imbibing technological advancements. Such developments have also led utilities to innovate and develop customer-centric products and services such as demand response solutions, advanced energy management and visualisation, mobile applications for 24 hours monitoring and control, workforce management for advanced outage detection and restoration, etc. Some examples of such initiatives also exist in India, which need to be more widely adopted by power utilities in India.

### Obligation To Serve (OTS)

The Government of India has embarked on a universal 'Power for All' programme to ensure that all citizens of the country have access to reliable electricity. The Electricity Act, 2003 provides an overall construct for this programme through Section 43, which obligates utilities to supply electricity on request. The Act also entrusts regulators with the responsibility to notify reliability standards and penalise defaulting service providers. However, the obligations have not been adhered to and penalties are generally not imposed. As the country modernises and the supply situation improves in general, it becomes imperative to alter the present status. Reliability and quality of supply should be brought to the forefront. The obligation to serve should be embedded in the utility filings, where transparent and timely disclosures of load shedding hours and eventually reaching zero load shed state should be the objective.

### Customer inclusion by providing choice to customers

Modern day power systems for most parts are no longer natural monopolies. Except for certain specific network functions, most activities are amenable to competition. In particular, the supply function that involves procurement and sale of energy is very responsive to competition and choice. Separation of carriage and content is important not only from

5. India's climate pledge and the global goal of limiting warming below 20 C; Rajiv Kumar Chaturvedi; [http://www.dccc.iisc.ernet.in/Indian-INDC\\_and\\_the\\_2C-goal.pdf](http://www.dccc.iisc.ernet.in/Indian-INDC_and_the_2C-goal.pdf)

the perspective of competition or consumer choice, but also to de-risk the utilities from financial stress. The readiness of the sector, especially utilities, to transition to this state, however needs to be ascertained.

### Improved consumption efficiency

While increasing demand for power has been under discussion in the recent times, it is equally important to promote efficiency in consumption. Utility service providers have rarely treaded in this space since they tend to keep away from customers, restricting their role to basic supply and corresponding revenue generation. However, this aspect needs to be accorded requisite focus. Information Technology enablement, a move towards smart grid backed by strong analytics, is likely to support the transition towards more efficient consumption.

Unless we see all these measures coming together, the power sector may continue to remain a concern for investors. The focus in the coming times has to be on relentless execution of the existing schemes to restore viability, yet also adequately stressing on the sustainability and modernisation of the sector, which only supports the cause of a viable and well-functioning power sector.

The government has been demonstrating tremendous initiative and leadership on fixing the past and, even as that agenda is in progress, it must prepare the strategies to deal with the uncertainties of the future.



The article has been co-authored by Manish Aggarwal - Partner, Infrastructure, Government and Healthcare and Vikas Gaba - Director, Infrastructure, Government and Healthcare, KPMG in India



# KPMG in India contacts

## **Nitin Atroley**

### **Partner and Head**

Sales and Markets

**T:** +91 124 307 4887

**E:** nitinatroley@kpmg.com

## **Utkarsh Palnitkar**

### **Partner and Head**

Infrastructure, Government and Healthcare Life Sciences

**T:** +91 22 3090 2320

**E:** utkarshp@kpmg.com

## **Manish Aggarwal**

### **Partner and Head**

Corporate Finance - M&A, Infrastructure and Government Services

### **Head**

Energy and Natural Resources

**T:** +91 22 3090 2625

**E:** manishaggarwal@kpmg.com

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