Discussion Paper

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Beyond a Band-Aid Approach for Electricity Distribution Reforms in India

Political Economy Analysis and its Implications

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1. Executive Summary

The electricity distribution sector is considered to be the weakest link in the power supply chain because of its consistently poor operational and financial performance over the past decade and a half. Apart from the reform measures aimed at bringing in efficiency in the working of the electricity sector as a whole, the poor performance of the distribution sector compelled the Indian Government to formulate a series of specific reform measures and financial bailouts for the sector including Accelerated Power Development and Reforms Programme (APDRP), Restructured Accelerated Power Development and Reforms Programme (R-APDRP), One Time Settlement Scheme and Financial Restructuring Plan (FRP).

Despite such focussed strategies, the sector has again landed in the same position, requiring another bailout. This time, a new reform-linked bailout scheme – Ujwal DISCOM Assurance Yojana (UDAY) – is expected to bring about an operational and financial turnaround of the electricity distribution companies (DISCOMs). While the UDAY reform measures include a set of operational milestones that the participating DISCOMs will have to meet, it lacks in providing details to ensure the actual implementation of these and seems to focus more on financial restructuring. This is evident from the fact that the policy document describes UDAY as a scheme for the financial turnaround of the DISCOMs, and not as that of an operational turnaround too.

At the face of it, the poor financial health of the distribution sector seems to be the biggest hurdle in ensuring its effective functioning but the devil lies in the details. In order to ensure a true turnaround in the functioning of the distribution utilities, there is a need to diagnose the problem precisely and devise a strategy to address its root cause rather than adopting a band aid approach.

With regards to UDAY, there are certain flaws in the blueprint of the policy framework, which include absence of appropriate disincentives for poor performers, lack of availability of up front financial assistance for strengthening distribution infrastructure, and unavailability of a mechanism to make utilities more transparent and accountable to the consumers.

However, it provides the much needed fiscal space to the DISCOMs. In order to ensure that the past failures of the previous schemes are not repeated, the long pending task of undertaking structural reforms in the distribution sector will have to be completed, either through the implementation of the scheme or through a more focussed parallel reform measure in the sector.

In case of the former, this can be executed by laying greater emphasis on means to achieve and ensure the actual achievement of the operational milestones by the participating DISCOMs during the implementation of the scheme. Moreover, special emphasis has to be laid on attempting to undertake structural changes that are required to achieve the mentioned operational milestones. This can be acquired by devising an inclusive and effective monitoring mechanism, providing for a state-specific course rectification plan at frequent intervals and incentivising DISCOMs to inculcate responsible corporate principles in their functioning. Hence, the litmus test for the effectiveness of the UDAY reforms lies in its implementation.

2. Introduction

Expectations are high and so are the associated stakes with the implementation of Ujwal DISCOM Assurance Yojana (UDAY), which aims at the financial turnaround of the electricity distribution sector. This is mainly because the distribution sector, for the third time in a span of a decade and a half, has plunged into a financial state so deteriorated that recovery seems almost impossible without external aid. With an accumulated debt of close to ₹4.3tn and losses of around ₹3.8tn as in 2014-15, the distribution sector remains to be the weakest link in the power supply chain.

Presence of an efficient, resilient, financially strong and well-functioning power sector is critical for the socio-economic development of any nation. The first major attempt by the Government of India (GoI) to overhaul the functioning of the electricity sector was through the implementation of the Electricity Act, 2003. This Act provided for unbundling of the vertically integrated State Electricity Boards (SEBs), which had been responsible for development and operation of all three sectors – generation, transmission and distribution, with an ultimate aim to enhance operational efficiency in each.

While significant developments have been made in the generation and transmission sectors, the distribution sector continues to be mired in operational and financial inefficiencies. Hence, the GoI formulated specific reform measures focussing on improving efficiency of the distribution sector, starting from early 2000 including Accelerated Power Development and Reforms Programme (APDRP) and Restructured Accelerated Power Development and Reforms Programme (R-APDRP). Despite such focussed strategies and two financial bailouts in the past, the sector has again landed in the same situation, requiring another bailout.

The repeated failure (or limited success) of various policy and regulatory reforms aimed at turning around the state of the electricity distribution sector calls for a deeper look into the unresolved issues and challenges faced by the sector as well as the appropriateness of the recently introduced strategy – UDAY – to resolve these issues.

To begin with, there is a dichotomy between the specified aim of the scheme and the objective with which it has been adopted by the GoI. Although UDAY aims at financial turnaround of power distribution companies (DISCOMs), the GoI has approved it with the objective to enhance the financial and operational efficiency of DISCOMs.

While a poor financial state of a sector is a strong indicator directing towards the poor operational functioning of that sector, it will be a misinterpretation that by turning around the financial state alone, the operational efficiency in the sector will also be ensured.

While UDAY provides for measures to enhance operational efficiency, it lays a greater emphasis on fixing the financial problems of DISCOMs, which is evident from the fact that mention of operational efficiency is amiss from the specified objective of the scheme. Given that in the long-term, financial efficiency can only be affirmed if operational efficiency is ensured on a sustainable basis. Thus, it remains to be seen whether UDAY is successful in strengthening the operational prerequisites of the

DISCOMs or turns out to be a short-term band aid solution to address the financial misery of DISCOMs.

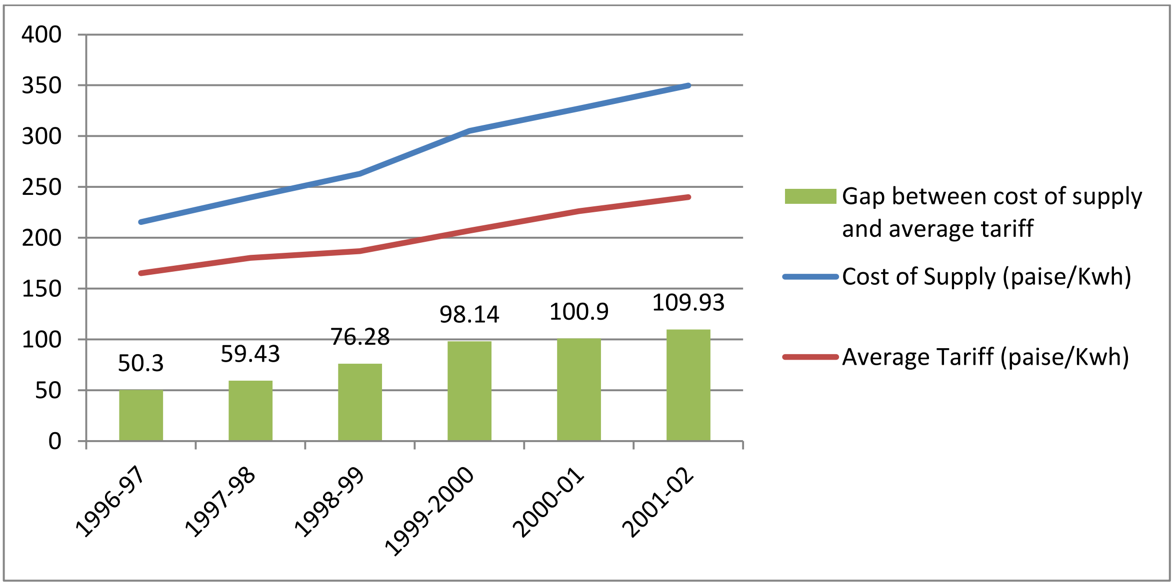
Further, in order to ensure that the past failures of the previous schemes are not repeated, any new strategy aimed at turning around the sector will have to complete the long pending task of undertaking structural reforms and addressing the fundamental causes behind the current state of affairs in the sector.

Given this background, this Discussion Paper analyses issues faced by the distribution sector and evaluates the subsequent reforms *vis-à-vis* their effectiveness in dealing with the issues. The first section explains the pre-reform (defined as the period prior to 2001) scenario of the power distribution sector in order to trace the evolution of problems faced by the sector. The second section identifies design and implementation gaps in all the major policy reforms. The third section analyses the policy design and provisions of the UDAY scheme through the lens of the prevalent political economy dimension within, which the policies are to be implemented and comments on its potential impact on the sector. The concluding section provides the recommendations and suggestions based on the analysis of the policy reforms since 2000.

3. Pre-reform era

In spite of liberalisation, globalisation and privatisation reforms introduced in 1991, the power sector suffered from poor private investment, both domestic and foreign, throughout the following decade. On closer examination, it was observed that the poor financial health of the distribution segment was one of the major reasons behind the investment uncompetitiveness of the sector.

Figure 1: Gap between Average Cost of Supply and Average Revenue Realised (1996-2001)



Source: All India Electricity Statistics, General Review, Central Electricity Authority

The commercial losses of SEBs had been continuously increasing and had reached a level of ₹260bn in 2000-01 with an ever increasing gap between the average cost of supply (ACS) of electricity and average revenue realised (ARR), which increased from a level of 50paise/Kwh in 1996-97 to 110paise/Kwh in 2001-02 (refer to Figure 1). The transmission and distribution (T&D) losses also kept increasing and reached a peak of 30.8 percent of total electricity available in 1999-2000 and stood at 27.8 percent in 2001-02. This was relatively much higher than the T&D losses of other developing countries like China, Indonesia and South Africa, which stood at 7 percent, 12 percent and 8 percent, respectively in 2000.[1]

In India, the actual losses including theft were estimated to be in the range of 40-45 percent. In other words, out of the total energy generated, only 55 percent was billed and 41 percent was realised.[2] The spill over effects reached other sectors as the outstanding dues of SEBs to Central Power Utilities (CPUs), Indian Railways and coal companies stood at ₹400bn during 2000-01. The major factors responsible for the poor financial condition of SEBs in 2000-01 can be summarised as follows:

- Highly skewed and distorted tariff structure that rendered cross subsidisation unsustainable. Agricultural and domestic consumers were heavily subsidised as traditionally electricity has been considered a public service to be provided by the government at low rates to all
- High T&D losses mainly due to outright theft and unmetered supply and
- Lack of transparency and accountability in the distribution sector

Prior to 2000, various reform measures at the centre including an amendment to Electricity Supply Act, 1948 and at the state-level including the restructuring of Orissa's power sector were introduced. While the former made way for establishment of SEBs, Orissa model provided for separation of generation, transmission and distribution, followed by their privatisation.

Despite lack of concrete evidences on the success of the Orissa model, it was soon adopted by many other states including Andhra Pradesh and Haryana. While these reform measures had an indirect impact on the electricity distribution sector as they aimed at bringing efficiency in the entire value chain of the electricity sector, they did not specifically aim at rectifying the structural flaws within the distribution sector. Moreover, major reforms in the distribution sector were initiated post 2000.

4. Revisiting the Era of Reforms

The fear of prevailing conditions in the power sector resulting into its collapse, crippling state governments' finances and jeopardising economic growth of the country were looming large during early 21st century. Hence, the GoI introduced a series of policy reforms to address issues in the distribution segment of the power sector.

[1] *http://data.worldbank.org/indicator/EG.ELC.LOSS.ZS*
[2] Reports on India's Power Sector, EconomicaIndia

Accelerated Power Development and Reforms Programme

The Accelerated Power Development Programme (APDP) introduced in 2000-01, rechristened as APDRP during 2002-03, was the first major policy measure with a dual aim of making SEBs commercially viable and introducing operational reforms in their functioning.

Under this conditional reform measure, the GoI agreed to provide financial assistance to the tune of 50 percent of the project cost (25 percent as loan and the rest as a grant) to SEBs for undertaking renovation and modernisation of old power plants, and upgradation of sub transmission and distribution network including energy accounting and metering.

However, this assistance was conditional on the progress made by the states on meeting certain milestones including setting up of the State Electricity Regulatory Commission (SERC), completing 100 percent metering in a planned manner and creating separate distribution circles as profit/responsibility centre to make the system more accountable.

The identified distribution circle, which was to represent a well-defined, and technically, commercially and operationally manageable area, was to function as a self-sufficient unit and ensure availability of good quality electricity, loss reduction, electricity accounting, theft reduction and effective redressal of public grievances.

Even after receiving central assistance for infrastructural projects under APDRP, the SEBs, the distribution sector of which came to be known as DISCOMs (after unbundling as per the Electricity Act), still had to arrange for 75 percent of the project cost. The already high outstanding dues of DISCOMs with other sectors were severely constraining their ability to invest in the expansion of networks to cater to the increasing energy demand and sign credible power purchase agreements with private power producers. Hence, in order to enable the DISCOMs to continue functioning, it was essential to settle their outstanding dues.

For this purpose, a bailout package (one-time settlement scheme) was designed for the DISCOMs under which:

- About 60 percent of the interest on the delayed payments to be paid to central power utilities for purchase of electricity were waived and
- Remaining 40 percent of the interest due and the principal amount was to be converted into tax-free bonds issued by the state governments repayable over a 15-year period with a five-year moratorium on principal repayments

While implementing APDRP, it was assumed that the financial assistance in up gradation of infrastructure would result in 100 percent metering, which in turn will ensure efficient collection of bills and thus, reduce commercial losses. However, in cases like Ajmer (Rajasthan) DISCOM, wherein 100 percent metering was completed, the revenue collection had declined instead of showing a sustained increase.[3] Moreover,

[3] Ninth Report of the Standing Committee on Energy (2005-06), Fourteenth Lok Sabha; http://164.100.24.208/ls/CommitteeR/Energy/9rep.pdf

contrary to the 9 percent target of AT&C loss reduction per year, 1.68 percent reduction per year was realised till 2004-05.

Hence, the financial assistance under APDRP as well as the bailout package ended up being an additional financial service to the SEBs by the government with no substantial gain in their operational efficiency, in return. In addition to this, as against the targeted amount of ₹400bn for investment in infrastructure (including the counterpart fund under 50:50 grant to loan ratio), projects worth ₹191.8bn were sanctioned and ₹97.3bn was utilised till May 2006.

The following were the observed shortcomings in formulation as well as implementation of the programme:

- Absence of a directly targeted strategy for reducing commercial losses of SEBs
- Procedural delays in awarding contracts to infrastructure projects
- Absence of a monitoring mechanism to ensure timely transfer of funds from the states to implementing agencies of infrastructure projects, and timely completion of these projects by the contractors
- Absence of a strategy to prepare a comprehensive consumer database to ensure efficient billing practices
- Overambitious target for AT&C loss reduction (from 60 percent to 15 percent in five years) and a universal, one size fits all target for all utilities without considering their varied performance
- Absence of a check mechanism on contractors' adherence to detailed project report (DPR) which, in turn, resulted in implementation of sub-standard work

Despite the above mentioned shortcomings, the programme was still instrumental in at least initiating a mindset change in the working of a few DISCOMs including those in the States of Andhra Pradesh, Gujarat, Karnataka and Maharashtra, which were committed towards ensuring improvements in their functioning. However, the main goal of ensuring commercial viability and operational efficiency in working of DISCOMs was left unmet and hence, the programme was revised in 2008 to plug the loopholes identified while implementing APDRP.

Restructured Accelerated Power Development and Reforms Programme

APDRP was restructured and named R-APDRP in 2008. In order to lay emphasis on ensuring presence of a robust customer database with the DISCOMs to contain commercial losses, it was decided to divide projects to be undertaken under R-APDRP under two separate heads:

- Part-A included projects aimed at establishing a baseline data of consumers and adoption of Information Technology (IT) applications for energy accounting/auditing and consumer services. GoI agreed to finance 100 percent of the project cost under Part A of R-APDRP as loan, which could be converted into a grant conditional on the establishment of the required baseline data system within three years of the sanctioning of the project.
- Part-B included all the distribution infrastructure strengthening projects. For these projects, initially only 25 percent (90 percent for special category of

states) of the project cost was to be funded by GoI as loan, while the rest was to be raised from financial institutions as a loan.

However, up-to 50 percent of the loan against Part-B projects was convertible into grant, if the concerned DISCOM reduced its AT&C loss to 15 percent on a sustained basis for five years and completed the infrastructure projects in time. The analysis on how R-APDRP was an improvement over APDRP is shown in the following table:

Table 1: R-APDRP: An Improvement over APDRP

Identified Loopholes under APDRP	Provisions under R-APDRP	Positives of New Provisions
Given the poor financial health of DISCOMs, difficulty in arranging for 75 percent of the project cost since only 25 percent was provided by the centre	Provision of financing 100 percent of the project cost as a loan component (for Part-A projects) initially, which could be converted into grants conditional on the establishment of a comprehensive consumer database	A good incentive for SEBs to undertake work with an aim to improve operational efficiency; establishment of a check mechanism to ensure timely completion of projects
Lack of focus on establishment of authenticated consumer database, which was one of the major reasons behind inefficient metering practices	Separation of projects into those aimed at establishing consumer database and good metering practices, and those relating to improving distribution infrastructure	Separate project heads to make it easier to monitor states' developments under each head and hence, suggest a corrective action
Mentioned a universal AT&C loss reduction target for all utilities	Mentioning specific AT&C reduction targets at utility level (utilities with loss above 30%- losses to be reduced by 3% per annum and for utilities with loss below 30%- losses to be reduced by 1.5% per annum) in the eligibility criterion for receiving central funds	Provided more realistic and achievable targets after taking into consideration different levels of utilities' performance

Although R-APDRP attempted to address the gaps identified during the implementation of APDRP relating to preparation of a comprehensive consumer database and devising feasible loss reduction targets among others, the practical implementation of the same faltered on many grounds. The time taken to address preliminary issues related to IT infrastructure under Part A consumed so much time and financial resources that very little of both was left to be spent on strengthening distribution infrastructure.

Despite spending a majority of resources on projects under Part A, benefits of the same could not be reaped by the states as excessive outsourcing of work related to computerising data system to IT service firms led to lack of ownership and understanding of the system amongst DISCOMs' officials and hence, seized to have any operational relevance.

Moreover, there was a complete lack of integration of operational information with that of commercial and financial, which is the key to ensure transparency and accountability in operations. For most of the contracted projects, there was a serious lack of monitoring to ensure their efficient completion. As a result of these factors, most of the expected grants to states remained as loans and further increased the financial burden on states, without a proportionate improvement in the DISCOMs operational performance.

Financial Restructuring Plan

Given that the poor financial health of the DISCOMs continued to take them deeper into the debt trap with accumulated loss of around ₹1.9tn as on March 2011 and crippled their ability to finance capital investments in essential infrastructure, the GoI introduced the second bailout package in 2012, as its new carrot and stick policy. It provides for:

- State Governments taking over 50 percent of the short term liabilities (STL) of DISCOMs outstanding as of March 31, 2012, and converting it into bonds to be issued by utilities to lenders with due backing of the state governments.
- Remaining 50 percent of the liabilities were to be converted into loans to be repaid by DISCOMs with a three year moratorium on payment of principal. The restructured debt was also to be guaranteed by the state governments.
- Central Government to provide a transitional finance mechanism, under which the Centre would provide a grant equivalent to value of energy saved by reducing AT&C losses beyond the loss trajectory specified under R-APDRP and a capital reimbursement support of 25 percent of principal repayment by those state governments, which take over the entire 50 percent of the STL of DISCOMs.

A critical point to be noted here is that the above mentioned support by the Central Government was conditional on fulfilment of a set of mandatory operational norms stipulated under the FRP.

Box 1: Key Mandatory Conditions to be Fulfilled by DISCOMs under FRP

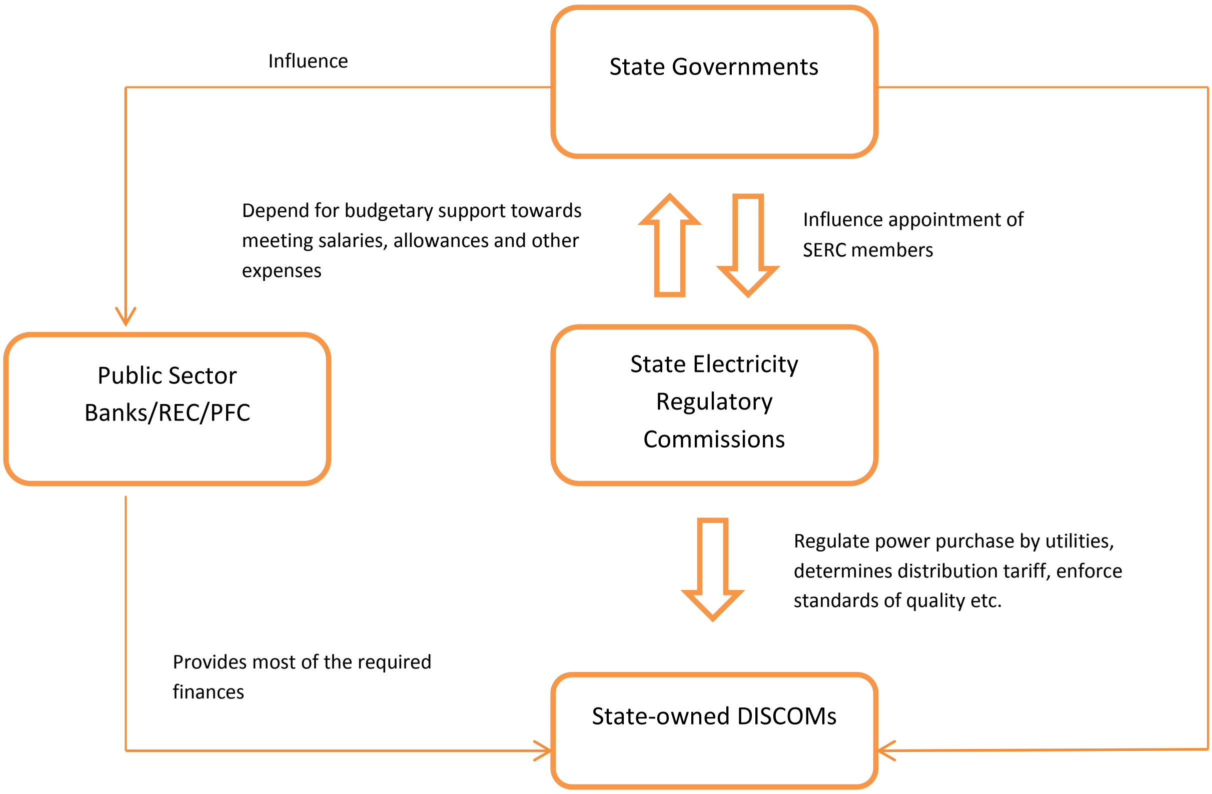
- Eliminate the gap between ACS and ARR within 3-5 years
- No more short term loans from banks for financing operational losses
- Prepaid meters to be installed for all government and large consumers by March 31, 2013 and preparation of a time bound plan for installing meters for all other consumers
- Release of agriculture subsidy on feeder/distribution transformer meter data
- Tariff order for 2012-13 to be notified before approval of FRP and by April 30 each year for all subsequent years
- Audited accounts for and up to 2010-11 to be finalised by the November 30, 2012 and for 2011-12 by the 31st January, 2013
- Establish state level monitoring committee

Despite having a comprehensive plan to improve operational efficiency of DISCOMs as well as to turn around their financial position, the FRP scheme failed mainly because of DISCOMs' inability to comply with the mandatory conditions. This was due to lack of required fiscal space with the state governments to bankroll the debt of DISCOMs, very few instances of tariff increases approved by regulators and high electricity purchase costs (due to increased coal prices and presence of election years in various states, they indulged in buying expensive power and selling it cheap to ensure constant supply at low cost).

5. Fundamental Cause of the Failure of Electricity Distribution Reforms

Since electricity is a concurrent subject in India, Centre, from its side has floated various carrot and stick policies (as mentioned above) to lure the states to take up comprehensive distribution sector reforms in their respective states. However, none of these has had the desired impact on the sector's performance. Partially, the reason lies in the inability of these policies to bring about a fundamental change in the functioning of the sector, which is closely related to the political-economic framework within which such policies were implemented (refer to Figure 2).

Figure 2: Political Economy of Electricity Sector in States



The close knit functioning of the state-owned DISCOMs and the State Government has been a major hurdle in ensuring independent functioning of the former. Given that in India, access to electricity continues to be seen as a public good, it is often misutilised by various State Governments as a tool to make quick political gains and hence, economic principles are frequently overlooked while making promises to the citizens on this front. This has resulted in the actual tariff rates being much lower than the cost of electricity to end users, thus adversely impacting the balance sheets of DISCOMs.

At a more fundamental level, while the DISCOMs lack complete autonomy in taking business decisions, the SERCs, which ultimately approve the tariffs and formulate regulations at the state level, do not enjoy independence in the process of regulatory decision making. Moreover, often, there is a lack of coordination between SERCs and DISCOMs, which, in turn, makes even regulatory decisions taken independently by SERC futile due to lack of their effective implementation.

Another reason behind operational inefficiencies of the DISCOMs is their high AT&C losses and accumulated debt over the years. This problem also has its origin in the irrational practices followed in the past, given the political economic framework of the sector.

High amount of cross subsidies also has an impact over the business of DISCOMs. With a majority of Indian population being employed in the agriculture sector, farmers and domestic consumers exercised much higher political influence than commercial and industrial users. Consequently, the former group was cross subsidised at the expense of the latter, which faced much higher tariffs. In light of increasing instances of big industrial houses resorting to captive power the DISCOMs continued to make operational losses despite cross subsidisation.

In order to cover this loss, the state governments, which owned these utilities, were liable to provide subvention to the ailing DISCOMs. This was mostly done through foregoing payments like interest and electricity duties rather than paying in cash. Moreover, the surge in uncovered subsidies resulted in DISCOMs increasingly diverting funds intended for capital expenditure (for infrastructure strengthening) to operating expenditure, forming a vicious circle of high losses, high debt and low investments.

The repeated inability of the DISCOMs, despite various reform measures, to reduce internal inefficiencies, especially that caused by power thefts and to an increasingly lesser extent by poor collection efficiency has been another major cause of the current state of affairs in most of the DISCOMs.

Therefore, a variety of factors including a faulty pricing mechanism for electricity, poor state of distribution infrastructure, ever increasing debt burden, high AT&C losses, lack of competition in the sector and incomplete structural reforms in DISCOMs, which lacked organisational autonomy, among others, were responsible for their inefficient functioning. Hence, for any strategy to avoid the fate of its predecessors, it will have to address these fundamental issues that so far continue to remain unresolved.

6. Ujwal Discom Assurance Yojana (UDAY)

The new government at the Centre decided to deal with the issue of the ailing electricity distribution sector by way of floating new reform measure known as UDAY reforms for all state-owned DISCOMs. Through the provisions mentioned in Table 2, the Centre plans to hand-hold states in achieving operational and financial turnaround of DISCOMs. Although the primary aim of the UDAY scheme is defined as the financial turnaround of DISCOMs, it also includes specifics to enhance their operational efficiency.

Table 2: Provisions of UDAY

Operational Efficiency	Financial Efficiency
• Compulsory feeder and distribution transformer metering by June 30, 2016 and June 30, 2017 respectively. • Smart metering for all consumers using > 500 units per month by December 31, 2017 and for those with > 200 units per month but < 500 units per month by December 21, 2019. • Undertake Demand Side Management measures by March 31, 2019. • Quarterly tariff revision to be permitted • Comprehensive IEC campaign to check theft. • Consumer indexing and GIS mapping of losses by September 30, 2018. • Trajectory to reduce gap between ACS and ARR to zero and AT&C loss to 15% by 2018-19 to be finalised by Ministry of Power (MoP) and states.	• States to take over 75 percent of DISCOM's debt as on September 30 2015 over two years till 2016-17 by issuing non-SLR bonds in the market or to concerned banks/FIs (not to be counted as state's fiscal deficit). • Bonds to have a maturity of 10-15 years with a five-year moratorium on repayment of the principal. • Remaining 25 percent debt to be re-priced or issued as state-guaranteed DISCOM bonds at rates not more than the bank's base rate plus 0.1%. • No prepayment charge to be levied on the DISCOM debt by banks, which shall also waive off any unpaid overdue interest/penal interest charged on the debt. • States to take over future losses of DISCOMs in a graded manner without any relief from Fiscal Responsibility and Budget Management (FRBM). • Centre and States to take steps to reduce cost of power.

While the scheme has various provisions with timelines attached to each in order to enhance operational efficiency of DISCOMs, it lacks in details to ensure the actual implementation of these provisions. For instance, it permits quarterly tariff revision by making required changes in the tariff policy but it neither empowers the SERC to independently take a legal action against a DISCOM that fails to submit a quarterly tariff petition nor makes it mandatory for SERC to consider the proposed revision, and give a time-bound and reasoned reply on acceptance or rejection of the same.

Similarly, while it provides for adoption of DSM measures, it does not provide an energy conservation/savings target to be achieved by the concerned DISCOM through adoption of such measures neither does it provide for an *ex-ante* or an *ex-post* cost benefit analysis of such measures.

Potential Impact of UDAY

In order to gauge the potential impact of the UDAY reforms on the sector, it is essential to see the individual impact on all concerned authorities of the various provisions specified under the scheme:

i) State Government

This accounting jugglery of excluding DISCOMs' debt taken over by states from calculation of their fiscal deficits in 2015-16 and 2016-17 will certainly help the state governments remain within the Fiscal Responsibility and Budget Management (FRBM) limits till the following fiscal year. Nonetheless, it will have an enormous impact on states' financial headroom. Various estimates peg the actual increase in the fiscal deficits of states post the debt transfer in the 50-70 percent range.[4] The inclusion of this debt as well as the subsequent interest burden in the calculation of states' fiscal deficit from 2017-18 might lay a colossal pressure on states' finances, and their planned capital and social development expenditure.

On the other hand, if the states are successful in ensuring an operational turnaround in the functioning of their DISCOMs, the long term gains will make up for all short term losses. However, this would require their continued firm commitment in fixing the political economy of the sector. The provision under the UDAY scheme of making the states responsible for a part of the DISCOMs' future losses in a graded manner is a right step. This will reverse the earlier trend of states not including their DISCOMs' borrowing as its *de jure* borrowing despite it being a part of its *de facto* borrowing, which led to the classical problem of moral hazard in the sector.

ii) DISCOMs

High interest cost of the past debt is one of the major hurdles in DISCOMs' way to enhance their current operational efficiency. With an accumulated debt of close to ₹4.3tn and losses of around ₹3.8tn as in 2014-15, the DISCOMs have been unable to buy sufficient electricity to meet the increasing demand, which in turn, has its impact on the viability of operational power plants, and hence the entire power sector and associated economic growth. The reduction in interest cost of past debts from 14-15 percent to 8-9 percent and an overhaul of operations at DISCOMs, provides an opportunity for DISCOMs to break even and start afresh on sound business principles.

iii) Banks/Financial Institutions

Public sector banks have a much higher exposure to the stressed power sector than their private peers. Apart from these, the public financial institutions – Power Finance Corporation (PFC) and Rural Electrification Corporation (REC) provide financial assistance exclusively in the power infrastructure space. Given that the three year moratorium on 50 percent of STL of seven states under FRP was to expire in early 2016, non-payment of DISCOMs' debt would have created panic in banks by adding to the existing problem of increasing non-performing assets (NPAs).

While the scheme is expected to prevent banks' stressed assets from being converted into NPAs, it also brings with it the negative consequences in terms of reduced operating profits of banks as the yield on past loans would now fetch 8-9 percent interest instead of the original 14-15 percent. Meanwhile, the PFC and REC will be the most negatively impacted owing to margin compression and lower loan growth, given their estimated exposure of 23 percent and 33 percent, respectively to the distribution sector.

[4] http://indianexpress.com/article/business/business-others/uday-scheme-bailout-may-swell-fiscal-deficit-of-states-centre-to-around-8-5-of-gdp/; http://www.business-standard.com/article/economy-policy/uday-s-shadow-lengthens-over-states-fiscal-deficit-115122300068_1.html

iv) Consumers

In case UDAY scheme is successfully implemented, the actual cost of electricity supply will be expected to percolate to the consumers. However, this increase in price will be offset by reduced AT&C losses and increased internal efficiency of DISCOMs to a large extent. Further, if the scheme is unable to meet its objective, the states will recover the incurred loss through increased tax income in the absence of an alternate source of finance, which will eventually hit the consumers harder than in the former case.

It should be noted that if the scheme is successful, it will benefit all stakeholders in the long run but if it meets the fate of its predecessors, there is much more at stake this time as compared to earlier, given the threat posed by accumulated debt and losses on various other sectors including renewable energy, power generation, infrastructure and banking, and hence, on the economy, as a whole. Therefore, the key lies in learning the lessons from the past experience and ensuring that they are not repeated in both design and implementation of UDAY. Table 3 compares provisions under UDAY with those of previous reform measures.

Table 3: How Different is the UDAY Scheme from Earlier Reform Measures?

<table>
<tr><th colspan="2">Similarities</th></tr>
<tr><td colspan="2">
Eliminate gap between ACS and ARR in a time bound manner
Reduce AT&C losses to 15% in a time bound manner
A part of DISCOMs’ liability to be taken over by the state and the rest to be issued as bonds backed by state guarantee
Installation of prepaid meters for all large consumers
No short-term loans to be taken by DISCOMs from banks/FIs to finance operational losses
Consumer indexing and GIS mapping
</td></tr>
<tr><th colspan="2">New Features of UDAY and Expected Benefits</th></tr>
<tr><td>Links states’ success in achieving operational milestones with provision of central funds through IPDS, DDUGJY and Power Sector Development Fund.</td><td>Expected to act as an additional incentive for states to undertake proposed operational reforms.</td></tr>
<tr><td>Participating states to be provided with additional coal supplies, if available, and low cost power from NTPC.</td><td>Apart from acting as an additional incentive for states to take up proposed reform measures, it is also expected to reduce the cost of power to DISCOMs, and hence, has the potential to reduce losses.</td></tr>
<tr><td>States to take over DISCOMs’ future losses in a graded manner.</td><td>Links state-owned DISCOMs’ balance sheets with that of the respective states; an incentive for states to stick to the reform roadmap.</td></tr>
<tr><td>Comprehensive Information, Education and Communication (IEC) campaign.</td><td>To increase public participation in reducing power theft.</td></tr>
<tr><td>Set of steps to be taken by the Central Government to reduce cost of power</td><td>Reduced input cost and hence, fiscal deficits of DISCOMs</td></tr>
</table>

75 percent of DISCOMs' debt undertaken by the states to be exempted from FRBM rules	Incentive for states to participate

Given the improved design of the UDAY reform measure, we believe that it is a further step in the right direction to reform electricity distribution sector. However, in order to ensure that past failures of earlier reform measures implemented with the same aim and similar features are not repeated, and that the fundamental causes responsible for the current state of affairs of DISCOMs are addressed, the following shortcomings should be taken into consideration:

i) ***Insufficient incentives for states to implement operational reforms:*** As per the provisions of UDAY, no financial support under Integrated Power Development Scheme (IPDS) and *Deendayal Upadhyaya Gram Jyoti Yojana* (DDUGJY) will be provided in case of non-compliance with operational milestones. This is similar to the incentives provided in earlier schemes like APDRP, R-APDRP and FRP, under which financial assistance from the Centre to states was to be provided for metering of DT, separation of feeders and strengthening of transmission and distribution network, (which constitute elements of IPDS and DDUGJY) only if states successfully undertook operational reforms.

The experience of implementing these reform measures has clearly shown the insufficiency of such incentives in pushing states on the reform path. Hence, there is a need to include certain disincentives/penalties like a plan for gradual divestment of states' stake, in case they fail to introduce operational reforms in the distribution sector in a given period of time or provision of a buffer period for the states to work towards meeting the unmet targets, beyond which a gradual reduction in the financial assistance might be initiated if the states' efforts are not thought to be adequate.

Moreover, instead of a one-time disincentive, a better corrective plan for each utility might be put in place by providing disincentives at frequent intervals in line with the performance review mechanism.

ii) *Absence of a transparent monitoring mechanism*: The previous reform measures could not succeed in ensuring states' compliance despite providing for a third party evaluation agency. Although UDAY provides for a monthly performance review through a mechanism yet to be designed by MoP, it is hoped that an element of transparency by providing public access to monitoring reports, subsequent corrective measures as well as their impact, which was excluded in all earlier reform programmes, will be included in UDAY's review mechanism.

iii) *Lack of emphasis on meeting sub-targets:* Although UDAY sets the target of AT&C loss reduction to 15 percent by 2018-19 through time bound completion of activities including installations of smart meters, DT metering, adoption of DSM measures and revision of tariff every quarter, it lays lesser emphasis on meeting the sub targets within each of these activities.

iv) *Lack of emphasis on improving operational performance:* While the scheme provides fine details on the way of issuing bonds, transferring debts, levying interest charges etc. and hence, the scheme for a financial turnaround of the sector, it fails to provide the same for activities aimed at ensuring effective operational performance of the DISCOMs. Hence, instead of mentioning merely the names of the activities that have a potential to improve their operational performance, there is a need to also deal with social, political and commercial aspects that often come in the way of DISCOMs undertaking these activities.

v) *Insufficient finances to set up required distribution infrastructure*: UDAY makes reduction in AT&C losses and gap between ACS and ARR through strengthening of distribution infrastructure a precondition for receiving funds under central schemes, which, in turn, provide funds for similar projects. A point that was missed in earlier schemes and continues to be amiss is that development of infrastructure requires huge investment on part of the already cash strapped DISCOMs.

While the debts undertaken by state governments provide interest savings to DISCOMs, there is no provision of upfront cash payments to DISCOMs to undertake such activities. This, in turn, increases the chances of failure as inability to improve the network results in ineligibility to receive finance for the same purpose, resulting into inefficient infrastructure and high AT&C losses.

vi) *Lack of a long term vision on making DISCOMs function independently on commercial principles:* The existing political economy set up is one of the major reasons behind the lack of independence exercised by DISCOMs to adopt commercial principles in their functioning and hence, the incomplete process of structural reforms in the utilities. Like all the previous reform measures, UDAY has also failed to define a roadmap, as part of its strategy to improve operational functioning of DISCOMs, to ensure their independent functioning, far from the influence of the state government.

vii) *Lack of public awareness:* One of the major reasons behind the poor functioning of distribution sector is that political interest often overpowers economic interest in the sector. The subsidies ingrained in prices are often ignored by consumers, and hence, a hike in price of electricity is seen as resulting from increase in corruption and inefficiencies of governments – a major reason behind the unwillingness of a state government to increase electricity prices. Hence, there is a need to target subsidies (by exploring the possibility of income-based subsidies) and to make the consumers aware of the economic cost of power, apart from spreading awareness on power theft as included under the IEC strategy of UDAY.

7. Way Forward

India has initiated various measures to reform the electricity distribution sector since 1990s, gradually moving away from assigning a more responsible role to the Centre for turnaround in DISCOMs' functioning to putting the onus on the states for the same. UDAY is a further step in this direction and is an improvement over all the previous reform measures in this regard.

However, the experience of implementation of all the previous reform measures has clearly shown the desperate need to strengthen the market fundamentals in the distribution sector. Hence, instead of quick financial fixes, which are expected to provide short-term respite to DISCOMs, a long term and sustainable solution requires adopting a much broader approach encompassing the structural, financial, operational and commercial aspects of the sector.

Although certain gaps still remain in the formulation of the policy framework including absence of appropriate disincentives for poor performers, lack of availability of up front financial assistance for strengthening distribution infrastructure, and absence of a mechanism to make utilities more transparent and accountable to the consumers, yet it still has the potential to enhance operational competence of DISCOMs in its current form. Nevertheless, there is a need to give much weightage to the operational aspects of the scheme during its implementation in order to go beyond a band aid solution to the existing problems of the distribution sector.

Moreover, in order to overcome the challenges posed by high political interests and control in the sector, special emphasis has to be laid on devising an inclusive and effective monitoring mechanism, providing for a state-specific course correction plan at frequent intervals and incentivising DISCOMs to inculcate responsible corporate principles in their functioning, among others.

Given the current political economy set up, the problems cannot be resolved by the Centre alone, and State Governments will have to play a pivotal role by keeping a grip on expenditure and revenue, ensuring metering of every consumer and involving communities in curbing power theft. The State Governments should also try and maintain an arm's length distance from the operational space of the DISCOMs in order to prepare them to function independently. The time has come to deal with the issue and overcome the 'Achilles heel' of the power sector. Overcoming barriers to ensure success of UDAY reforms would require continued political commitment and willingness to go against populist measures that have dominated the sector and the policies, till date.

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