Empowering the power sector through UDAY: A study of Haryana

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Abstract:
In the era of reforms, power sector has also created space for itself by launching Ujwal Discoms Assurance Yojana (UDAY) with a motive to bring and upgrade efficiency in power sector. The Discoms had bearded an amount of Rs. 2374 Crore as burden of interest on outstanding debt. In this paper, an attempt has been made to assess the performance of Haryana Discoms on operational & financial parameters. The researcher draws a conclusion on the operational parameters that DT meter (Rural), smart metering above 500 KWH and smart metering between 200 to 500 KWH parameters have an insignificant growth. On the other hand, financial parameters of UDAY scheme show that UHBVNL Discom has higher Aggregate Technical and Commercial (AT&C) losses and the Average Cost of Supply (ACS) & Average Revenue Realization (ARR) gap of DHBVNL reports to be insignificant which poses a major challenge for Haryana.

Keywords: UDAY Scheme, Haryana Discoms, Operational and Financial Performance

Introduction

The Haryana Electricity Reform Act, 1997 restructured the Haryana Electricity Board in 1998 into four utilities namely (1) Haryana Power Generation Corporation Limited (HPGCL), (2) Haryana Vidyut Parsaran Nigam Limited (HVPNL), (3) Uttar Haryana Bijli Vitran Nigam Limited and (4) Dakshin Haryana Bijli Vitran Nigam Limited. For regulating these utilities a commission named Haryana Electricity Regulation Commission (HERC) was setup. The two DISCOMs UHBVNL and DHBVNL distribute electricity under nine circles each in twenty-two districts of Haryana. The Ministry of Power, Government of India launched Ujwal Discoms Assurance Yojana (UDAY) which was approved by Union Cabinet on 5th November 2015. The objectives of the scheme are financial and operational improvement, cost reduction of power

generation, energy efficiency and conversion of Discoms in financial turnarounds alongwith special assistance to the states achieving the set targets on time. UDAY scheme is not compulsory but optional for all states and states are encouraged to join and take benefits from the scheme. Jharkhand was the first state to join the scheme and up to March 31, 2019 twenty-seven states and five Union Territories have signed the Memorandum of Understanding (MOU) of UDAY with the Ministry of Power, Government of India. Under the scheme 75% of outstanding debt of Discoms has been taken over in the form of equity/ loan/ grants to Discoms by state and remaining 25% was issued in the form of bonds repriced by banks/ Financial Institutions at an interest rate not more than the bank base rate plus 0.10% (UDAY Portal). A tripartite Memorandum of Understanding (MoU) was signed on March 11, 2016 amongst the Ministry of Power, Government of India, Government of Haryana and Haryana Discoms (Uttar Haryana Bijli Vitran Nigam Limited and Dakshin Haryana Bijli Vitran Nigam Limited) at New Delhi. This tripartite agreement helps to improve operational & financial efficiency and a proper time set was framed to achieve the targets prescribed for both Discoms of Haryana. Haryana Discoms were under heavy financial burden. The accumulated losses of both Discoms were stood at Rs. 29029 Crore during financial year 2014-2015 and outstanding debt of Rs. 34600 Crore was as on September, 30 2015. The Discoms were burdened with an amount of Rs. 2374 Crore as interest on outstanding debt. Average Cost of Supply (ACS) and Average Revenue Realization (ARP) had a notable gap of 7.89% because of much interest burden. The state government has taken over amount of Rs. 25950 Crore (75% of 34600) in the form of equity/ loan/ grants to Discoms and bonds were issued of remaining amount Rs. 8566 Crore.

Review of Literature:

Kaur (2018), analysed the status of all member states of UDAY regarding operational & financial parameters of the scheme. The author analysed the data retrieved that except Gujarat, Karnataka, Himachal Pradesh and Telangana all other states were not performing well on stated operational and financial parameters. **Chakraborty et. al (2018)**, analysed the post UDAY impact of Rajasthan Discoms on the basis of operational & financial parameters stated in scheme and concluded that high AT&C losses and ACS-ARR gap was a major challenge to tackle by state. Author also recommended that for long run sustainability of public finance there is need to improve power sector finance. **Ojha (2018)**, critically analysed the factors affecting performance of power sector and also focused on performances of states under UDAY scheme. Author

concluded that low tariff rates, high AT&C losses, more political interference, inaccurate metering, power thefts, lack of technical regulation/mechanism etc. were main reasons of low performance. **Veluchamy et. al (2018)**, discussed about next generation reforms in power sector along with financial & operational achievements under UDAY scheme. Researchers concluded that Discoms were in needs to be re-design to achieve their targets and to sustain the Indian power sector alongwith consideration of financial, political, and social environment. **Asaad et. al (2017)**, discussed about the different center schemes along with UDAY scheme and current status of electric grid in India. Researchers discussed how UDAY scheme will benefit to states in financial restructuring and performance enhancement of electricity distribution companies with a pre-fixed time to achieve the target. **Keeley (2016)**, developed a case study on Rajasthan and NTPC to point out the different ways to improve operational & financial efficiency of distribution companies through reduction of AT&C losses, burden of interest cost, improving energy efficiency, rationalizing coal delivery process etc. and suggests a close cooperation of center and state government for successful implementation of scheme. **Ghose and Raja (2016)**, analysed financial aspects of UDAY at national level and concluded that to reduce AT&C losses and ACS-ARR gap the states have to do efforts to make investment in infrastructure development, proper and timely tariff revisions, controlling power theft, and to check the competitiveness impact of the industry and service sectors through cross subsidization. **Swain (2016)**, discussed about role played by electricity regulatory commission and key features of different schemes introduced by government along with UDAY from time to time to make electricity sector operationally and financially viable and concluded there were not much more efforts at national level to consolidate regulatory structure for the electricity sector.

From the above discussed literature, we can conclude that there is need to investigate the impact of UDAY scheme regarding financial and operational performance of Discoms in Haryana. So, the study presents the current status of operational and financial performance with reference to Haryana Discoms.

Research Methodology:

The data related to operational and financial performance of Haryana Discoms (UHBVNL &DHBVNL) is collected from UDAY Portal, Government of India. The data is taken from 11 March, 2016 (Haryana Discoms join the scheme) to the 31 December, 2018. The financial performance (Aggregate Technical and Commercial (AT&C) Losses and Average Cost of

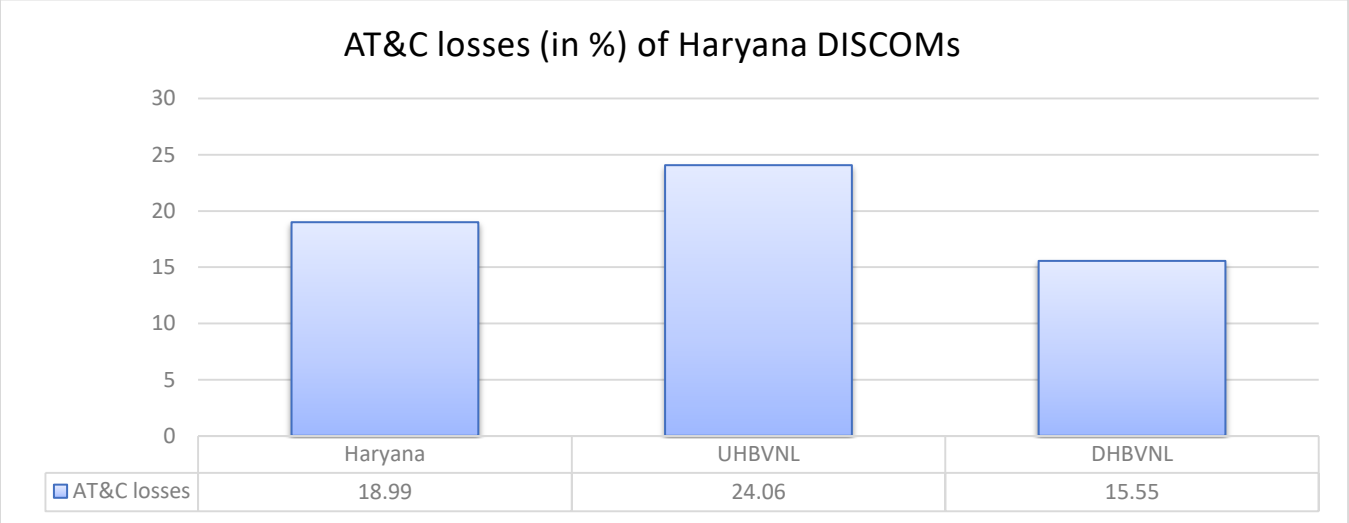
Supply (ACS) & Average Revenue Realization (ARR) Gap) is shown in graphically manner while operational performance (Feeder Metering (Urban), Feeder Metering (Rural), DT Metering (Urban), DT Metering (Rural), Electricity Access to Unconnected Households, Smart Metering above 500 kWh, Smart Metering above 200 kwh up to 500 kWh, Feeder Segregation, Rural Feeder Audit, Distribution of LEDs under UJALA) is shown in table form. The data has been taken from UDAY, portal, Government of India and analysed to review the financial & operational performance of Discoms.

Objectives:

1. To measure Financial performance of Haryana Discoms on Parameter of:-
    a. Aggregate Technical & Commercial losses (AT&C).
    b. Identify Average Cost of Supply (ACS) & Average Revenue Realization (ARR) gap.
2. To measure performance on Operational parameters of Haryana Discoms.

Results of the study:

Fig 1(a): UDAY Financial Parameters -Progress in reducing AT&C Losses in Haryana (As on December 31, 2018)



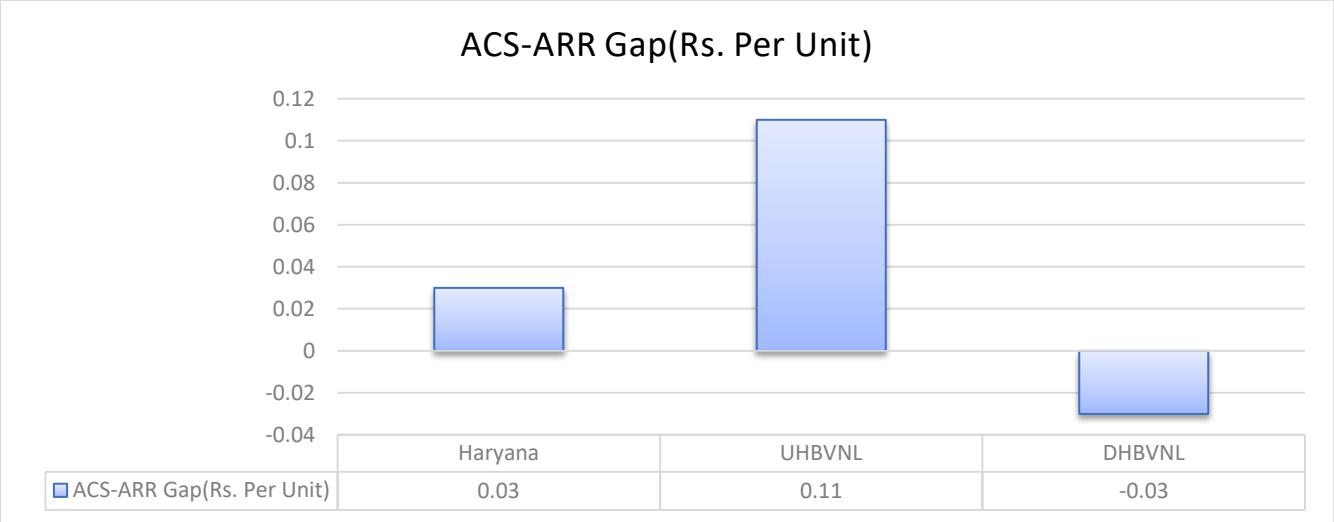
Source: UDAY Portal, Government of India

Aggregate Technical and Commercial (AT&C) losses increase due to electricity transformation losses and consumption of electricity in illegal ways. Distribution line losses and incorrect

metering, billing and collection of revenue are major causes of AT&C losses. Under UDAY scheme, a trajectory target was set for Haryana Discoms to bring down the AT&C losses to 15% by financial year 2019-20 (MoU, UDAY). The AT&C losses of UHBVNL were respectively 24.06% and 15.55% of DHBVNL upto December 31, 2018 as shown in Figure 1(a). Under the scheme the trajectory target for financial year 2018-19 was 20.04% for the both Discoms while overall state progress was 18.99% on December 31, 2018. DHBVNL Discom is working very efficiently to reduce AT&C losses while UHBVNL is far away from the Expected target. So, to achieve the trajectory target of 15% AT&C losses the UHBVNL Discom is in need to work more on the major causes of losses. A proper AT&C loss reduction targets should be communicated to concerned officers at Sub- Division/ Division/ Cycle/ Zonal level and to make them responsible for achieving the target a performance monitoring and Management Information System (MIS) must be implemented. A proper procedure for correctly metering/ billing/ revenue collection and campaign for controlling power theft also followed.

Fig 1(b): UDAY Financial Parameters -Progress in reducing ACS-ARR in Haryana

(As on December 31, 2018)



Source: UDAY Portal, Government of India

Average Cost of Supply (ACS) & Average Revenue Realization (ARR) gap measured in Rupees per unit. The higher ARR than ACS indicates commercial viability and soundness of Discoms. The ACS & ARR gap of UHBVNL was 0.11 (Rs. Per Unit) but gap of DHBVNL was -0.03 (Rs. Per Unit) and the overall state progress shows a gap of 0.03 (Rs. Per Unit) upto December31,

2018 as shown in Fig. 1(b). The UHBVNL Discom shows a positive result and DHBVNL shows a negative result while overall result was positive only because of UHBVNL performance. Under UDAY scheme the financial year 2019-20 is set as a target to eliminate the ACS & ARR gap. The main reason behind higher ACS than ARR is electricity tariffs are not increasing as cost of supply. For increasing the Average Revenue Realization (ARR) electricity tariffs should be revised and this gap can be eliminated by creation of regulatory assets, subsidies and tariff hike.

Table 2.1: Representation of performance of Haryana Discoms on Operational parameters (as on December 31, 2018)

Target vs Achievements of Operational Parameters of UDAY (Haryana state)				
Operational Parameters	Expected Date of Completion	as of 31 Dec.2018		
		Progress	Target	Average (%)
Feeder Metering (Urban) *	June, 2016	1381	1365	101.172
Feeder Metering (Rural) *	June, 2016	1674	1621	103.27
DT Metering (Urban) *	June, 2017	50154	49420	101.485
DT Metering (Rural) *	June, 2017	63744	478120	13.3322
Electricity Access to Unconnected Households #	FY 2019	45.58	49.18	92.68
Smart Metering above 500 kWh *	Dec. 2017	6583	431797	1.52456
Smart Metering above 200 kwh up to 500 kWh *	Dec. 2019	3857	822747	0.4688
Feeder Segregation *	March, 2018	3536	3536	100
Rural Feeder Audit *	September, 2017	2076	1621	128.069
Distribution of LEDs under UJALA#	March, 2019	155.89	214.00	72.8458

Source: UDAY Portal, Government of India
*Note: * measured as no. of units; # measured in lakhs; FY- Financial Year*

The above table shows overall operational efficiency of UDAY scheme in Haryana on the basis of above mentioned parameters. As shown in table feeder metering (Rural & Urban), distribution transformer (DT) meter (Urban), and Rural Feeder Audit shows more than 100 Percent growth while Feeder Segration is 100 per cent, which indicates efficiency of both DISCOMs. Electricity

access to unconnected household are 92.68 per cent which shows state made significant efforts to provide electricity to unconnected households and can achieve the target of 100 percent access in FY 2019. The target to achieve distribution of LEDs under Ujala Scheme to 100 per cent is in March 2019, but still only 72.84 per cent distribution has been made possible which is not significant. The DT meter (Rural) is 13.33 per cent, smart metering above 500 kWh is 1.52 percent and smart metering between 200 to 500 KWH shows 0.46 per cent growth, which is insignificant and to achieve this target becomes a major challenge for Haryana.

Conclusion:

On the basis of above discussed financial parameters of UDAY scheme it is concluded that high Aggregate Technical and Commercial (AT&C) losses and Average Cost of Supply (ACS) & Average Revenue Realization (ARR) gap are major challenges for Haryana. In Operational efficiency, the performance of Haryana is satisfactory except DT meter (Rural), Smart Metering above 500 kWh and Smart Metering above 200 kWh to 500 kWh parameters. In operational parameters the DT meter (Rural) is 13.33 per cent, smart metering above 500 KWH is 1.52 percent and smart metering between 200 to 500 KWH shows 0.46 per cent growth, which is insignificant and to achieve this target become a major challenge for Haryana. As per Memorandum of Understanding (MoU) of UDAY if Haryana state achieved the set targets the state will get additional/ priority funding through different schemes of center like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Power Sector Development Fund (PSDF), or other schemes of Ministry of Power (MoP), and Ministry of New and Renewal Energy (MNRE), Government of India. The state will also be benefitted by other benefits such as supply of crushed coal, washed coal for G10 grade, rationalization of coal, allowing coal swapping from inefficient plants to efficient plants etc. Further, future studies could be planned for comparative analysis of Discoms across states which have implemented and its impact (operational & financial) can be assessed by the potential researchers.

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