Issue Brief | October 2022

Approach for the regulatory treatment of the UDAY debt takeover

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Contents

About the study

Who should read this study and why?

This issue brief reviews and analyses the impact of the regulatory treatment of the *Ujwal Discom Assurance Yojana* (UDAY) debt takeover on discoms and consumers under two approaches:

Approach A

Regulatory treatment by state electricity regulatory commissions (SERCs)

Approach B

Regulatory treatment based on financial principles

The issue brief provides insights for the Ministry of Power (MoP), Forum of Regulators (FoR), Appellate Tribunal for Electricity (APTEL), distribution companies (discoms), state electricity regulatory commissions (SERCs), state governments, and sectoral experts.

This study covers the following aspects

1. Background on the UDAY scheme
   - The motivation, structure, and objectives of UDAY
   - The extent of debt taken over under UDAY
2. Comparative impact of the regulatory treatments of the UDAY debt takeover on discoms and consumers under Approaches A and B

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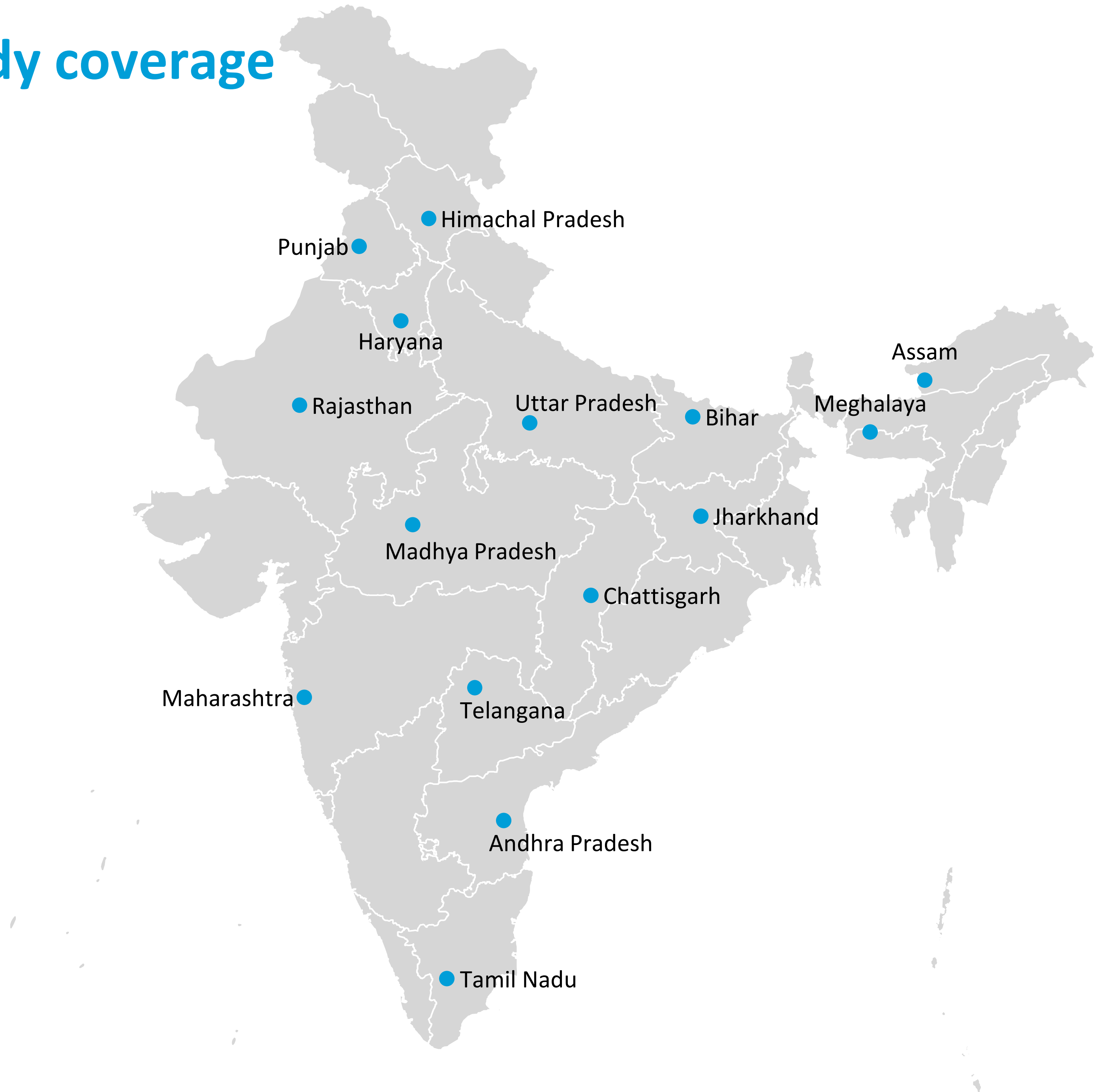
15 states: study coverage



Source: UDAY dashbaord

Key highlights of the study

01

Huge discoms debts

Discoms from 16 states participated in the UDAY scheme for their financial turnaround and operational efficiency improvement[1]. As of 30 September 2015 (the launch date for the UDAY scheme), the total debt of the discoms of 15 states stood at INR 3.7 lakh crore, i.e., ~93% of the total debt of discoms in India[2].

02

UDAY scheme

Under the UDAY scheme, state governments were to take on over INR 2.3 lakh crore of discoms' debt (~75% of the INR 3.7 lakh crore debt).

03

SERC's approach

State electricity regulatory commissions (SERCs), using certain assumptions and available data, adjusted the UDAY debt takeover against the revenue gap (RG) or regulatory asset (RA) in tariffs and true-up orders (**Approach A**). This adjustment will impact discoms' future revenue recovery as captured by the RG or RA.

04

Disproportional impact

Our review suggests a disproportionate distribution of the benefits of the UDAY scheme to consumers (in Uttar Pradesh, Madhya Pradesh, Tamil Nadu, and Jharkhand) and discoms (in Rajasthan) in **Approach A**[3].

1. Overall, 32 states participated in the UDAY scheme. While 16 states participated to improve discoms' financial and operational efficiency, the other 16 states participated to improve operational efficiency only.
2. Authors' analysis based on the UDAY MoU for the 15 states that are covered in the study. Jammu & Kashmir has been excluded from our study due to a lack of data in the public domain.
3. Authors' analysis based on the five states with reliable data.

Key highlights of the study

05

Discom benefits

The **Approach B-**based regulatory treatment (rooted in financial principles) could result in an improvement in discoms' financial position cumulatively by INR 58,276 crore in Uttar Pradesh, Madhya Pradesh, Tamil Nadu, and Jharkhand.[3] This, in turn, would also reduce discoms' dues to generation companies.

06

Consumer benefits

Approach B-based regulatory treatment in Rajasthan can provide relief of INR 26,886 crore to electricity consumers in the form of reduction in unfunded revenue gap.

07

Pending debt conversion

State governments in seven states (Andhra Pradesh, Himachal Pradesh, Telangana, Madhya Pradesh, Uttar Pradesh, Tamil Nadu, and Jharkhand) need to convert their discoms' cumulative debt worth INR 47,672 crore into grants/equity.

08

Recommendation

We propose that the Ministry of Power (MoP), as a signatory to the UDAY Memorandum of Understanding (MoU), should share a guidance note with state governments, discoms, and SERCs to revisit their existing approaches **(Approach A).**

1. Overall, 32 states participated in the UDAY scheme. While 16 states participated to improve discoms' financial and operational efficiency, the other 16 states participated to improve operational efficiency only.
2. Authors' analysis based on the UDAY MoU for the 15 states that are covered in the study. Jammu & Kashmir has been excluded from our study due to a lack of data in the public domain.
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UDAY: *Ujwal Discom Assurance Yojana*

Background on UDAY

Progress so far
status of accumulated losses and the outstanding debt of discoms since UDAY

Image: iStock

Background: Need for *Ujjwal Discom Assurance Yojana* (UDAY)

In November 2015, the Government of India (GoI) announced the UDAY scheme for discoms' financial turnaround and operational improvement with the following major features.

Financial turnaround

- A total of 75 per cent of discom debt is to be taken over by state governments and converted into grants and/or equity. The remaining 25 per cent is to be issued by discoms as bonds.
- The future losses of discoms are to be gradually taken over by state governments.

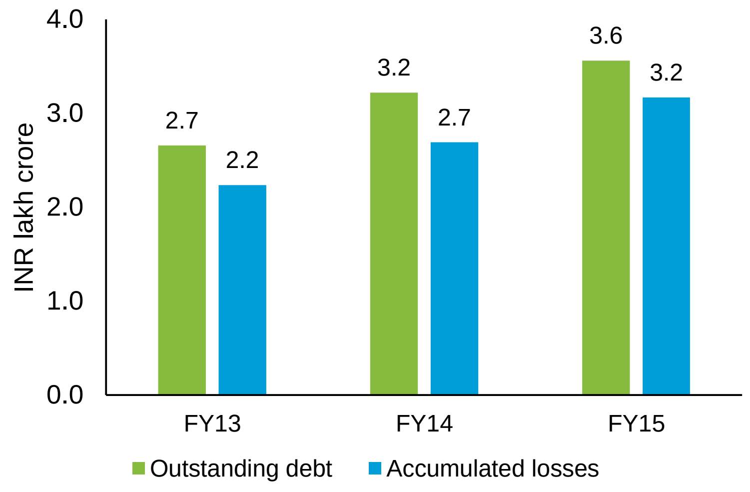
Operational efficiency targets

- Target aggregate technical and commercial (AT & C) loss reduction to 15 per cent and reduce the average cost of supply (ACS)–average revenue recovered (ARR) gap to zero
- Targets for energy auditing, metering, collection, etc.

Reduction in generation cost

- Coal supply and linkage rationalisation
- Enabling competitive power purchase

Figure 1: The cumulative debt of discoms rose from INR 2.7 lakh crore to INR 3.6 lakh crore in the pre-UDAY period (FY 13–FY 15)[1,2]



Source: Authors' analysis from PFC reports

Note 1: Jammu & Kashmir has been excluded from our analysis due to a lack of data in the public domain.

Note 2: Outstanding debt for FY 15 is as of March 2015 and FY 15 means financial year 2014-15

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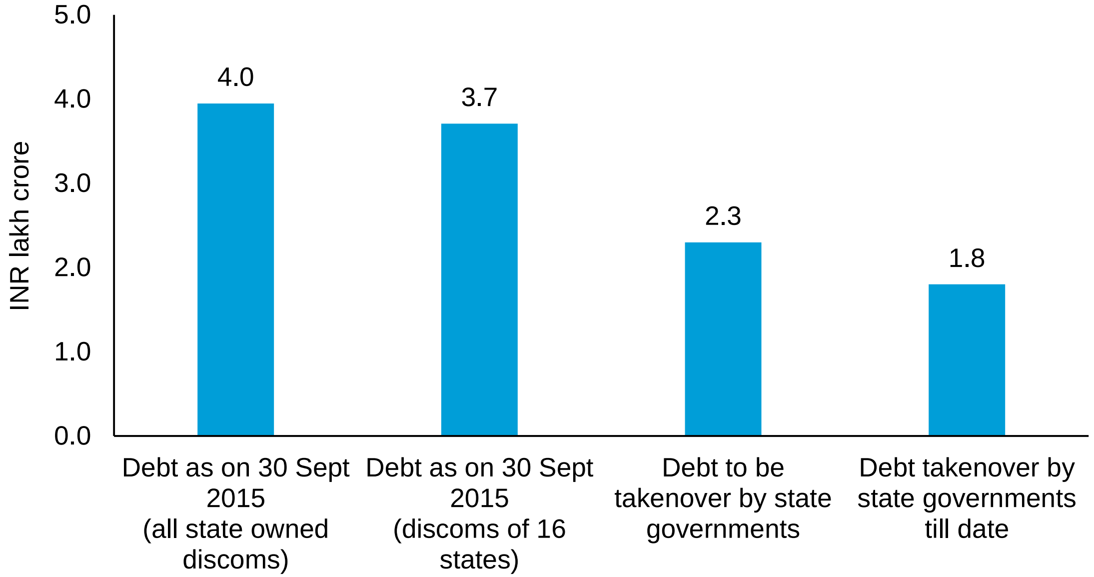
Progress so far

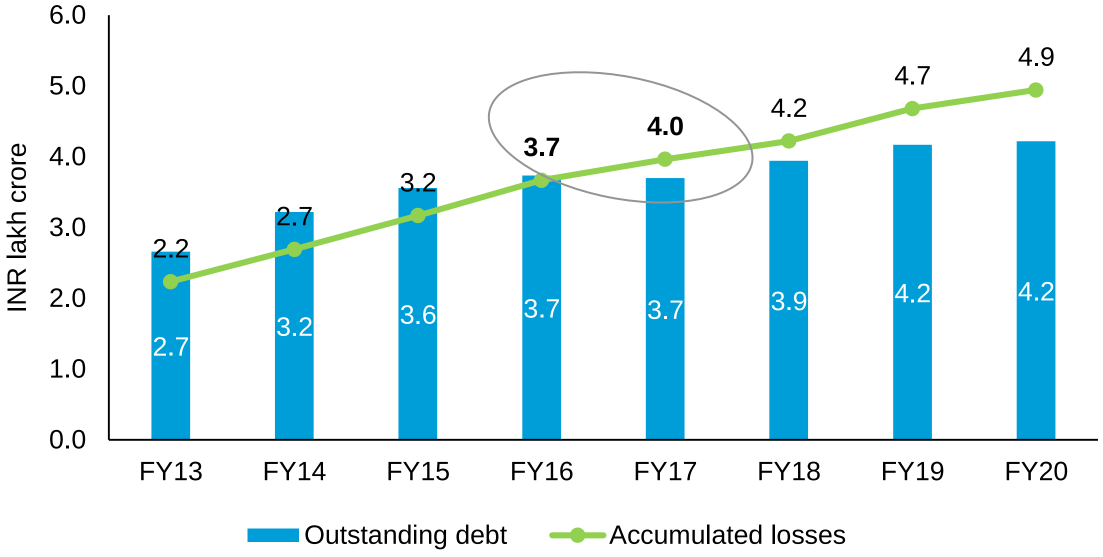
The state takeover of 75 per cent of discom debt was aimed at improving the discoms' balance sheet position by reducing the interest cost burden. This would have increased the fiscal space for infrastructure investments and improved revenue realisation.

Figure 2: As per the UDAY MoU, state governments were to take over discoms' outstanding debt worth INR 2.3 lakh crore through grants and/or equity infusion



Source: Authors' analysis from PFC reports, the UDAY MoU, and the audited balance sheets of discoms.

Figure 3: Improvements in outstanding debt and accumulated loss additions began to taper off after FY 17



Source: Authors' analysis from various power finance corporation (PFC) reports .
Note: The same holds for eroding net worth (not shown in the graph) due to rising accumulated losses.

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Motivation and data

Examination of the existing regulatory treatment under UDAY and its present and future impact on stakeholders (Approach A)

Data sets used for review and analysis

Image: iStock

Motivation for the study

After a brief reduction in discoms' rising outstanding debt and pace of accumulating losses, the improvements have reversed post-FY 17.

The UDAY MoU did not envision SERCs as a stakeholder. Consequently, each SERC acted based on certain assumptions, the available data, and particular treatment methodologies.

The UDAY scheme aimed to financially turn around discoms. The varied approaches adopted for regulatory treatment by various SERCs led to a deviation from financial principles, which is reflected in the disproportionate sharing of benefits among consumers and discoms in the regulatory accounts. The impact of such treatment persists in the system.

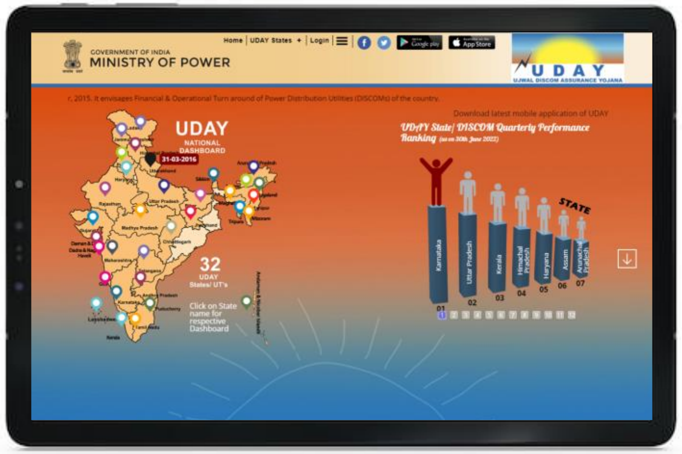
No study so far has analysed the regulatory treatment of the UDAY debt takeover and its impact on discom finances and consumers.

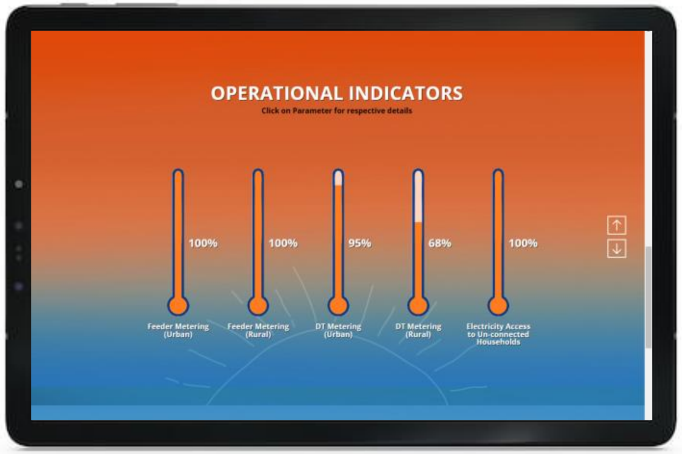
A few discoms, such as those in Uttar Pradesh and Madhya Pradesh, have filed appeals with APTEL for a review of SERCs' regulatory treatments under UDAY.

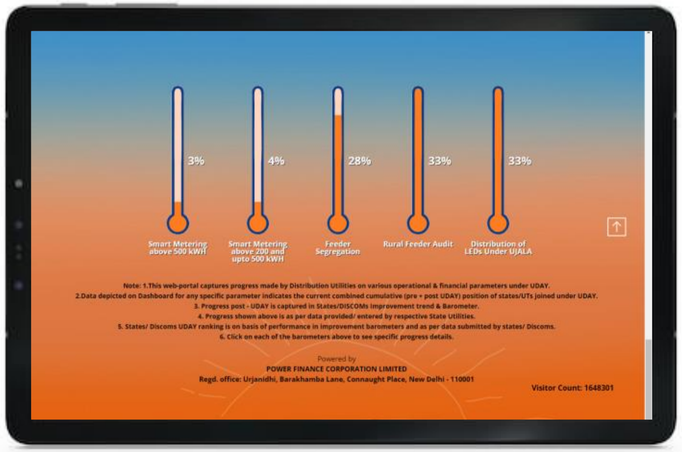
Under UDAY, state governments are to take over the future losses of discoms in a graded manner until FY 22. Consistent regulatory treatment of these takeovers is required, backed by financial principles, to equitably distribute the benefits of the UDAY scheme.

Data for the study

For the study, we have collected data from the UDAY MoU, UDAY portal, CAG audit reports, SERCs’ tariff and true-up orders, power finance corporation (PFC) and discoms’ audited accounts.







Approach for the regulatory treatment of the UDAY debt takeover

Unpacking the variations (what and why) in SERCs' treatment methodologies across states (Approach A)

The financial principles for the regulatory treatment of the UDAY debt takeover (Approach B)

Image: iStock

Primer on discom accounts - key terminologies

Audited vis a vis regulatory accounting

Discoms incur a variety of expenses over the business cycle, such as power purchases (75–80 per cent of the total expense), operation and maintenance (10–12 per cent), interest costs and depreciation (5–6 per cent), and others.

There is usually a difference between the discoms' actual expenses, covered in the audited accounts, and the expenses allowed by the SERC (known as regulatory accounts) as per the norms/state regulations. The difference is not passed onto consumers and forms the discoms' **operating losses**.

Table 1 represents the interplay between actual and allowed for the state of Madhya Pradesh.

Table 1: Variation between 'actual' and 'allowed' expenses and revenues for a discom

All amounts in INR crore

	Particulars	Claimed by discoms (Actual)	Allowed – by SERC (Normative)
EXPENSES	**Power purchase (including transmission charges)**	**25,587**	**24,294**
	Net operation and maintenance expenses	3,306	2,862
	Depreciation charges	**814**	**363**
	Interest and financing charges on project loans	348	411
	Interest on working capital loans	204	78
	Other Expenses[1]	**1,478**	**824**
	Total expenses (A)	31,737	28,832
INCOME	Tariff income	19,063	18,536
	Non-tariff and other income (excluding delayed payment surcharge)	615	1,336
	Subsidies	6,736	6,736
	Total income (B)	26,414	26,608
	Revenue gap (C=A-B)	5,323	2,224

Note 1: Other expenses include interest on consumer security deposits, return on equity, bad and doubtful debts, etc.
Note 2: The highlighted cells indicate items causing a major difference between actual and allowed.

Operating losses are a result of discom inefficiencies on the technical and commercial front as well as regulatory norms. These losses accumulate over time and adversely affect discoms' net worth.

Source: MPERC (2021a)

Primer on discom accounts - key terminologies

Accumulated losses represent the difference between discoms' expenses and income over time as per the audited balance sheets. Rising accumulated losses indicate unviable operations, and such losses adversely impact the net worth of the discom. They also create cash-flow issues for discoms, leading to frequent delays in payments to generators. The net expenses disallowed by SERC in Table 2 (see 'e') is a subset of losses incurred over a year.

Revenue gap (RG) or regulatory assets (RA) are the costs incurred by discoms' and allowed by SERCs for recovery through future tariffs. These are part of the accumulated losses of discoms. Rising RG or RA also creates cash-flow issues and results in a stretched working capital cycle. Table 2 depicts the interplay of the revenue gap and accumulated losses. The admitted revenue gap in Table 2 (see 'd') represents RG or RA for a year.

Outstanding debt includes loans to fund project costs, meet working capital needs, and service legitimate losses allowed by the commission (RG or RA). Discoms' also take loans to service losses disallowed by the commission.

Table 2: The complex interplay between discoms' allowed and disallowed expenses

Particulars	ID	Amount (in INR crore)
Total expenses claimed by discoms	a	31,737
Expenses allowed by SERC	b	28,832
Revenue recovered as per SERC	c=i+ii+iii	26,608
Allowed recovery through tariff income	i	18,536
Non tariff and other incomes	ii	1336
Subsidy from government of MP	iii	6,736
Admitted revenue gap	**d=b-c**	**2,224**
Net expenses disallowed by SERC	**e=a-b**	**2,905**

Source: Authors' compilation from MPERC (2021a)

Data unavailability and implications for the existing UDAY regulatory treatment (Approach A)

Under the UDAY scheme, 75 per cent of the discom's debt (as on 30 September 2015) is to be converted into grant (revenue and capital) and equity by the state governments

SERCs didn't have visibility on the extent of loans taken over against the discoms allowed (basically RG or RA) and disallowed expenses.

In the absence of complete data, clear directions under UDAY, and mounting revenue gap or regulatory asset (RG or RA), SERCs based on certain assumptions adjusted (either fully or partially) debt takeover under UDAY against RG or RA.

This resulted in disproportionate distribution of benefits amongst consumers and discoms.

Our review of regulatory treatments by different SERCs suggest that SERCs did not take into consideration the actual break-up of grant and equity.

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Financial principles for the regulatory treatment of the UDAY debt takeover (Approach B)

The debt taken over by state governments under the UDAY scheme was converted into grants and equity. In the absence of details on the takeover/conversion of loans against RG or RA, SERCs can adopt the following widely accepted financial principles to adjust the grants and equity provided under the UDAY scheme:

Equity cannot be adjusted against RG or RA

Equity represents shareholders' contribution to the business. Against equity investments, shareholders earn returns on equity (RoE) and absorb any losses after payments are made to operational and financial creditors. Equity, as per accounting norms, cannot be adjusted against future revenue recovery as captured under RG or RA. Alternatively, equity infusion under UDAY could allow for an improvement in the accumulated negative net worth. This can improve discoms' payment cycles and allow for timely payments to generators.

Grants under the UDAY scheme can be adjusted against RG or RA but with some differentiation

Revenue grants are equivalent to the revenue subsidies provided by the state government. To avoid double recovery from consumers, they should be deducted from RG or RA. The benefits could be directly passed on to consumers in the form of lower tariffs in the subsequent years.

Capital grants support the capital expenses undertaken by discoms. These grants can be deducted against the chargeable gross fixed assets (GFA) of discoms. This will lower depreciation and interest costs in the average revenue recovered from consumers.

Debt pending takeover under UDAY, or taken over but not yet converted into grants/ equity, cannot be adjusted against RG or RA

The remaining debt needs to be first converted to grants or equity, as per the UDAY MoU. Once the grant/equity is received by the discom, it should be adjusted against RG or RA as per financial principles.

Approaching the regulatory treatment based on financial principles (Approach B)

Following Approach B, the UDAY scheme benefits can be equitably distributed among discoms and consumers.

Figure 4: **Undertaking regulatory adjustment based on widely accepted accounting practices**

Equity

No adjustment against Revenue gap (RG) or regulatory asset (RA).Return on equity to be provided as per norms

Revenue grant

To be fully adjusted to the extent of RG or RA

Loans pending conversion

To be adjusted post conversion into grant and/or equity

Capital grant

To be adjusted against gross fixed asset (GFA)

Source: Authors' depiction

Note: Return on equity can be provided to discoms based on the normative level.

Actual debt converted into equity/grants/loans has been sourced from Comptroller and Auditor General of India (CAG) orders, SERC's true-up orders, and discoms' audited accounts.

Impact under Approaches A and B

UDAY debt taken over across states – magnitude and criteria – MoU vs actual numbers

What is the impact of Approaches A and B on discoms and consumers? (Use case of Madhya Pradesh and Rajasthan)

Summary for all 15 states

Image: iStock

Madhya Pradesh: Background

Table 3: Data for the UDAY debt takeover and its break-up is not consistent across sources

All amounts in INR crore

<table>
<tr><th>Particulars[1]</th><th>Per UDAY MoU</th><th>Per true-up order</th><th>Per audited balance sheet[2]</th><th>Per the CAG audit report</th></tr>
<tr><td>Total debt to be taken over</td><td>26,055</td><td>26,055</td><td>26,055</td><td>26,055</td></tr>
<tr><td>Revenue grants</td><td rowspan="2">18,487</td><td rowspan="2">5,122</td><td>5,744</td><td rowspan="2">4,622</td></tr>
<tr><td>Capital grants</td><td>170</td></tr>
<tr><td>Equity</td><td>7568</td><td>7,568</td><td>6,809</td><td>7,568</td></tr>
<tr><td>Pending loan takeover/ conversion</td><td>-</td><td>13,365</td><td>13,332</td><td>13,865</td></tr>
</table>

There is no clarity about who will bear interest cost of the loans pending takeover: discoms, consumers or the state government

MP govt's take on the pending loan takeover (as submitted to the CAG)

"Government stated (December 2019 and March 2021) that certain parameters were stipulated in the MoU to make DISCOMs eligible for transfer of amount and the DISCOMs could not fulfill the parameters as envisaged. Further, keeping in view other priorities (like debt waiver to farmers, decrease in electricity charges, paying suitable price for crops to farmers, etc.) and requirements to comply with various financial and fiscal targets set under FRBM Act, no amount was transferred to DISCOMs as per MoU under UDAY."

Source: CAG (2021)

Criteria for debt takeover as per UDAY MOU

"In the order of Non-capex GoMP debt, followed by other debts with highest cost"

Source: Ministry of Power, Government of Madhya Pradesh, and MPPMCL (2016)

Source: Authors' compilation from the Ministry of Power, Government of Madhya Pradesh, and MPPMCL (2016); CAG (2021); MPERC (2021c); and MPEZ (2020) .

Note 1: Reasons for variations in the debt takeover break-up across different sources were not available.

Note 2: A few balance sheets were not available in the public domain; the debt break-up is subject to revision.

Madhya Pradesh: Regulatory treatment based on Approach A

Table 5: [Approach A] MPERC has adjusted INR 13,610 crore against the revenue gap in view of debt takeover under UDAY

Parameters	ID	Amount (INR crore)	Approach A treatment
Revenue gap till FY 2015	a	13,610	**MPERC adjusted the UDAY debt takeover provided as grant/equity (see - 'i'). The revenue gap till FY 2015 (INR 13,610 crore) gets completely net off against the UDAY debt takeover.**
Revenue gap between FY 2016 - FY 2020	b	2,940	
Revenue gap till FY 2020	c=a+b	16,550	
Debt to be takeover under UDAY	d	26,055	
Debt takeover as grant/equity under UDAY	e	12,690	
Debt remaining as loans owed to MP state government	f=d-e	13,365	
UDAY grant against future year losses for FY 2018	g	253	
UDAY grant against future year losses for FY 2019	h	730	
UDAY grant adjusted against revenue gap till FY 2020	i=e+g+h	13,610	
Revenue gap till FY 2020 (after UDAY debt take-over adjustment)	j=c-i	2,940	

Source: Authors' analysis from MPERC (2021a; 2021b; 2021c) , MPEZ (2020; 2021) and MPPKVVCL (n.d., 2018; 2019a; 2019b;2020)).

Note 1: MPERC: Madhya Pradesh Electricity Regulatory Commission.

Note 2: "Revenue gap till FY 2015" is as admitted by the commission in true-ups of FY 2008–09 to FY 2014–15 – i.e., prior to the start of UDAY – and is allowed recovery through tariff orders issued after the loan is taken over in FY 2015–16 to FY 2021– 22.

Note 3: "Revenue gap till FY 2020" consists of the cumulative true-up revenue gap of FY 2015–FY 2018 (INR 13,414 crore), FY 2019 (INR 438 crore), and FY 2020 (INR 2,698 crore). MPERC has considered the impact of the UDAY debt takeover on these three revenue gaps separately. However, to simplify, we have aggregated the revenue gap in our computation.

Madhya Pradesh: Regulatory treatment based on Approach B

Table 5: [Approach B] Following financial principles, we suggest an adjustment of INR 5,744 crore against the revenue gap

Parameters	iD	Amount (INR crore)	Approach B treatment
Revenue gap till FY 2015	a	13,610	**Under Approach B treatment, only revenue grants (see 'i') have been adjusted against the revenue gap till FY 2020 (see 'c'). The UDAY grant against future year losses for FY 2018 and FY 2019 of INR 983 crore will not be used for adjustment against the revenue gap till FY 2015.**
Revenue gap between FY 2016 and FY 2020	b	2,940	
Revenue gap till FY 2020	c=a+b	16,550	
Debt to be takeover under UDAY	d	26,055	
Portion of "UDAY debt takeover" provided as a revenue grant	e	5,744	
Portion of "UDAY debt takeover" provided as a capital grant	f	170	
Portion of "UDAY debt takeover" provided as equity	g	6,810	
Debt remaining as loans owed to MP state government	h=d-e-f-g	13,331	
UDAY grant adjusted against revenue gap till FY 2020	i=e	5,744	
Revenue gap till FY 2020 (after UDAY debt takeover adjustment)	j=c-i	10,807	

Source: Authors' analysis from MPERC (2021a; 2021b; 2021c) , MPEZ (2020; 2021) and MPPKVVCL (n.d., 2018; 2019a; 2019b;2020).

Note 1: "Revenue gap till FY 2015" is as admitted by the commission in true-ups of FY 2008– 09 to FY 2014–15, prior to the start of UDAY, and is allowed recovery through tariff orders issued after the loan is taken over in FY 2015–16 to FY 2021–22.

Note 2: "Revenue gap till FY 2020" consists of the cumulative true-up revenue gap of FY 2015–FY 2018 (INR 13,414 crore), FY 2019 (INR 438 crore), and FY 2020 (INR 2,698 crore). MPERC has considered the impact of the UDAY debt takeover for these three revenue gaps separately. However, for simplicity, we have aggregated the revenue gap in our computation.

Note 3: For FY 2020, the annual report was not available for the central discom. Additionally, for FY 2021, annual reports were not available for central and western discoms.

Note 4: Capital grants need to be adjusted by MPERC in upcoming tariff filings and orders.

Rajasthan: Background

Table 6: Audited accounts provide a break-up of the grants against the UDAY debt takeover

All amounts in INR crore

<table>
<tr><th>Particulars</th><th>Per UDAY MoU</th><th>Per true-up orders[1]</th><th>Per audited balance sheets</th><th>Per CAG audit reports</th></tr>
<tr><td>Total debt to be taken over</td><td>62,422</td><td>62,422</td><td>62,422</td><td>62,422</td></tr>
<tr><td>Revenue grant</td><td rowspan="3">Not specified</td><td rowspan="2">41,501</td><td>42,726</td><td rowspan="2">46,816</td></tr>
<tr><td>Capital grant</td><td>4,090</td></tr>
<tr><td>Equity</td><td>11,700</td><td>15,606</td><td>15,606</td></tr>
<tr><td>Pending loan takeover/conversion</td><td>-</td><td>9,221</td><td>-</td><td>-</td></tr>
</table>

Criteria for debt takeover as per UDAY MoU

"In the order of debt already due, followed by debts with highest cost"

The UDAY MoU provides lender name, RoI, the nature of the loan, repayment start year, residual debts, and the outstanding loan amount.

Source: Authors' compilation from Rajasthan's (RJ) UDAY MoU, CAG audit report for RJ for FY 20, true-up orders for FY 17 to FY 21, and audited balance sheets for FY 20.
Note: 1. We could not locate equity (INR 3,906 crore) and grants (INR 5,315 crore) in regulatory accounts.

Rajasthan: Regulatory treatment based on Approach A

Table 7: [Approach A] RERC has adjusted INR 15,840 crore against the unfunded revenue gap in view of debt takeover under UDAY

Parameters	ID	Amount (INR crore)	Approach A treatment
RERC-approved unfunded revenue gap till FY 2016	a	51,867	RERC adjusted the UDAY debt takeover under ID c against the revenue gap till FY 2016 (see 'a'). The RERC has adjusted the UDAY debt takeover only to the extent of INR 15,840 crore (and not the entire UDAY debt takeover of INR 62,422 crore) against the revenue gap, but the reasoning for such a treatment could not be found. Based on this, discoms' unfunded revenue gap was reduced from INR 51,867 crore to INR 36,027 crore.
Debt to be takeover under UDAY	b	62,422	
UDAY debt takeover adjusted against revenue gap	c	15,840	
Revenue gap (after UDAY debt takeover adjustment)	d=b-c	36,027	

Source: RERC Retail Tariff Order for FY 2017.
Note: RERC: Rajasthan Electricity Regulatory Commission

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Rajasthan: Regulatory treatment based on Approach B

Table 8: [Approach B] Following financial principles, we suggest an adjustment of INR 42,726 crore against the unfunded revenue gap

Parameters	ID	Amount (INR crore)	Approach A treatment
Commission-approved unfunded revenue gap till FY 2016	a	51,867	Under Approach B treatment, only revenue grants (see ‘f’) have been adjusted against the revenue gap till FY 2016 (see ’a’). Based on this, the discoms’ unfunded revenue gap has reduced from INR 51,867 crore to INR 9,141 crore.
Debt to be taken over under UDAY	b	62,422	
Portion of "UDAY debt takeover" provided as a revenue grant	c	42,726	
Portion of "UDAY debt takeover" provided as a capital grant	d	4,090	
Portion of "UDAY debt takeover" provided as equity	e	15,606	
UDAY grant to be adjusted against revenue gap	f = c	42,726	
Revenue gap (after UDAY debt takeover adjustment)	g=a-f	9,141	

Source: Authors’ analysis from RERC true-up orders for FY 17–FY 21, discoms’ annual reports (FY 16 to FY 20), and CAG audit report for FY 20.
Note: Capital grants, if not already adjusted, need to be adjusted by RERC in upcoming tariff filings and orders.

Summary: States that should revisit the regulatory adjustment based on Approach B

The Approach B methodology strengthens discoms' balance sheets and further helps augment their investments under the *Reformed Distribution Sector* (RDS) scheme. For detailed state-wise computation, see the accompanying excel sheet.

Table 9: Summary of treatment of revenue grants

All amounts in INR crore

State	RG or RA as per Approach A (1)	RG or RA as per Approach B (2)	Change in discoms' financial position (3 = 2-1)
Rajasthan (RJ)	36,027	9,141	(26,886)
Madhya Pradesh (MP)	2,940	10,807	7,867
Uttar Pradesh (UP)	(13,337)	17,247	30,584
Tamil Nadu (TN)	8,069	21,758	13,689
Jharkhand (JH)	(180)	5,956	6,136

Source: Authors' analysis

For the states of MP, UP, TN, and JH, INR 55,768 crore (see column 2 in Table 9) will have to be recovered from consumers via regulatory assets/surcharges, tariff hikes, and pending loan conversion from state governments to grants and/or equity.

For Rajasthan, the consumers will benefit, and INR 26,886 crore will be reduced from the unfunded revenue gap. This will also result in a reduced interest cost burden on the unfunded revenue gap.

Table 10: Treatment of capital grant

All amounts in INR crore

State	Amount
RJ	4,090
MP	170
UP	7,321
TN	0
JH	0

Source: Authors' analysis
Note: Amounts are subject to change based on the pending loan conversion

Capital grants for the respective states can be deducted against the chargeable gross fixed assets (GFA) of the discoms. This will result in a lowering of depreciation and interest costs and ultimately of tariffs for consumers.

Table 11: Treatment of equity

All amounts in INR crore

State	Amount
RJ	15,606
MP	6,810
UP	9,783
TN	0
JH	0

Source: Authors' Analysis.
Note: Amounts subject to change based on the pending loan conversion

The return on equity must be provided by SERCs to the discoms up to normative levels.

Summary: States requiring closer examination, consultations and more data (except Chhattisgarh)

Table 12: Summary of debt takeover and regulatory treatment by SERCs

All amounts in INR crore

State / Parameter	Debt conversion				SERC's UDAY debt takeover treatment	Remarks
	Equity	Capital grants	Revenue grants	Loan takeover/ conversion pending		
Andhra Pradesh	-	8,256	-	636	SERC has not undertaken any treatment	Capital grants treatment has to be done as per Approach B. This will result in reduced tariffs for consumers.
Chhattisgarh	-	870	-	-	SERC has undertaken treatment against capital grants	SERC's treatment is as per Approach B. The benefits have been passed on to consumers in the form of reduced tariffs.
Maharashtra	-	-	4,960	-	SERC has not undertaken any treatment	Revenue grants treatment has to be done as per Approach B. This will result in reduced tariffs for consumers.
Bihar	-	2,332	-	-	The UDAY debt takeover was used to pay off (1) power purchase liabilities (PPL) and (2) REC project loans. SERC did not do any treatment for (1), whereas treatment for (2) is not clear.	Incomplete data to draw a conclusion

Source: Authors' analysis based on UDAY MoU, UDAY portal, CAG audit reports, SERCs' tariff and true-up orders, and discoms' audited accounts.
Note: J&K has been excluded from our analysis due to a lack of data in the public domain.

Summary: States requiring closer examination, consultations and more data (except Chhattisgarh)

Table 12: Summary of debt takeover and regulatory treatment by SERCs

All amounts in INR crore

State / Parameter	Debt conversion				SERC's UDAY debt takeover treatment	Remarks
	Equity	Capital grants	Revenue grants	Loan takeover/ conversion pending		
Assam	283		849	-	SERC deducted the grant against the regulatory loan bucket; the treatment was not clear	Approach B cannot be applied due to the unavailability of a break-up of debt into capital and revenue grants
Haryana	25,950	-	-	-	SERC has not undertaken any treatment	The state converted the entire debt takeover into equity, which is not in line with the provisions of the UDAY MoU
Himachal Pradesh	-	-	-	2890	SERC has not undertaken any treatment	Approach B cannot be applied due to the unavailability of a break-up of debt into capital and revenue grants
Punjab	15,628	-	-	-	SERC deducted the capital grant against the regulatory loan bucket	The state converted the entire debt takeover into equity, which is not in line with the provisions of the UDAY MoU
Meghalaya	31		94	-	SERC has not undertaken any treatment	Approach B cannot be applied due to the unavailability of a break-up of debt in capital and revenue grants
Telangana	7,723	-	-	1,206	SERC adjusted the UDAY debt takeover savings in the form of a reduction in depreciation and interest costs. The computation of the same was not clear.	The state converted the entire debt takeover into equity, which is not in line with the provisions of the UDAY MOU

Source: Authors' analysis based on UDAY MoU, UDAY portal, CAG audit reports, SERCs' tariff and true-up orders, and discoms' audited accounts.
Note - J&K has been excluded from our analysis due to a lack of data in the public domain.

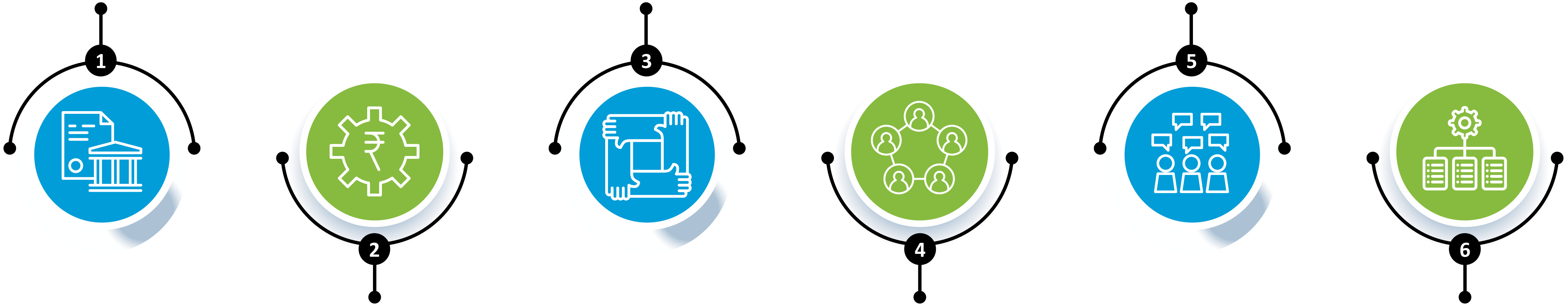
Recommendations and limitations

Recommendations for MOP, state governments, SERCs, and discoms

Limitations of the study

Image: iStock

Recommendations



1. **The Ministry of Power (MoP),** as a signatory to the UDAY MoU, should consider sharing a guidance note with state governments, discoms, and state electricity regulatory commissions (SERCs) to effect the pending takeover of debt and revisit the regulatory treatment of the UDAY debt takeover.

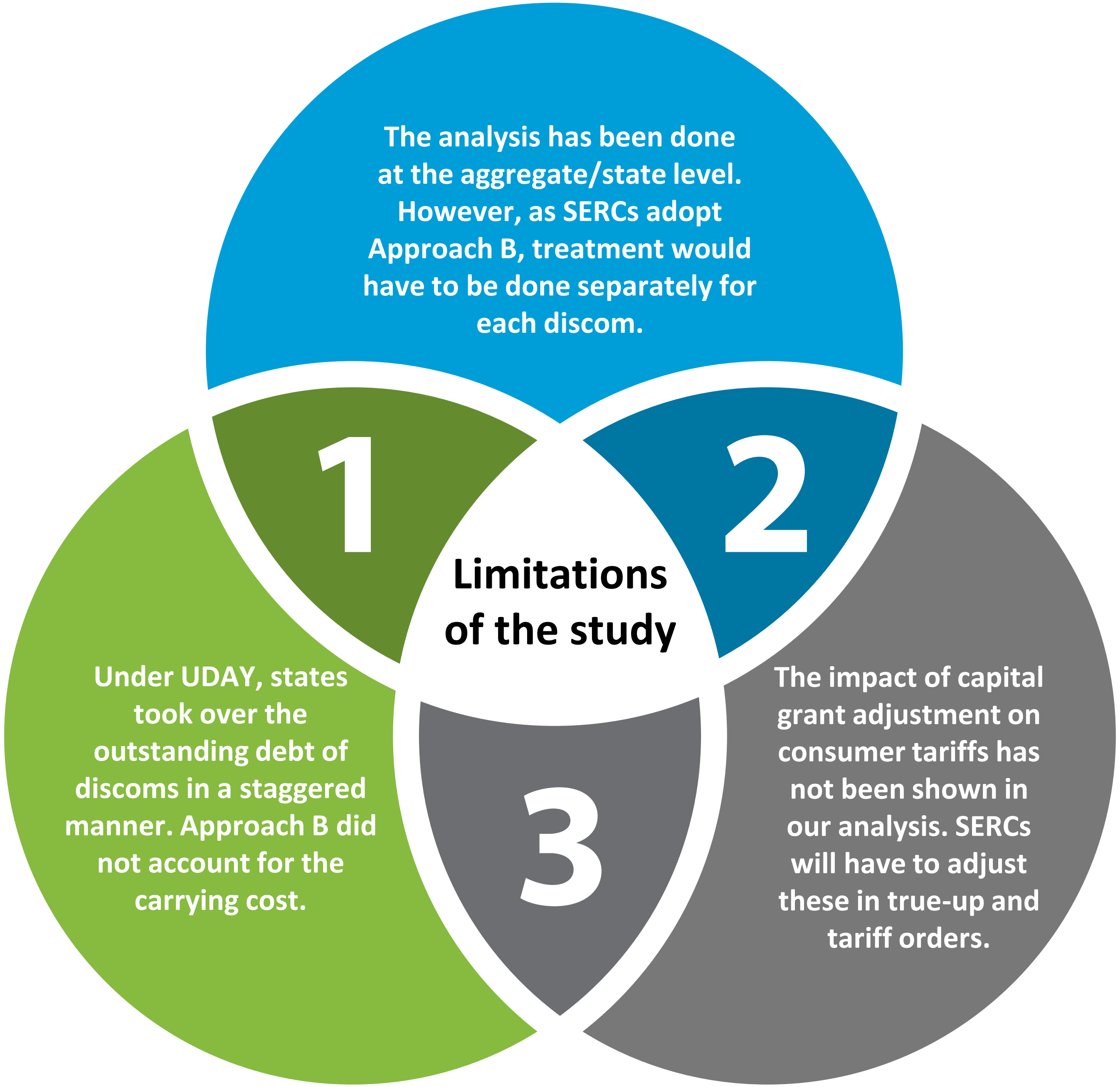
2. **The state governments** in the seven states of Uttar Pradesh, Tamil Nadu, Madhya Pradesh, Telangana, Andhra Pradesh, Jharkhand, and Himachal Pradesh should convert debt worth INR 47,672 crore into grants and/or equity.

3. SERCs should consider adopting Approach B for the **regulatory treatment of the UDAY debt takeover** and equitable distribution of benefits among discoms and consumers. This will require discoms, state govt. and SERCs to work together for the timely recovery of accumulated RG or RA via refinancing of regulatory asset, regulatory surcharges and tariff hikes.

4. **All stakeholders (the MOP, state governments, discoms, and SERCs)** should work in close coordination during the designing and implementation of various such financial schemes.

5. **The Forum of Regulators** should be used as a common platform to decide on such matters that need continuous national and state-level dialogue. Other issues with financial implications such as the pass-through of smart metering costs and tariff rationalisation need to be taken up.

6. Finally, **discoms** need to invest in data-management practices to improve the quality of financial and operational data.


The analysis has been done at the aggregate/state level. However, as SERCs adopt Approach B, treatment would have to be done separately for each discom.
1
2
Limitations of the study
Under UDAY, states took over the outstanding debt of discoms in a staggered manner. Approach B did not account for the carrying cost.
3
The impact of capital grant adjustment on consumer tariffs has not been shown in our analysis. SERCs will have to adjust these in true-up and tariff orders.

Acronyms

ACS	Average Cost of Supply
APTEL	Appellate Tribunal for Electricity
ARR	Average Revenue Recovered
AT & C	Aggregate Technical and Commercial
CAG	Comptroller and Auditor General of India
Discoms	Distribution Companies
FoR	Forum of Regulators
FY	Financial Year
GFA	Gross Fixed Assets
GoI	Government of India
INR	Indian rupee
J&K	Jammu and Kashmir
JH	Jharkhand
MoP	Ministry of Power
MoU	Memorandum of Understanding
MP	Madhya Pradesh
MPERC	Madhya Pradesh Electricity Regulatory Commission
RA	Regulatory asset
RDSS	*Revamped Distribution Sector Scheme*
RERC	Rajasthan Electricity Regulatory Commission
RG	Revenue Gap
RJ	Rajasthan
RoE	Return on Equity
SERC	State Electricity Regulatory Commission
TN	Tamil Nadu
UDAY	*Ujwal Discom Assurance Yojana*
UP	Uttar Pradesh

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