



# Ujwal Discom Assurance Yojana

9<sup>th</sup> December, 2017

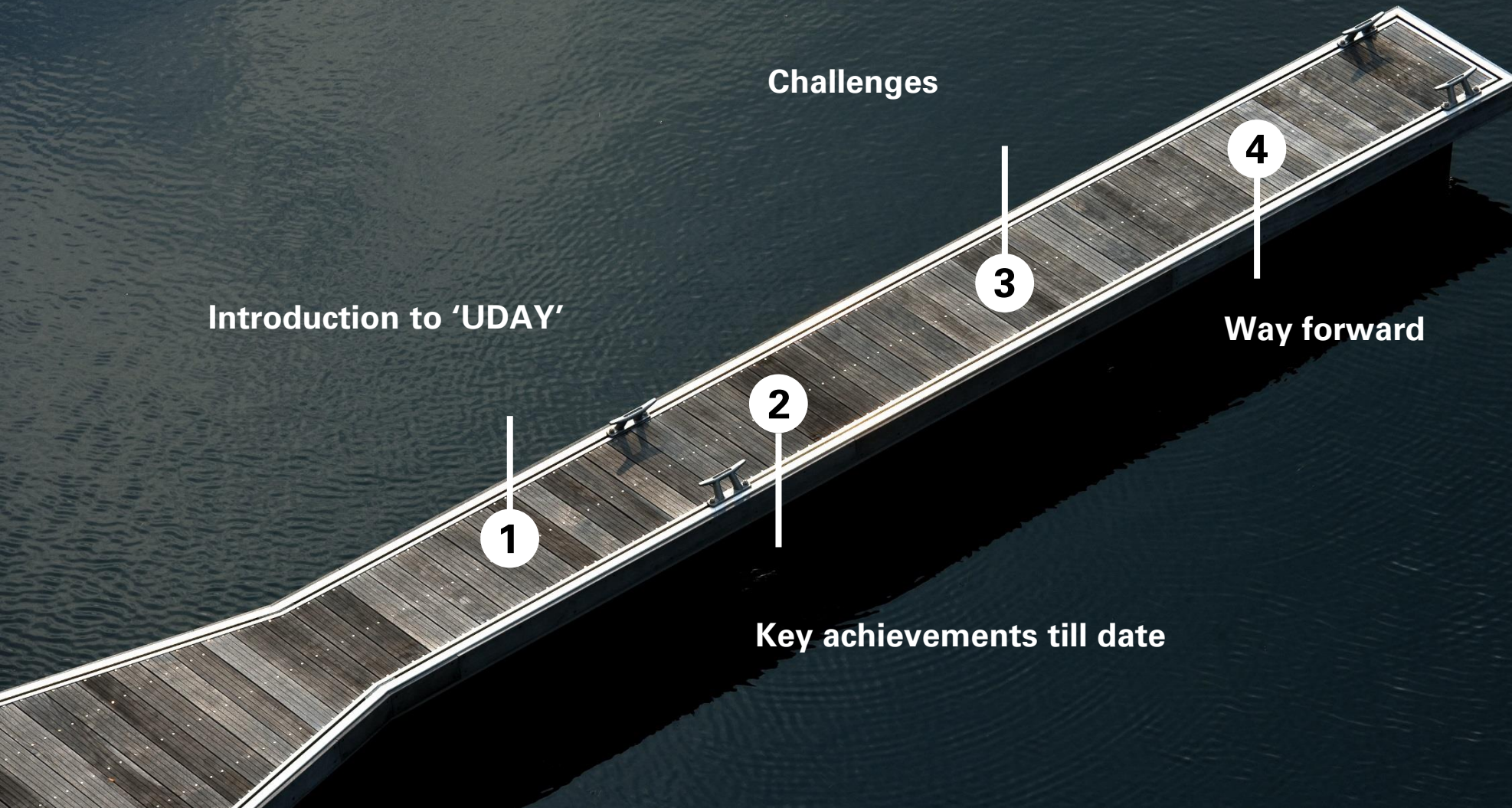


# DFID's Technical Assistance Programme

## *Supporting structural reforms in the Indian Power Sector*

- The UK's Department for International Development (DFID) has been supporting the power sector in India over the last two decades
- The Govt. of India has put in ambitious plans to deliver **24x7 Power for All** as well as a target of increasing **renewable energy generation capacity to 175 GW by 2022**. In order to meet its target, the government is taking several pro-active measures
- To support the reforms process further, UK Government and Government of India have now approved a Technical Assistance titled, "**Power Sector Reform Program**" to be delivered over the next four years to support at national and state level
- The objective is to achieve **improved efficiency, reliability and sustainability** of electricity supply, with an **increased share of renewable energy** in the mix

# Agenda



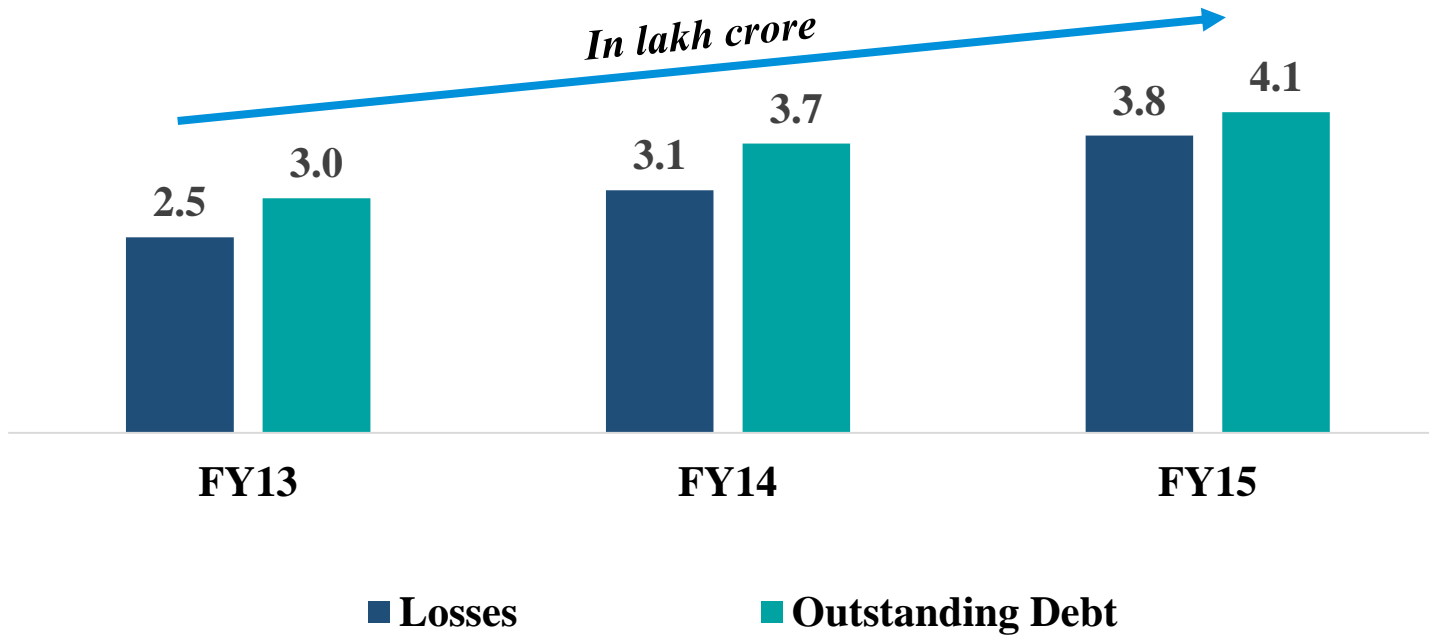
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# Introduction to 'UDAY'



# The genesis of UDAY

Accumulated losses and outstanding debt of DISCOMs  
(in lakh crores of rupees)



**Losses were funded primarily by debt. Total outstanding debt of distribution utilities was ₹ 4.1 lakh crore**

## High loss states

Rajasthan	0.81 lakh cr.
Uttar Pradesh	0.69 lakh cr.
Tamil Nadu	0.65 lakh cr.

## Sources of debt

Banks / FIs / Bonds / Debentures	90%
State Govt	10%

# Contours of UDAY

## Broad Contours of UDAY



- 75% of DISCOM debt issued as State Bonds and 25% as DISCOM Bonds
- Gradual takeover of future losses by states
- Bank / FI shall lend up to 25% of previous year annual revenue for working capital\*



- Reduce power purchase cost including coal reforms
- Reduce interest cost



- Metering
- Online feeder monitoring
- IT enablement
- Energy audit and theft reduction

## Indicators

**AT&C loss <15%**

**ACS-ARR Gap = Zero**

**Target by 2018-19**

## Outcome

- 24X7 Reliable and Affordable Power Supply
- Commercially Viable Discoms
- Less stress in the banking sector

\*DISCOMs may issue bonds, guaranteed by state govt, to meet losses, if any.

# Tri-partite MoUs: Comprehensive or Operational

## Government of India

- Increase in supply of domestic coal
- Rationalization of coal linkages, Coal swaps
- Rationalization of coal price based on GCV
- Correction of coal grade slippages
- Faster completion of ISTN lines

## State Government

- Clearance of state govt. dues
- Replacement of street lights with LEDs
- Improving state GENCOs efficiency
- Ensure electricity tariff hikes
- Reduce transmission losses

## DISCOM

- Reduce AT&C losses
- Eliminate ACS-ARR Gap by taking measures as agreed in the MoU
- Achieve operational milestone as per DDUGJY & IPDS
- Undertake measures for loss reduction like feeder segregation, DT & feeder metering, smart meter installation, implementing ERP system etc.
- Ensure timely tariff revision
- Increase employee engagement and customer service

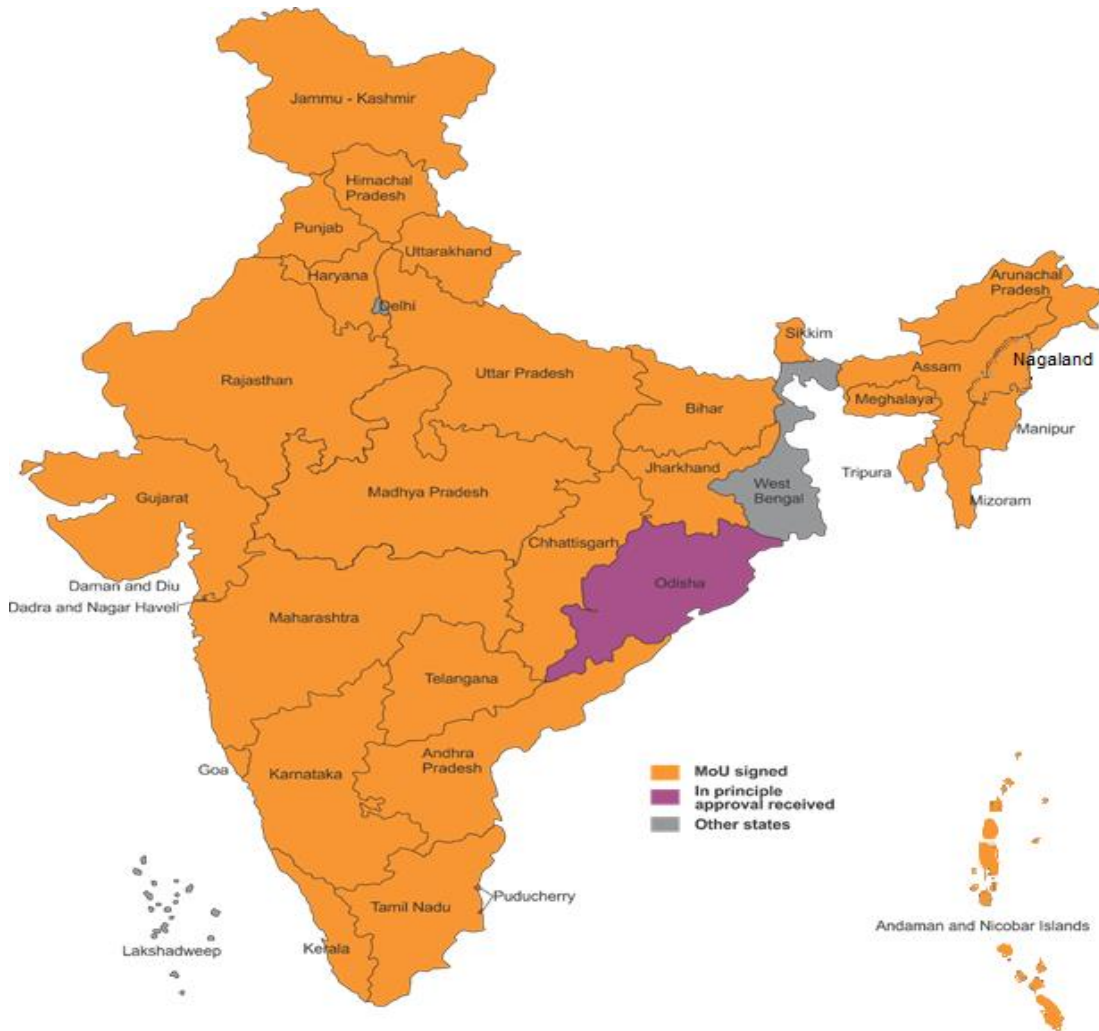
- Facilitating state governments to takeover DISCOMs' outstanding debt

- Takeover DISCOMs debt and issue non-SLR bonds to raise funds
- Takeover future losses of DISCOMs in a graded manner and provide them OFR support

- DISCOM to issue state government guaranteed bonds or get them converted to loans or bonds by Banks / FIs

Operational
Comprehensive

# 27 States and 4 UTs have joined UDAY so far



## MoU Signed - 31 States /UTs

<b>Comprehensive: (16)</b>	Jharkhand	Bihar	Uttar Pradesh	Himachal Pradesh
	Chhattisgarh	Jammu & Kashmir	Punjab	Telangana
<b>Operational: (15)</b>	Rajasthan	Madhya Pradesh	Haryana	Assam
	Tamil Nadu	Pradesh	Andhra Pradesh	Meghalaya
<b>Operational: (15)</b>	Gujarat	Maharashtra	Tripura, Sikkim	Puducherry, D&D, DNH, A&N Islands
	Karnataka	Uttarakhand	Kerala	Manipur, Mizoram, Arunachal Pradesh, Nagaland
	Goa			

*Nagaland, Andaman & Nicobar Islands, Dadra & Nagar Haveli and Daman & Diu joined UDAY on 20<sup>th</sup> Nov 2017 while Chandigarh, Lakshadweep and Odisha are going to join soon*

*Odisha and remaining UTs have indicated their willingness to participate in UDAY for operational improvements. The process for signing of MoUs are underway.*



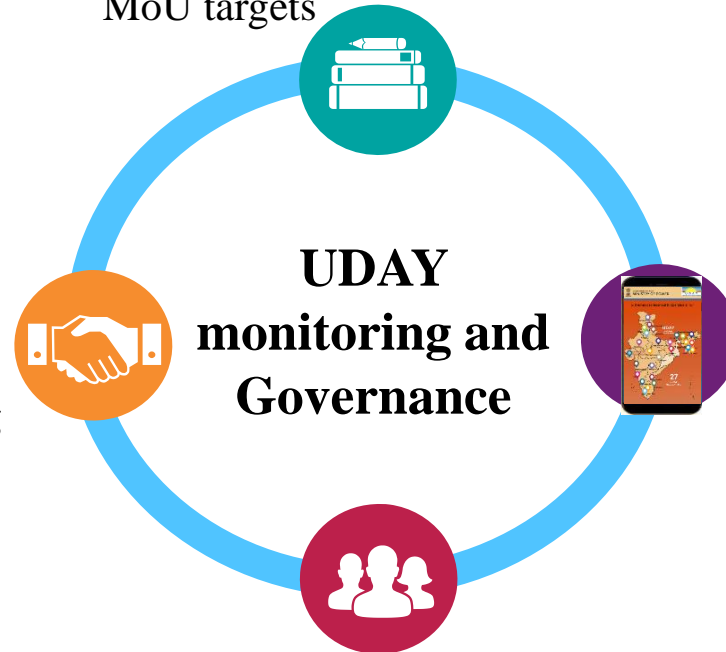
# Stringent and comprehensive monitoring framework of UDAY

## MoU and Action Plans

- Tripartite / Bipartite MoUs signed
- Action Plans prepared / being prepared by states to achieve MoU targets

## Review, Planning & Monitoring Focused Review Meetings

- Monthly reviews at central-, state- and DISCOM-levels
- Focused one to one review meeting with states



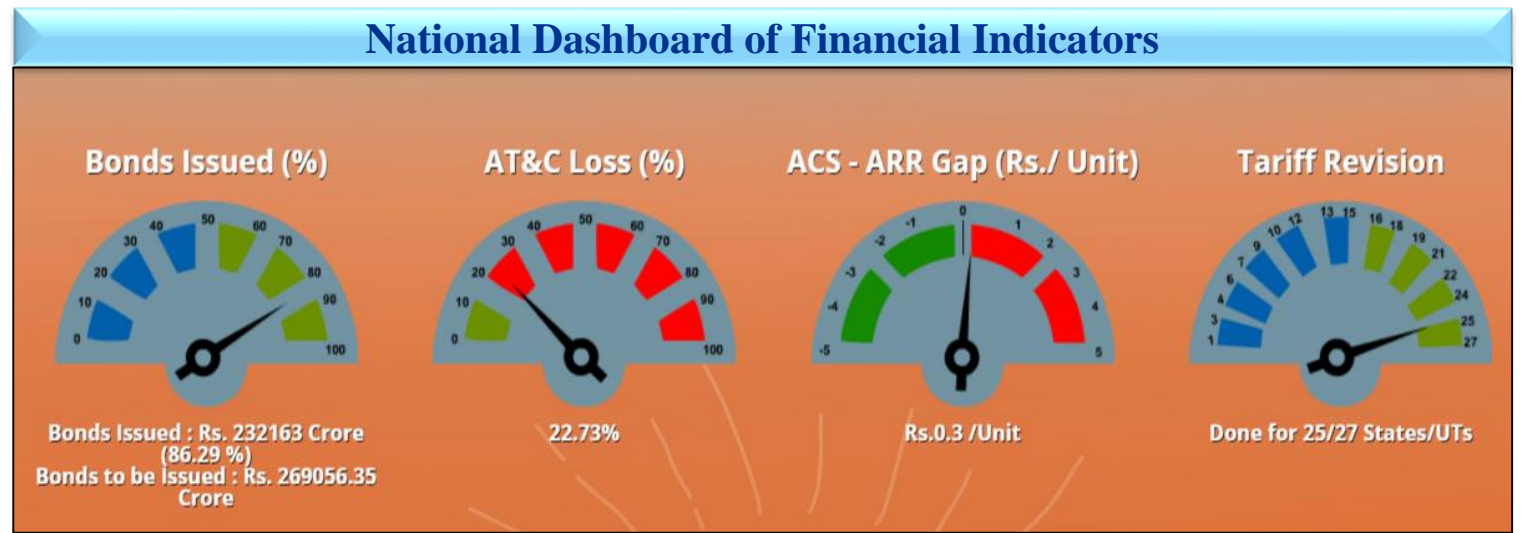
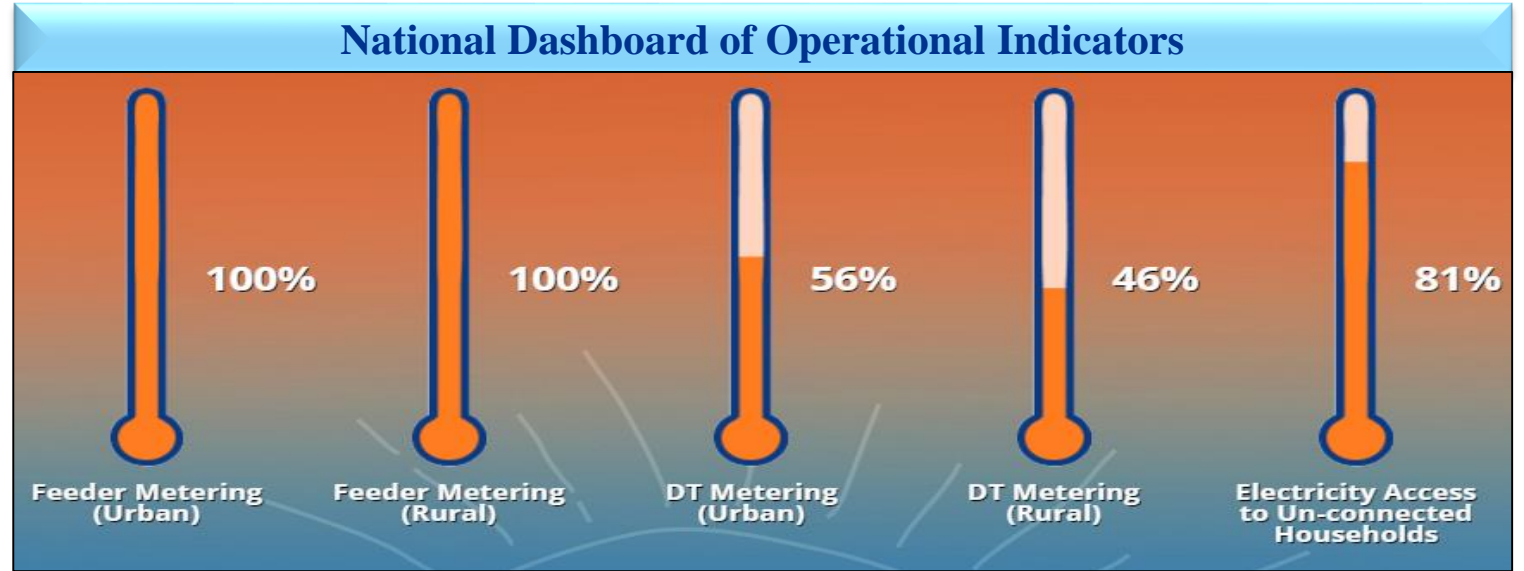
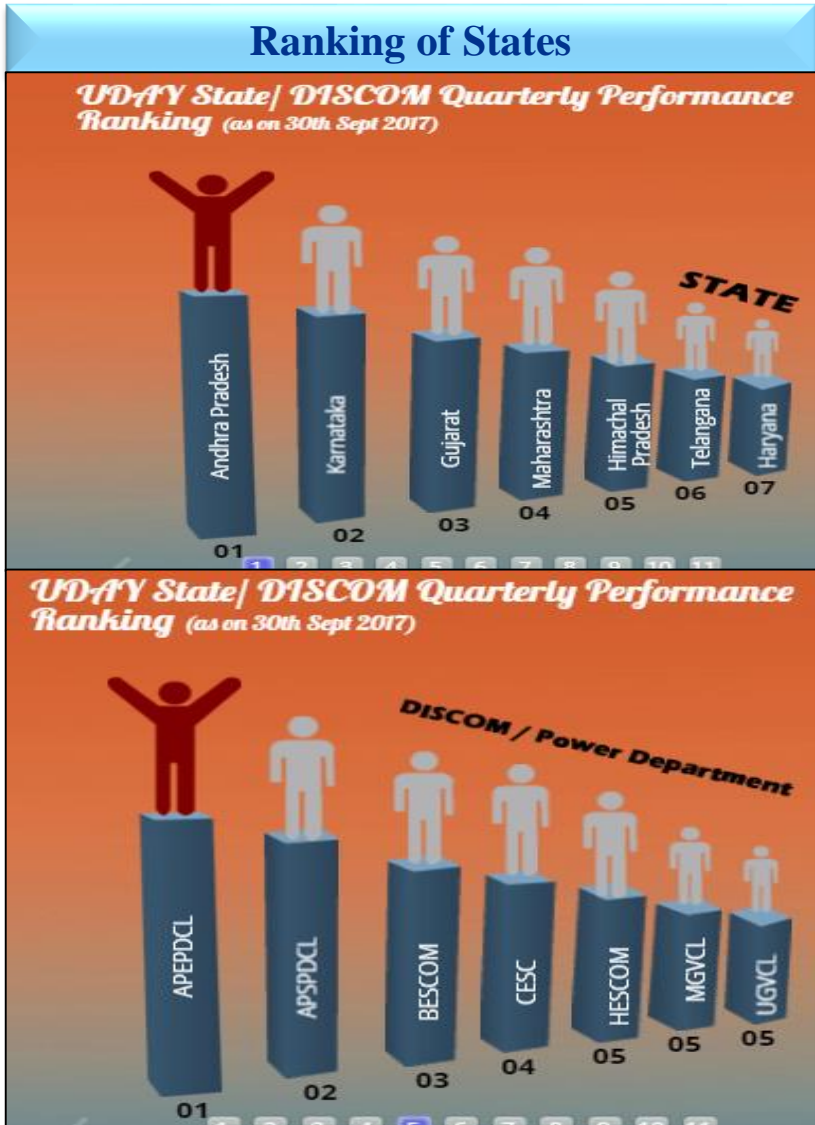
## UDAY Portal/App

- Monitoring through 26 parameters (monthly / quarterly)
- Increased transparency and accountability of DISCOMs

## Governance

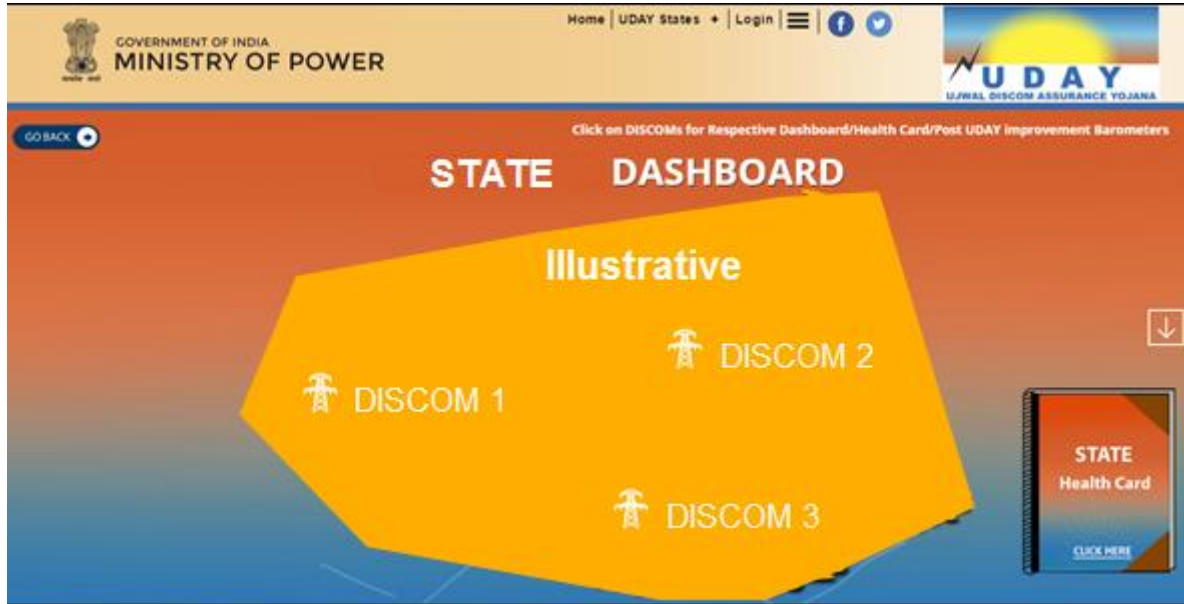
- UDAY Cell at GoI level and nodal officers at DISCOM level
- State Level Monitoring Committee
- DISCOM level Committee

# UDAY is monitored through dedicated web portal and accessible through mobile apps



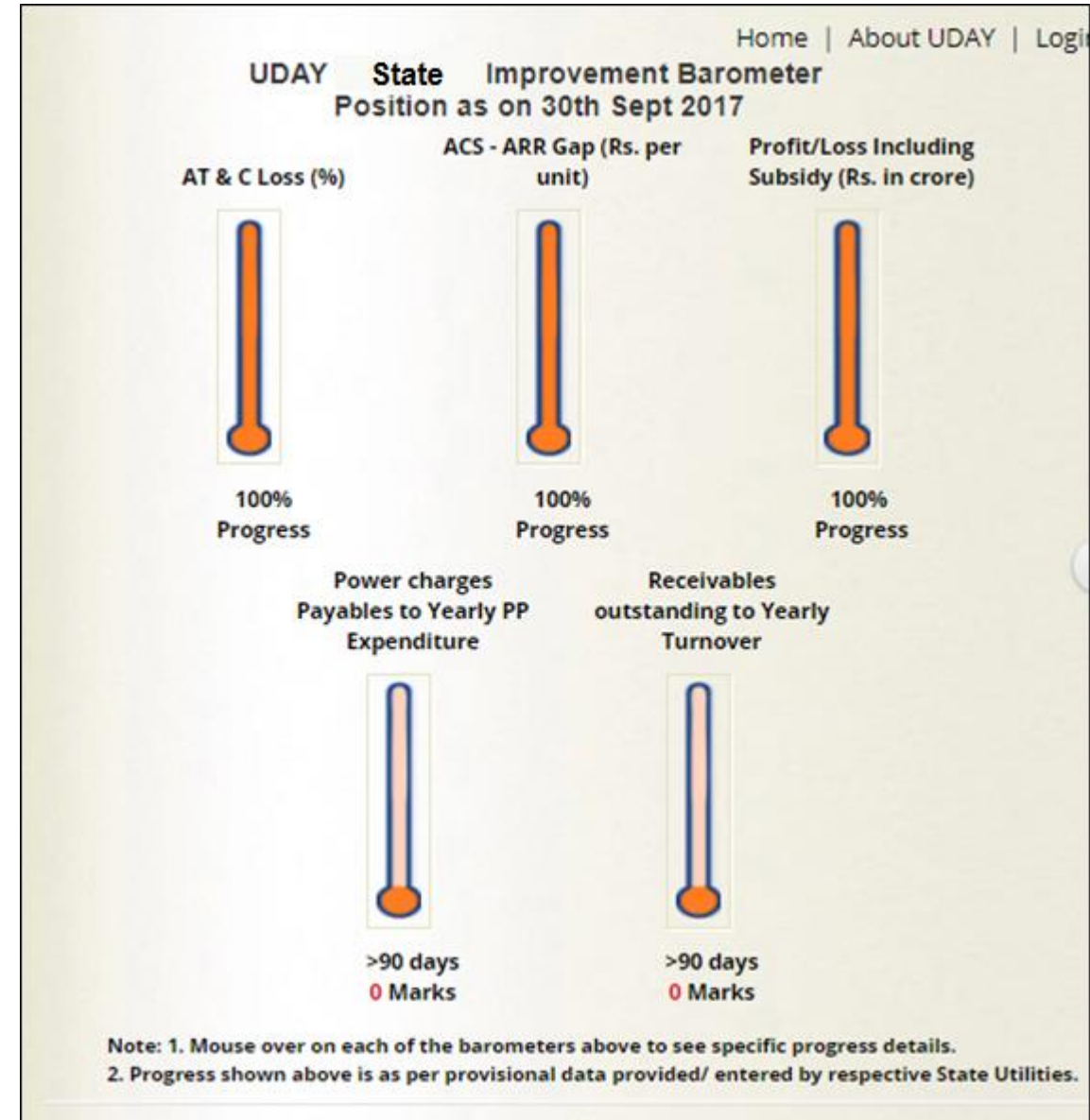
# State wise dashboard / health card

State wise summary of performance through a digital dashboard is available on the portal



## State and DISCOM wise health card

Improvement barometers signify the post UDAY cumulative progress made by state distribution sector on targets set against UDAY parameters.



# DISCOM wise dashboard / health card

The dashboard is presented as a two-page spread in a spiral-bound notebook. The left page (page 2) features a 'GO BACK' button at the top left and a title 'UDAY STATE - DISCOM1 DASHBOARD'. Below the title is a descriptive paragraph: 'It signifies the performance of the DISCOM as on date on major financial/Operational UDAY Parameters. The Dashboard represents the cumulative progress (i.e. Pre and Post signing of Moll under UDAY) made by the DISCOM on these parameters.' The right page (page 3) contains two gauge charts under the heading 'Parameters'. The first gauge is for 'AT & C Loss' with a value of 16.35%. The second gauge is for 'ACS - ARR Gap' with a value of Rs. -0.39 /Unit. A note at the bottom of the right page states: 'Note: Progress shown above is as per provisional data provided/ entered by respective State Utilities.' Navigation arrows are visible on both pages.

**UDAY STATE - DISCOM1 DASHBOARD**

*It signifies the performance of the DISCOM as on date on major financial/Operational UDAY Parameters. The Dashboard represents the cumulative progress (i.e. Pre and Post signing of Moll under UDAY) made by the DISCOM on these parameters.*

**Parameters**

**AT & C Loss**

16.35%

**ACS - ARR Gap**

Rs. -0.39 /Unit

Note: Progress shown above is as per provisional data provided/ entered by respective State Utilities.



**Focus under  
UDAY**

**A. Reviews by:**

1. Hon'ble Prime Minister
2. Hon'ble Power Minister
3. Power Ministers' conference

**B. Central Monitoring Committee meetings**

**C. Review Planning and Monitoring meetings**

**D. Focused review meetings with states and state visits**

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# Key achievements till date



# Performance snapshot as on FY17



**~Rs. 15,906 Cr.**

**Reduction in losses**

*From Rs. 51,589 Cr in FY16 to Rs. 35,683 Cr. in FY17*



**2% Improvement in Billing Efficiency**

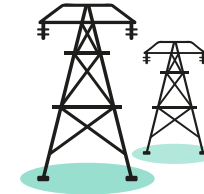
*From 81% in FY16 to 83% in FY17*



**~17 paisa/kWh**

**Reduction in ACS-ARR Gap**

*From 60 paise / kWh in FY16 to 43 paise / kWh in FY17*



**1% Decrease in AT&C Losses**

*From 21% in FY16 to 20% in FY17*



**~Rs. 15,000 Cr. Estimated savings in interest cost till March 2017**



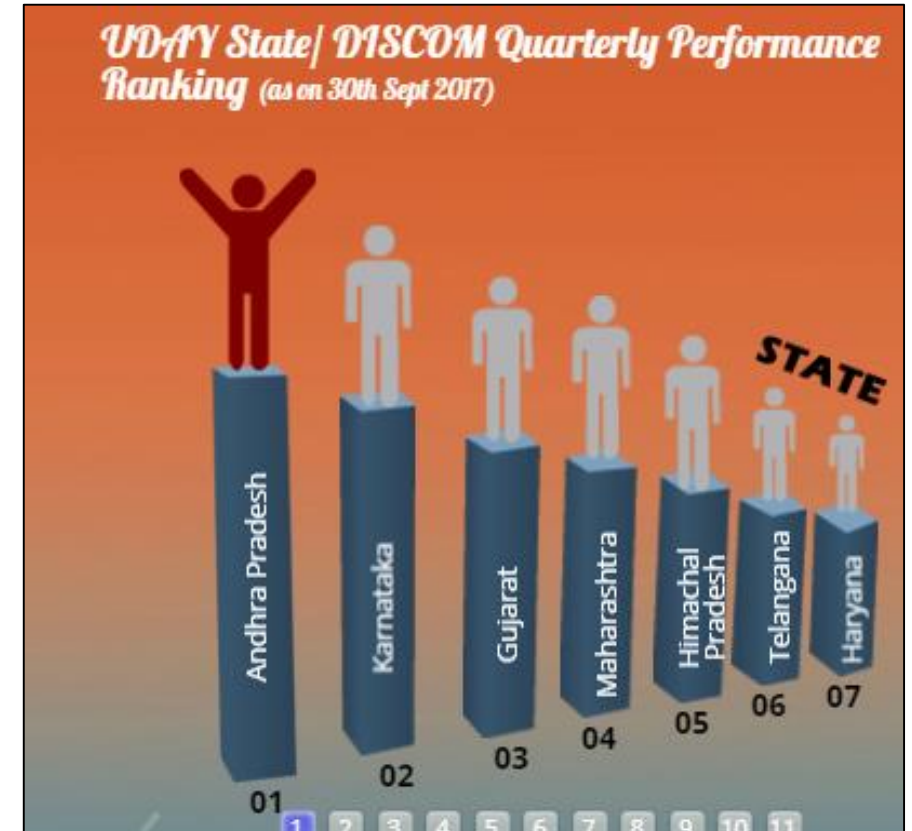
**97% Feeders Metered; and 58% DTs Metered**

# State rankings...

**Andhra Pradesh, Karnataka, Gujarat and Maharashtra are overall top performers till Q1FY18**

Parameter	Best performing States (Data as on 31 <sup>st</sup> March 2017)
<b>AT&amp;C Loss</b>	<ol style="list-style-type: none"> <li>1. Andhra Pradesh (<b>11%</b>)</li> <li>2. Karnataka (<b>15%</b>)</li> <li>3. Gujarat (<b>12%</b>)</li> <li>4. Maharashtra (<b>19%</b>)</li> </ol>
<b>ACS-ARR gap</b>	<ol style="list-style-type: none"> <li>1. Andhra Pradesh (<b>0.44</b>)</li> <li>2. Karnataka (<b>0.29</b>)</li> <li>3. Gujarat (<b>-0.03</b>)</li> <li>4. Maharashtra (<b>0.22</b>)</li> </ol>

**Illustrative ranking of states as highlighted in UDAY Portal**





# Losses of DISCOMs during 2016-17 have reduced by more than Rs. 15,000 crores.

<b>Turnaround</b>	Chhattisgarh
	Goa
	Himachal Pradesh
<b>Significant reduction in losses</b>	Haryana
	Rajasthan
<b>Other states which have reduced losses</b>	Andhra Pradesh
	Telangana
	Tamil Nadu
	Maharashtra
	Jammu & Kashmir

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# Challenges



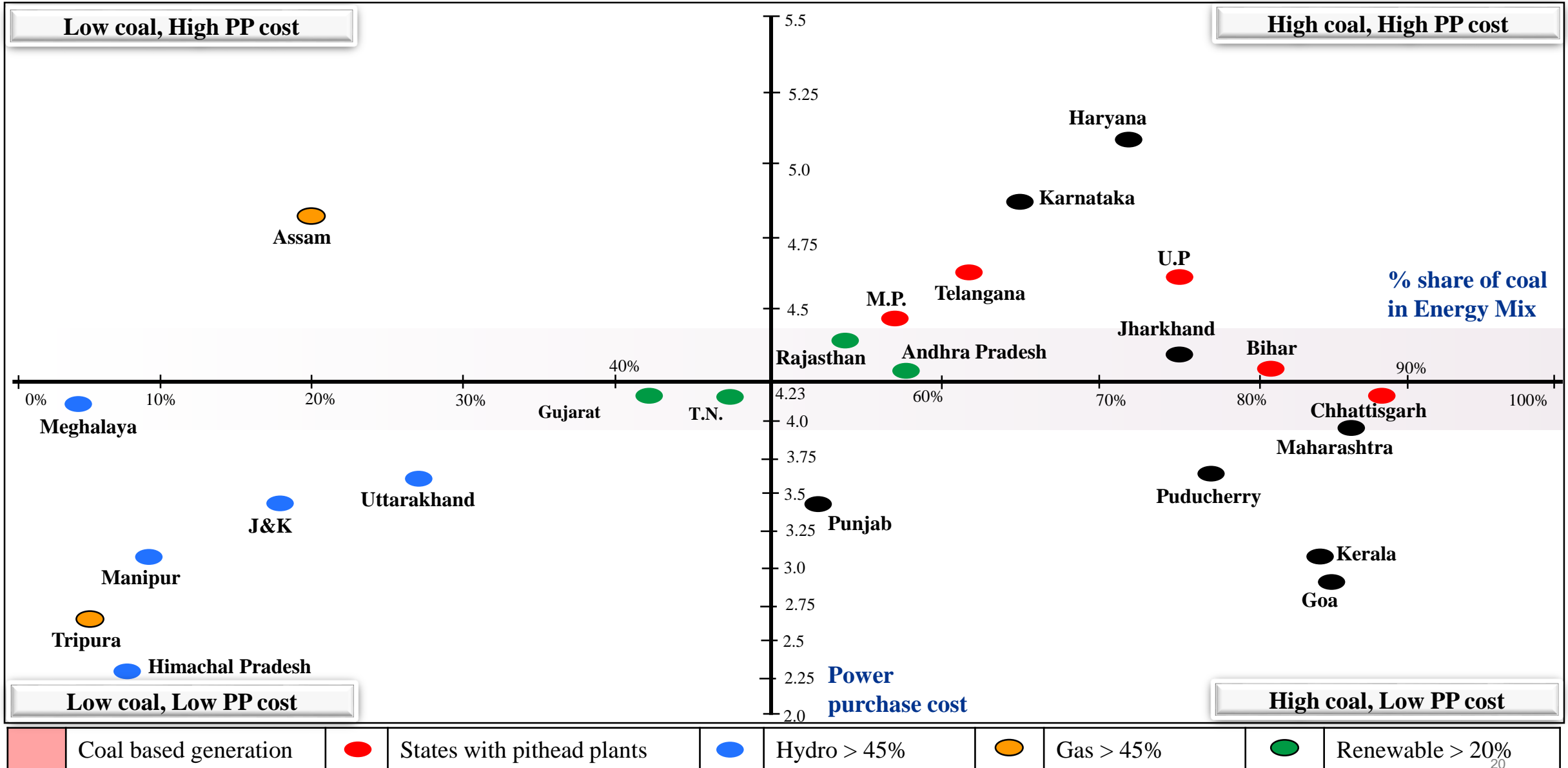
# AT&C losses Vs. ACS-ARR Gap

<b>AT&amp;C Losses in FY 2016-17</b>	<b>HIGH</b> Loss $\geq$ 25%	Haryana Manipur	Madhya Pradesh Uttar Pradesh	Jammu & Kashmir Jharkhand Meghalaya
	<b>Moderate</b> 15% $\leq$ Loss $<$ 25%	Chhattisgarh Maharashtra Puducherry Tripura	Assam Bihar Punjab Rajasthan Goa Kerala	
	<b>LOW</b> Loss $<$ 15%	Andhra Pradesh Himachal Pradesh Tamil Nadu Gujarat Karnataka Uttarakhand	Telangana	
		<b>LOW</b> Gap $<$ 0.5 INR/Unit	<b>MODERATE</b> 0.5 $\leq$ GAP $<$ 1.0 INR/Unit	<b>High</b> GAP $\geq$ 1.0 INR/Unit
<b>GAP (ACS-ARR) in FY 2016-17</b>				



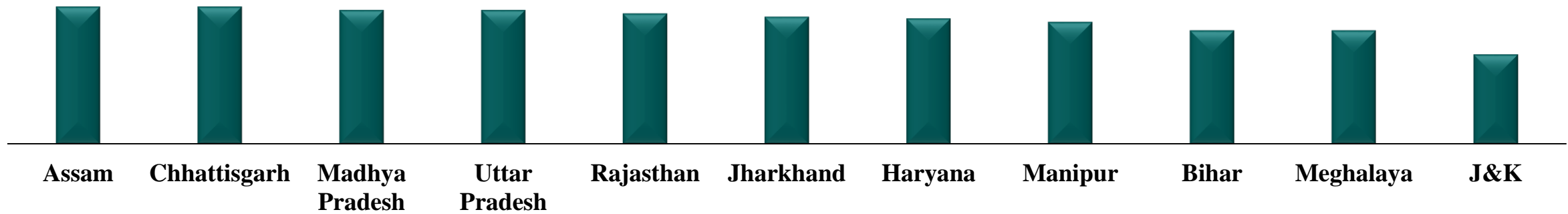
**States which require focus and continuous monitoring**

# High Power Purchase cost

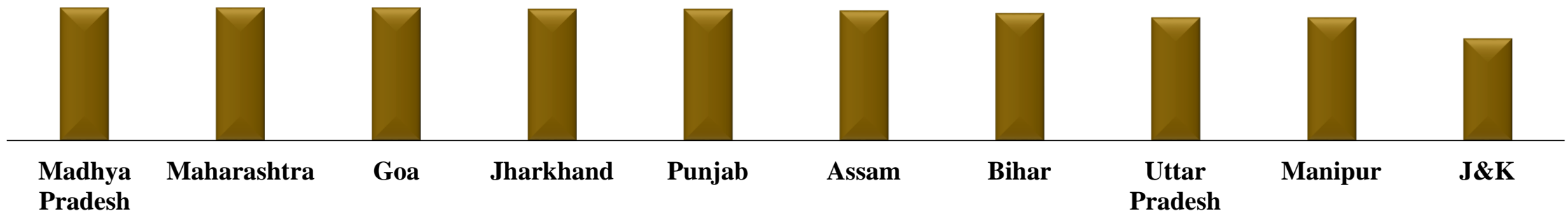


# High AT&C Losses (1/2): Persistence of low billing efficiency

Few states which have reported lower than 83% Billing efficiency in FY17



Few states which have reported lower than 96% collection efficiency in FY17



# High AT&C Losses (2/2): Unmetered consumers and flat rate billing

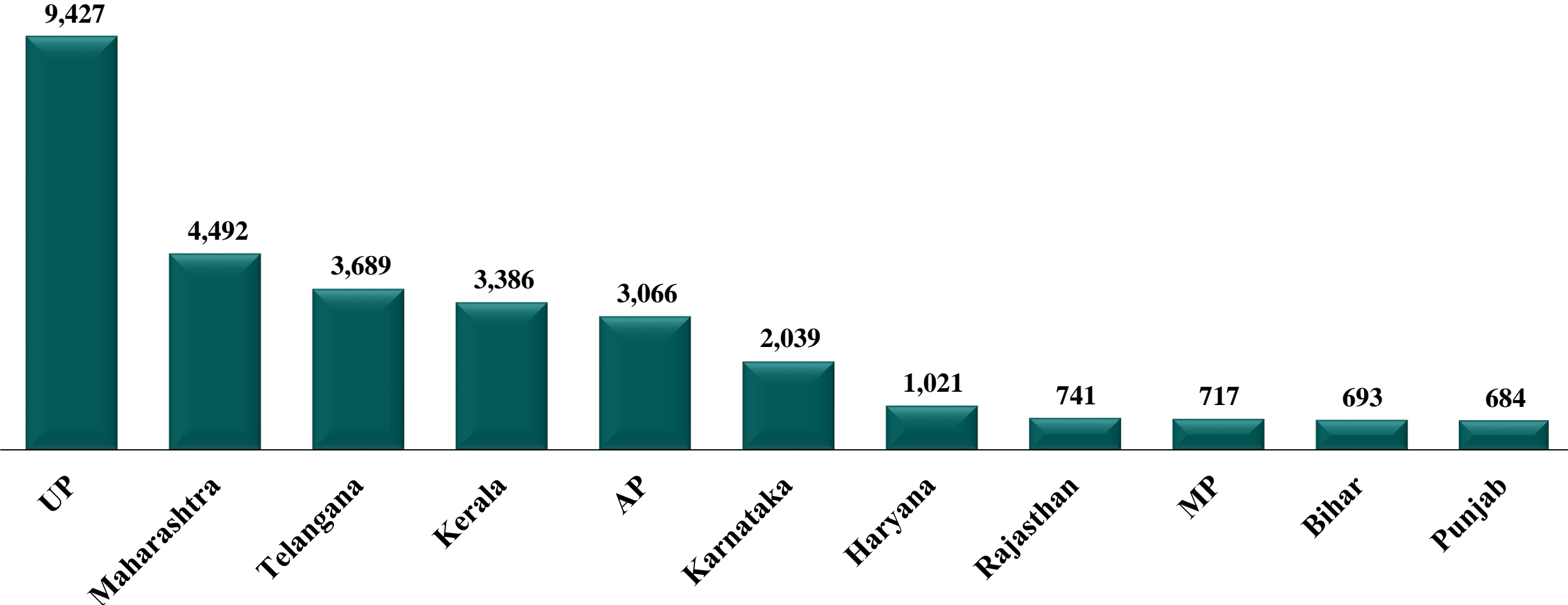
State	% Un-Metered consumers
Jammu & Kashmir	45%
Uttar Pradesh	40%
Arunachal Pradesh	24%
Sikkim	21%
Madhya Pradesh	14%
Jharkhand	12%
Tamil Nadu	12%

- **Age old legacy of un-metered consumers and flat rate billing**
- **Flat billing does not incentivize energy efficiency**
- **Cause of high T&D losses for DISCOMs**
- **Reluctance towards meter installation and proper billing**

Source: Power for All documents



# Dues from government departments (As on June 2017)



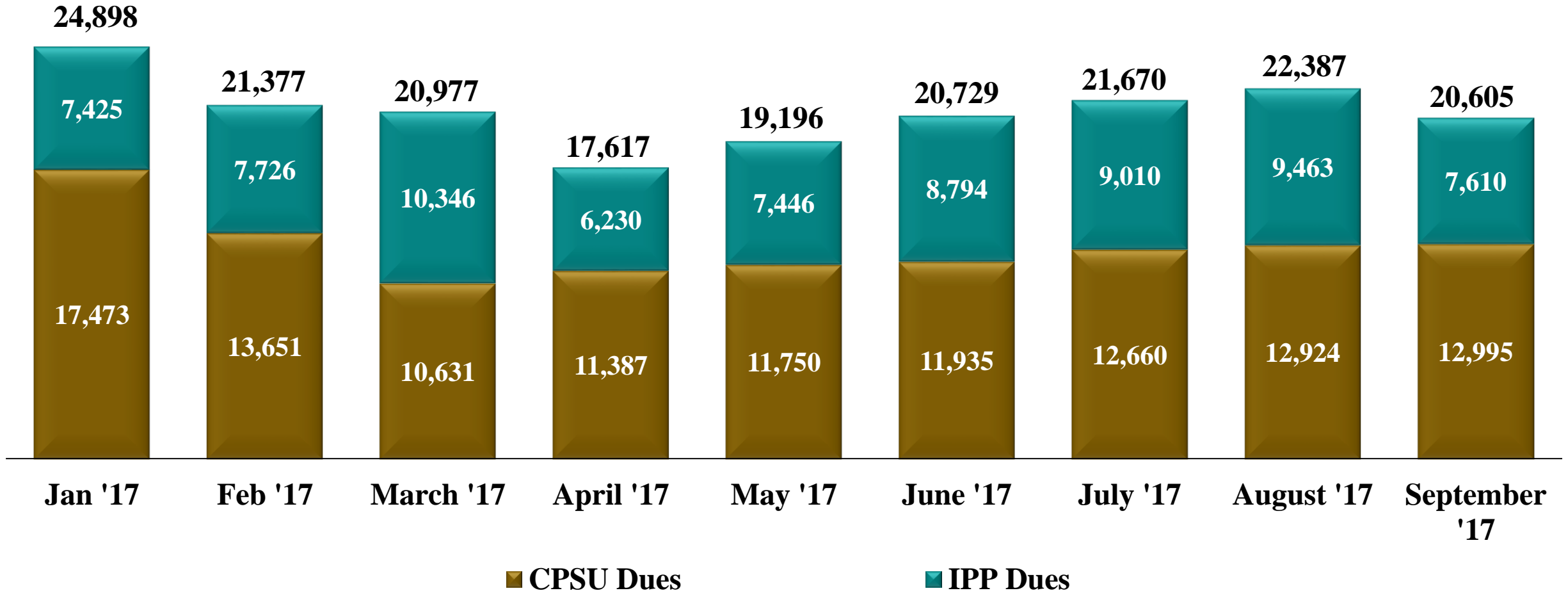
All figures in Rs. Cr.

Source: UDAY Portal



# Outstanding GENCO dues

Figures in Rs. Cr.



Source: CEA





# High establishment and other cost

*Average for UDAY States- 0.67 Rs./kWh; 13% of ARR*

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## States which have reported establishment cost higher than the UDAY average

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Kerala  
Himachal Pradesh  
Goa  
Punjab  
Maharashtra  
Assam  
Manipur  
Rajasthan  
Tripura

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Potential Savings of about **Rs. 10,000 Cr per annum**, if their costs are brought down to the level of UDAY states' average

# Poor quality of data

**Stakeholders (UDAY, regulators, CEA, PFC, etc.) tend to struggle to reconcile data received from DISCOMs potentially because of:**

- **Non-standard definitions of terms used by DISCOMs / stakeholders leading to confusion**
  - Ministry of Power has recently issued circulars on uniform formulae and definitions of key parameters
- **Manual data management leading to errors and delays**
  - Implementation of ERP is being tracked under UDAY
  - DISCOMs are asked to complete account audit by November and to move towards quarterly audits
- **Non-standard flow of data within and from DISCOMs:** Same data may flow from two or more independent sources / personnel
  - Nodal officers appointed under UDAY to ensure single source of data
  - Complete migration from manual accounts to ERP shall ensure single source of data
  - National Power Portal has been launched. It shall ensure data flow from and to all stakeholders
- **Possibly, lack of large data-management and MIS skills at DISCOMs**
  - MIS, regular analysis reports comprising data triangulation and root cause analysis are being sent under UDAY
- **Inadequate governance, accountability and transparency at DISCOMs**
  - UDAY portal and monitoring mechanism ensures transparency, governance and accountability

**Does ‘Regulatory Information Management System’ assist regulators in identifying data errors and improving data quality?**

# DISCOMs need to identify coherence among schemes

DISCOMs' woes of poor data-management, potential operational inefficiencies and lack of funds are aggravated as they are mandated to improve and expand at the same time while their resources are continuously diminishing:

- **DDUGJY (including RGGVY):** Feeder separation (rural households & agricultural) and strengthening of sub-transmission & distribution infrastructure including metering at all levels in rural areas
- **Saubhagya:** Provide energy access to all by last mile connectivity and electricity connections to all remaining un-electrified households in rural as well as urban areas to achieve universal household electrification in the country
- **IPDS (including R-APDRP):** 1) Strengthening of sub-transmission and distribution network, 2) Metering of distribution transformers /feeders / consumers and 3) IT enablement of distribution sector and strengthening of distribution network under R-APDRP (now subsumed under IPDS)
- **24 x 7 PFA:** Joint initiative of the Government of India (GoI) and state governments, with the objective to provide 24x7 power to households, industry, commercial, and other consuming entities, and adequate power to the agricultural sector by 2019
- **UJALA (erstwhile DELP):** To promote efficient use of energy at the residential level; enhance the awareness of consumers about the efficacy of using energy efficient appliances and aggregating demand to reduce the high initial costs thus facilitating higher uptake of LED lights by residential users
- **UDAY:** AT&C loss: 15% and ACS – ARR GAP: 0 (UDAY dovetails all the above schemes and brings about coherence in them)

Debt for investments in infrastructure can increase interest burden without immediate corresponding revenue. Also, line losses may increase due to supply to scarcely populated hamlets and cash recovery may take hit due to increased supply to certain category of consumers

# MoU v/s actual tariff hikes

State	FY16		FY17		FY18	
	MoU	Actual	MoU	Actual	MoU	Actual
<b>Andhra Pradesh</b>	5.00%	5.00%	3.60%	0.81%	5.00%	4.50%
<b>Bihar</b>	2.40%	2.50%	10.00%	0.00%	15.00%	20.00%
<b>Goa</b>	14.00%	14.00%	5.00%	4.85%	5.00%	0.00%
<b>Himachal Pradesh</b>	0.00%	0.00%	3.50%	3.50%	3.00%	0.00%
<b>Manipur</b>	N/A	4.00%	8.30%	8.25%	15.00%	5.60%
<b>Punjab</b>	0.00%	0.00%	5.00%	0.00%	9.00%	9.33%
<b>Uttar Pradesh</b>	5.47%	5.47%	5.75%	3.20%	6.95%	-
<b>Sikkim</b>	9.00%	0.00%	10.00%	9.40%	15.00%	1.05%
<b>Meghalaya</b>	8.70%	0.00%	8.70%	0.00%	8.70%	5.70%

Source: KPMG Analysis



# Role of regulators

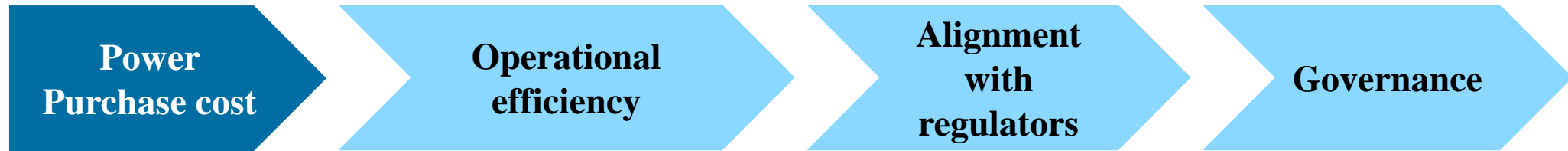
- Enforcing ‘standards of performance of distribution licensees’
- Proactively making or directing to make consumers aware of ‘standards of performance’, DISCOMs’ record of adhering to ‘standards of performance’ and consumers’ own obligations
- Ensuring that DISCOMs file tariff petitions by November of every year
- Proactively ascertaining consumers’ ability and willingness to pay for the services their deserve / demand
- Limiting cross-subsidy in tariff to 20% of average cost of supply
- Acknowledging baseline performance and set realistic targets, considering price sensitivity of consumers as well as current situation of DISCOMs. Review, to adopt or alter, the trajectory of targets set under UDAY
- Advising or working with DISCOMs, in larger interest, to find out ways and means of achieving the targets and directives issued by regulator to DISCOMs
- Organizing suo-motu meetings with DISCOMs from time-to-time to proactively discuss persisting issues
- Capacity development and training programs for staff of regulators

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# Way Forward



# Way Forward (1/4)



- **Strict adherence to Merit Order Dispatch** (after considering technical minimums & must-run plants)
- **Leveraging schemes like Coal Mitra for optimizing coal source and linkage**
- **Demand forecasting and load management**
- **Leveraging short term power market for low cost of electricity**
- **Phasing out or backing-down of inefficient old plants with high VC**

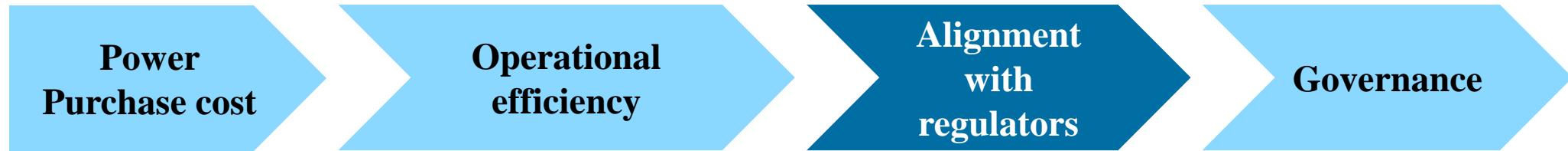
## Way Forward (2/4)



- **Formalization of all connections**
- **100% consumer metering; 100% feeder and DT metering**
- **Smart / Pre-paid meter rollout** (Manipur has been able to reduce its losses by over 50% by installing prepaid meter in all its urban areas)
- **Prioritization of high loss divisions and loss reduction initiatives**
- **24 x 7 consumer support initiatives** (Urja Mitra app, dial 1912)

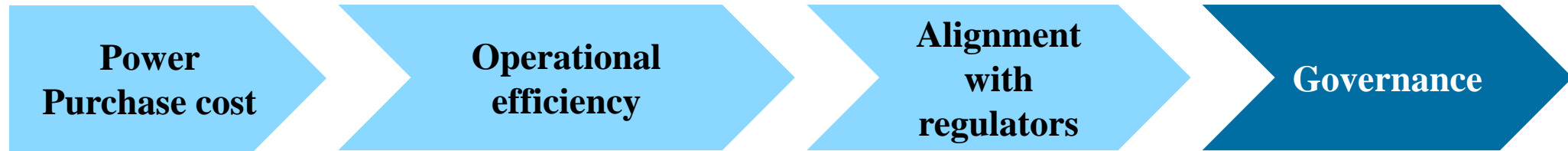


## Way Forward (3/4)



- **Mandatory and timely filing of tariff petitions**
- **Mandatory and timely audit of accounts and operational data** (faster implementation of ERP may be helpful)
- **Regulators may acknowledge baseline performance and set realistic targets, considering price sensitivity of consumers as well as financial situation of DISCOMs**
- **Capacity development and training programs for staff of DISCOMs as well as regulators**

# Way Forward (4/4)



- **Strengthening of State level governance to ensure regular review and monitoring (steering committee headed by CM)**
- **Strengthening of managerial capacity in DISCOMs**
- **Need for a centralized audit team to monitor and scrutinize performance of states and DISCOMs**
- **Handholding of some of the laggard states and exchange of best practices and people**
- **Sharing of leadership team through ‘twining arrangement’ between DISCOMs or states**

# Thank You

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