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MINISTRY OF
POWER
सत्यमेव जयते

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CONSUMER SERVICE RATING OF DISCOMS (CSRD)

REPORT FY 2022-23

GOVERNMENT OF INDIA
MINISTRY OF POWER

सत्यमेव जयते

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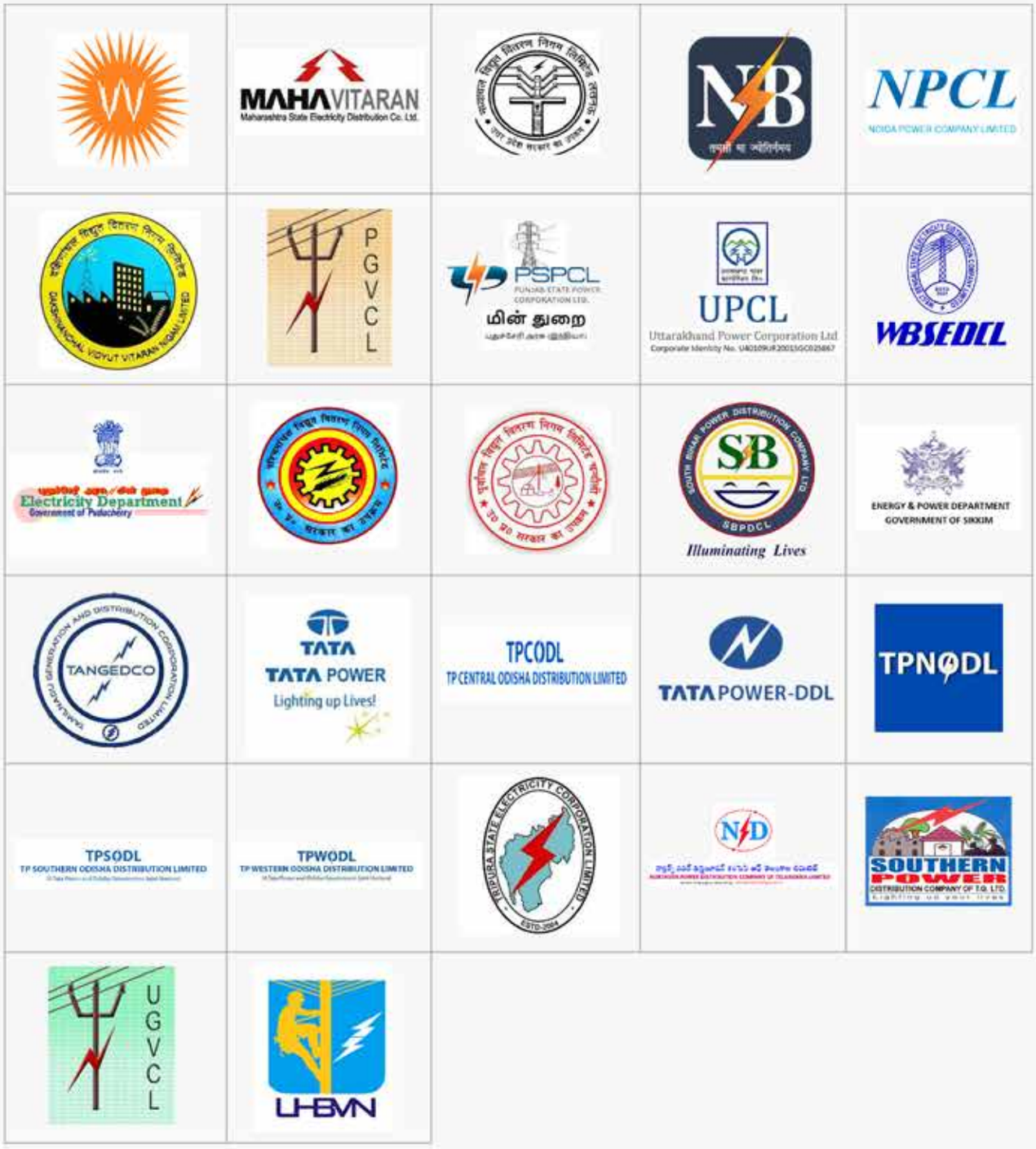
CONSUMER SERVICE RATING OF DISCOMs (CSRD)

FY 2022-23


adani
Electricity
సదా మీసేవలో...
Eastern power
SOUTHERN POWER
DISTRIBUTION COMPANY OF A.P. LTD
Ajmer Vidyut Vitran Nigam Limited
BESCOM
BSES
BSES Rajdhani Power Limited
BSES
BSES Yamuna Power Limited
C.E.S.C, MYSORE
CSPDCL
DGVCL
DHBVN
CHANDIGARH ADMINISTRATION
Electricity Department
A&N Administration
ELECTRICITY DEPARTMENT
Government of GOA
GESCOM
HESCOM
JODHPUR VIDYUT VITRAN NIGAM LIMITED
JAMMU POWER DISTRIBUTION CORPORATION LTD
JPDCL
JVVNL
केस्को
KSEB
Administration of Union Territory of Ladakh
MSPDCL
Manipur State Power
Distribution Company Limited
MESCOM
MGVCL
Mizoram
Power & Electricity Department
MPMKVVCL Bhopal


MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.
NPCL
NOIDA POWER COMPANY LIMITED
PGVCL
PSPCL
PUNJAB STATE POWER CORPORATION LTD.
மின் துறை
UPCL
Uttarakhand Power Corporation Ltd
WBSEDCL
Electricity Department
Government of Puducherry
SBPDCL
Illuminating Lives
ENERGY & POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TANGEDCO
TATA
TATA POWER
Lighting up Lives!
TPCODL
TP CENTRAL ODISHA DISTRIBUTION LIMITED
TATA POWER-DDL
TPNODL
TPSODL
TP SOUTHERN ODISHA DISTRIBUTION LIMITED
TPWODL
TP WESTERN ODISHA DISTRIBUTION LIMITED
TRIPURA STATE ELECTRICITY CORPORATION LIMITED
SOUTHERN POWER
DISTRIBUTION COMPANY OF T.G. LTD.
UGVCL
UHBVN

आर. के. सिंह
R. K. SINGH

सत्यमेव जयते

विद्युत मंत्री एवं
नवीन और नवीकरणीय ऊर्जा मंत्री
भारत सरकार

Minister of Power and
Minister of New & Renewable Energy
Government of India

MESSAGE

As India makes progress towards becoming a $5 Trillion economy, the power sector will play a critical role in enabling all sectors to contribute to this ambitious goal. No economic growth is possible without electricity; and therefore, a financially sound and operationally strong power sector is vital to achieving the Government of India's mandate of enabling ease of doing business and ease of living.

Over the years, the Ministry of Power (MoP), Government of India (GoI) has undertaken concerted measures to increase power generation capacity - transforming our country from power deficit to power surplus by adding generation capacity of 197 GW. The grid has been expanded and strengthened to transmit power from any part of the country to any other part. Universal access has been achieved by connecting every village and every home. The distribution system has been strengthened by adding 2900 sub-stations, upgrading 3900 sub-stations and adding ~880000 ckt kms of HT & LT lines. Accordingly this has enabled increase in power supply in rural areas from an average of 12 hours in 2015-16 to an average of 22 hours today - and to the urban areas to 23.5 hrs.

Now it is important that the level of service to the customers is monitored and improved. With this view the MoP, GoI has brought Electricity (Rights of Consumers) Rules into force in order to empower the consumers. In order to increase the consciousness and focus on the importance of serving the people, the MoP, GoI has been publishing the report on Consumer Services Rating of DISCOMs (CSRD) for the last two years. This report tracks the performance of DISCOMs across key consumer service parameters. The report has gathered much attention of the key stakeholders i.e DISCOMs and policymakers, which are making efforts to improve upon their service which impacts the consumers.

I am pleased to release the third edition of this annual exercise which has made significant contribution in providing detailed insights into consumer-centric initiatives taken by DISCOMs across the nation. The purpose of the CSRD is to encourage DISCOMs to address their existing gaps and learn through best practices adhered to by other DISCOMs thereby improving the overall consumer satisfaction level. I am certain that the CSRD FY 2022-23 Report shall also serve as a necessary aid to other stakeholders like businesses, investors, and regulators across the nation.

(R.K. SINGH)

कृष्ण पाल गुर्जर
KRISHAN PAL GURJAR

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

केंद्रीय राज्य मंत्री,
विद्युत और भारी उद्योग मंत्रालय
भारत सरकार, नई दिल्ली
UNION MINISTER OF STATE FOR
POWER AND HEAVY INDUSTRIES
GOVERNMENT OF INDIA, NEW DELHI

संदेश

भारत के विद्युत क्षेत्र में पिछले कुछ समय में अभूतपूर्व उन्नति हुई है। इस महत्त्वपूर्ण क्षेत्र के दायित्वों का निर्वहन करते हुए इस क्षेत्र में हुई उल्लेखनीय प्रगति को रेखांकित करना मेरे लिए गर्व का विषय है। निजी क्षेत्र की भागीदारी के साथ पारंपरिक उत्पादन क्षमता में तीन गुना वृद्धि हुई है, नवीकरणीय ऊर्जा की मात्रा अत्यंत लघु स्तर से ~12% ऊर्जा मिश्रण तक बढ़ी है, पूरे भारत को जोड़ने वाले एक आधुनिक ग्रिड की स्थापना, बाजार की संरचना में बदलाव और 31 करोड़ से अधिक उपयोगकर्ताओं को आवश्यक सेवाओं का प्रावधान किया गया है। विभिन्न राज्यों, कार्यक्रमों और संस्थाओं में सफलता की अनेक गाथाएँ सामने आई हैं जो वितरण के स्वदेशी मॉडल सहित अन्य व्यक्तियों के लिए अनुकरण का विषय बन सकती हैं और उन्हें प्रेरित कर सकती हैं।

संपूर्ण विद्युत मूल्य श्रृंखला के लिए एक मात्र राजस्व स्रोत एवं विद्युत उपभोक्ताओं के लिए संपर्क का एकल बिंदु होने के कारण विद्युत वितरण क्षेत्र, ग्रिड आधुनिकीकरण के उभरते रुझानों के अनुरूप गुणवत्ता पूर्ण एवं विश्वसनीय बिजली आपूर्ति सुनिश्चित करने के लिए उपभोक्ता-केंद्रित एवं विद्युत के स्थाई इकोसिस्टम के निर्माण में चुनौतीपूर्ण रहा है, इसलिए सम्पूर्ण विद्युत क्षेत्र को आत्मनिर्भर एवं उपभोक्ता केंद्रित बनाने के लिए इसे और अधिक मजबूत बनाने की आवश्यकता है।आरडीएसएस, पॉवरथॉन-2022, एलआईएस और 0.5% अतिरिक्त उधार के माध्यम से किए गए नीतिगत हस्तक्षेप स्थाई एवं विश्वसनीय विद्युत आपूर्ति प्रदान करने के लिए विद्युत वितरण के व्यवसाय के भविष्य को निर्धारित कर रहे हैं।3 लाख करोड़ के अनुमानित परिव्यय के साथ आरडीएसएस का लक्ष्य वितरण क्षेत्र के लिए अत्यंत आवश्यक निवेश लाना है जिससे अंततःआपूर्ति की गुणवत्ता और विश्वसनीयता में सुधार होगा और अंतिम छोर पर स्थित उपभोक्ताओं को मदद मिलेगी।

वित्तीय वर्ष 2022 और वित्तीय वर्ष 2023 के लिए प्रकाशित सीएसआरडी (CSRD) रिपोर्ट के पहले दो संस्करणों ने उपभोक्ताओं की दृष्टि से,महत्त्वपूर्ण सेवा मापदंडों को लेकर वितरण कंपनियों का ध्यान उनके प्रदर्शन पर आकर्षित किया। इससे उन्हें अपने प्रदर्शन का स्व-मूल्यांकन करने एवं अपने समकक्ष अन्य वितरण कंपनियों तथा राष्ट्रीय औसत के साथ तुलना करने में मदद मिली है।

हम आरईसी लिमिटेड द्वारा जारी रिपोर्ट के तीसरे संस्करण का स्वागत करते हैं, जिसमें वही पद्धति शामिल है जो पिछले दो संस्करणों में अपनाई गई थी।मुझे पूर्ण विश्वास है कि यह रिपोर्ट वितरण कंपनियों को हमारी विद्युत संस्थाओं में व्यापक अंतर्दृष्टि विकसित करने में मदद करेगी, जिससे उन्हें वित्तीय रूप से अधिक मजबूत, उपभोक्ता-केंद्रित एवं परिचालन रूप से कुशल बनने में सहयोग मिलेगा।

(कृष्ण पाल गुर्जर)

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पंकज अग्रवाल, भा.प्र.से.
सचिव
Pankaj Agarwal, I.A.S.
Secretary

सत्यमेव जयते

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MESSAGE

The power distribution sector has seen a massive transformation in recent years with universal electrification in the country. As the sector continues to evolve, delivery of consumer services is emerging as a key priority area. In this context, DISCOMs are re-engineering their operations, optimising them for greater ease and satisfaction of consumers. This is being enabled through simplified processes for various services like new connection, grievance registrations/ redressal, billing & payments and consumer-friendly apps/ portals etc. However, despite there being provisions under Electricity (Rights of Consumers) Rules specifying mechanisms to be put in place for simplifying processes, some gaps are still noticed in few DISCOMs in actual procedures put in place.

Ensuring resource adequacy to serve the growing consumer demand in a cost-effective manner is equally vital, as this would play a major role in ensuring uninterrupted, reliable and quality power supply to consumers. DISCOMs are now adopting measures for adequate planning and load forecasting in order to meet the seasonal demand variations.

The adoption of digital initiatives and use of advanced technologies like AI/ML based solutions for demand and supply forecasting shall improve the DISCOM services.

With rapid transformation of the sector and penetration of advanced technologies, capacity building and knowledge management is becoming essential. Recognizing this, DISCOMs are actively building their capacities across operational, financial and institutional aspects in order to address the growing expectations of electricity

consumers. The enhanced capacity of the DISCOMs will enable them to operate efficiently and provide superior services to the consumers.

CSRD Report, an annual rating exercise initiated in 2021, rigorously analyses DISCOMs/ Power Departments on four broad parameters, namely Operational Reliability; Connection & Other Services; Metering, Billing & Collection; and Fault Rectification & Grievance redressal. The report has helped in garnering critical insights, which aim to effectively bridge the gap between service delivery and consumer satisfaction, drive healthy competition amongst DISCOMs and enhance consumer experience and promote inter-se learning.

I am pleased to learn that the third edition of the CSRD report for FY 2022-23 has been prepared by REC Limited. I believe this report will provide insight into the DISCOMs' efforts to augment consumer services, which shall further aid in fostering innovation, enhancing infrastructure, and driving efficient power distribution mechanisms to enhance consumer satisfaction.

I would like to appreciate the efforts made by the officials of the Ministry, State Distribution utilities, and REC Limited in making this exercise successful.

Pankaj

(Pankaj Agarwal)

विवेक कुमार देवांगन, आई ए एस
अध्यक्ष एवं प्रबंध निदेशक,
Vivek Kumar Dewangan, IAS
Chairman and Managing Director,

सत्यमेव जयते

आरईसी REC
असीमित ऊर्जा, अनन्त संभावनाएं
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MESSAGE

The Ministry of Power and the Government of India have undertaken multiple reform measures centered on ensuring the viability and sustainability of the sector. At a national level, the need of the hour is to have a state-of-the-art, smart, robust, and reliable distribution system capable of handling higher loads to ensure a resilient power system for reliable power supply to consumers.

The Revamped Distribution Sector Scheme (RDSS), launched in 2021, aims to improve the quality and reliability of power supply to consumers, as well as the financial and operational efficiency of Discoms. However, there still exist a few gaps in terms of overall service delivery by the DISCOMs to the consumers when it comes to some key service parameters. Moreover, due to the evolving and dynamic power distribution system with increased consumer expectations and service standards, it is important to have a monitoring system in place to track the performance of the DISCOMs on key service parameters. Hence, going forward, the focus shall be to ensure the best-in-class services to the electricity consumers.

With this vision, the Hon'ble Minister of Power and New & Renewable Energy, Sh. R. K. Singh, launched the first-ever Consumer Services Rating of DISCOMs (CSRD) for FY 2020-21 on 5th August 2021. The CSRD report provides insights into the DISCOMs' performance across micro-level operational parameters, promotes healthy competition, and improves performance in deficient areas, enabling Discoms to improve their performance standards and adopt a more consumer-focused approach.

REC is pleased to release the third edition of the annual CSRD Report for FY 2022-23, under the esteemed guidance of the Ministry of Power. We hope the report will continue to facilitate knowledge sharing and bring forth actionable insights for the relevant power sector stakeholders, including policymakers and regulators.

I would like to acknowledge the efforts of the PMD-UR&SI Division, REC in carrying out this vast exercise and I express my sincere appreciation to all the stakeholders for their guidance and support throughout the process of successfully publishing this report. Thank you for your trust and continued partnership.

(Vivek Kumar Dewangan)

राहुल द्विवेदी, आई ए एस
कार्यकारी निदेशक,
Rahul Dwivedi, IAS
Executive Director

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MESSAGE

The Consumer Service Rating of DISCOMs (CSRD) report, since its inception in 2021, has become a valuable tool to track and assess the performance of power distribution companies and power departments in India on various parameters related to consumer services. It aims to create a culture of transparency, accountability, and a consumer-focused approach in the power sector and provides a platform for benchmarking, learning, and sharing of best practices among DISCOMs. The report has been instrumental in creating awareness and sensitization among the DISCOMs, consumers, regulators, policymakers, and other stakeholders on the performance across various services.

As we unveil the annual grading CSRD report for FY 2022-23, I would like to express my sincere gratitude to Shri R.K. Singh, Hon'ble Minister of Power and New & Renewable Energy, for his visionary leadership and entrusting REC Limited to publish this report. Our sincere appreciation goes out to Shri Pankaj Agarwal, IAS (Secretary Power, Govt. of India), Shri Shashank Misra, IAS (Joint Secretary, Distribution), and other Ministry officials for their continued support and guidance.

I extend special thanks to Shri Vivek Kumar Dewangan, IAS (Chairman and Managing Director of REC Limited) for his steadfast leadership, strategic insights, and esteemed guidance throughout the CSRD exercise. His in-depth valuable insights have been instrumental in bringing out key insights in the report, which would enable DISCOMs to take corrective measures across various key services.

The grading methodology for this year remains the same as the initial two editions, with some upgrades and refinements in the data collection and validation methodology detailed in the report. Furthermore, to provide a comparative idea of where India stands vis-à-vis other nations, we have added a chapter on Global Best Practices. We have also included a chapter on the best practices being followed by the Discoms across India, so that the rest of the Discoms can follow suit. I am confident that the last two editions have motivated DISCOMs to analyze their shortcomings and adopt best practices to enhance their performance.

As we present the CSRD Report FY 2022-23, I take a moment to express my deepest gratitude to the relentless efforts of the entire team involved in making this comprehensive report possible. I invite our stakeholders, partners, and readers to engage and provide valuable feedback for continuous improvement.

(Rahul Dwivedi)

Bharat Mandapam, New Delhi

EXECUTIVE SUMMARY

Across the globe, power infrastructure and associated ecosystem is unique to the local circumstances, economic structure and socio-economic priorities. Therefore, a holistic approach is essential to achieve an effective power system that is capable to provide reliable electricity services to the end consumers. With a customer base of ~32.4 crore and service outreach spanning across large land area, the Indian power system is one of the largest & most complex in the world. Currently, the system operates as a 'One Nation, One Grid, One Frequency', post the creation of the national grid.

The Indian power sector poses unique challenges and has a low per capita electricity consumption of ~1,327 kWh as on March-2023. But it is still lower (~37%) than the per capita global power consumption of ~3,600 kWh. India's power sector has advanced significantly in numerous areas including the promotion of renewable energy, consumer empowerment, enforcement of financial discipline and the reduction of AT&C losses. Also, various efforts to ensure electricity access to every household in India has translated to widescale reach of the electricity network.

Globally, digitalization is proving to be a major disruptor across the utility space and is paving its way into the distribution space for enhancing operational efficiency and enhancing consumer experience. The increasing adoption of digital payment gateways, smart grids, AMI, web / mobile application by the power distribution utilities in India is evident and all of the above are aiding in achieving enhanced operational service levels. Marching ahead, focus is to achieve self-sustainability and financial viability of the distribution sector along with discipline in maintaining the mandatory services levels being rendered to the consumers.

"IT IS THE RIGHT OF CONSUMER TO HAVE MINIMUM STANDARDS OF SERVICE FOR SUPPLY OF ELECTRICITY FROM THE DISTRIBUTION LICENSEE IN ACCORDANCE WITH THE PROVISIONS MADE IN THESE RULES"

~ Electricity (Rights of Consumers) Rules, 2020

Over the years, GoI has introduced dedicated programmes for the power distribution sector with a focus to improve health of the distribution infrastructure, ensure the reach of electrical infrastructure to the households / villages and improve the operational and financial position of the DISCOMs. Some of the noteworthy schemes like Saubhagya, IPDS, DDUGJY, UDAY and now RDSS have brought about a transformational change in the way DISCOMs and Power Departments (PDs)[1] operate and render services to the end consumers.

The promulgation of the Electricity (Rights of Consumers) Rules, 2020 (and amendments thereof) reinforces the rights of electricity consumers and the service delivery obligations of distribution utilities. The rules lay emphasis on the micro level service parameters like new connections, consumer metering, billing, digital payment modes, reliable power supply, facilitating prosumers, grievance redressal, etc. Additionally, the rules outline the contours of compensation mechanism for consumers in case, there is a shortfall in minimum standards of performance by DISCOMs.

These rules provided a benchmark for the inception of Consumer Service Rating of DISCOMs (CSRD) Report in 2021 to evaluate the consumer service of DISCOMs by specifying the minimum standards and expectations that consumers have, such as timely and accurate metering & billing, prompt & effective grievance redressal, fair and transparent tariff determination, etc.

[1]All the DISCOMs and Power Departments shall be referred as 'DISCOMs' throughout this report

To create a comprehensive strategy for boosting consumer satisfaction and encouraging cross-disciplinary learning, this Consumer Service Rating of DISCOMs (CSRD) report intends to indulge further into various consumer-focused services. It uses standards of service mentioned in the Electricity Rules as a basis for grading the DISCOMs on various key service areas and monitors / measures the compliance and implementation of the rules by the DISCOMs.

In light of the previous two editions of the CSRD report (FY 2020-21 and FY 2021-22), the third edition – CSRD Report for FY 2022-23 is now being released. The structural framework of the grading exercise remains unchanged from the previous year, adhering to a robust and stringent methodology, adopted in the last 2 editions. The report entails a meticulous data collection on a centralized online portal, thereby ensuring a granular analysis of various operational dimensions across the below 4 key parameters:

Operational Reliability	Connection & other Services	Metering, Billing & Collection	Fault Rectification & Grievance Redressal
45 Marks	10 Marks	35 Marks	10 Marks

Under the CSRD-2023 exercise, 70 DISCOMs were approached, of which 8 DISCOMs could not be considered for evaluation due to non-responsiveness from DISCOMs or they were unable to provide sufficient data. In total, 62 DISCOMs were evaluated for the rating exercise comprising of 10 private and 52 state-owned DISCOMs. Each DISCOM has been assigned grades based on the scores calculated as per the pre-defined methodology. The DISCOMs are graded and segmented into urban and rural categories based on their proportion of consumers. As per the RDSS guidelines, 14 states / UTs, namely Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Ladakh, Lakshadweep, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand have been granted "Special Category States (SCS)" status, accordingly same has been indicated in the report.

For majority of the parameters, circle-wise data has been collected from DISCOMs to ensure granularity of data. The grading methodology consists of 4 key parameters comprising of 23 sub-parameters' metrics to capture a holistic view of DISCOMs' performance on varied aspects. On the basis of scores obtained by evaluating the submitted data, DISCOMs are assigned the following grades: A+, A, B+, B, C+, C and D. These 7 grades are formed to ensure adequate distinction amongst the DISCOMs, to bring in a sense of healthy competition and nudge them to improve upon their service levels.

OUT OF THE 62 DISCOMS BEING RATED:

- 4 DISCOMs have secured the highest grade i.e. "A+"
- 19 DISCOMs have secured the average grade i.e. "B"
- 1 DISCOM has secured the lowest grade i.e. "D"

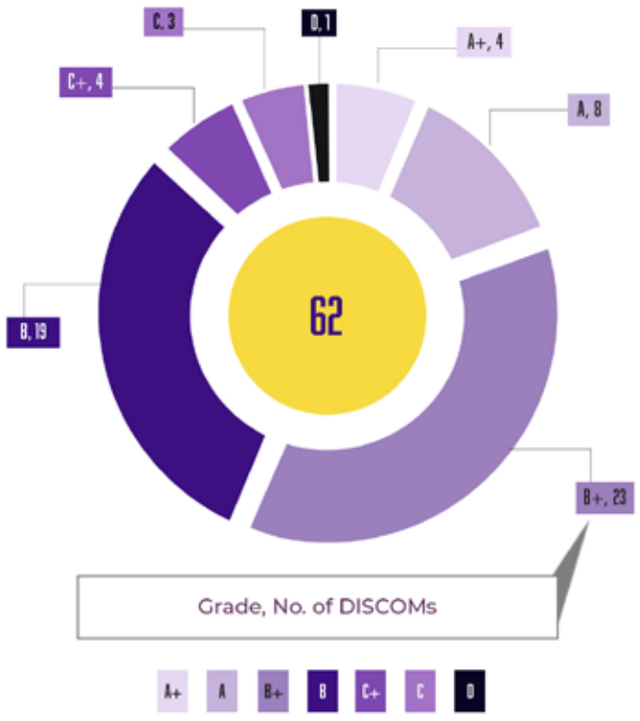


Figure: No. of DISCOM across Grades

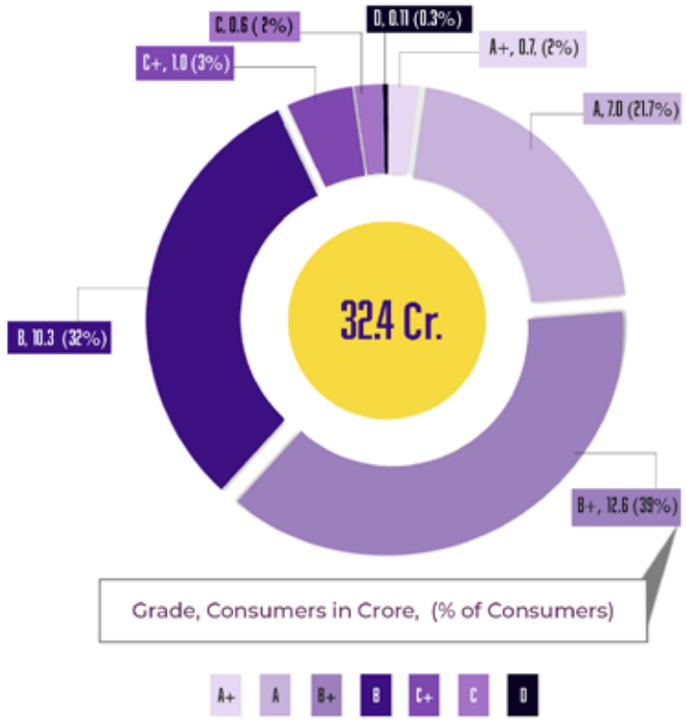
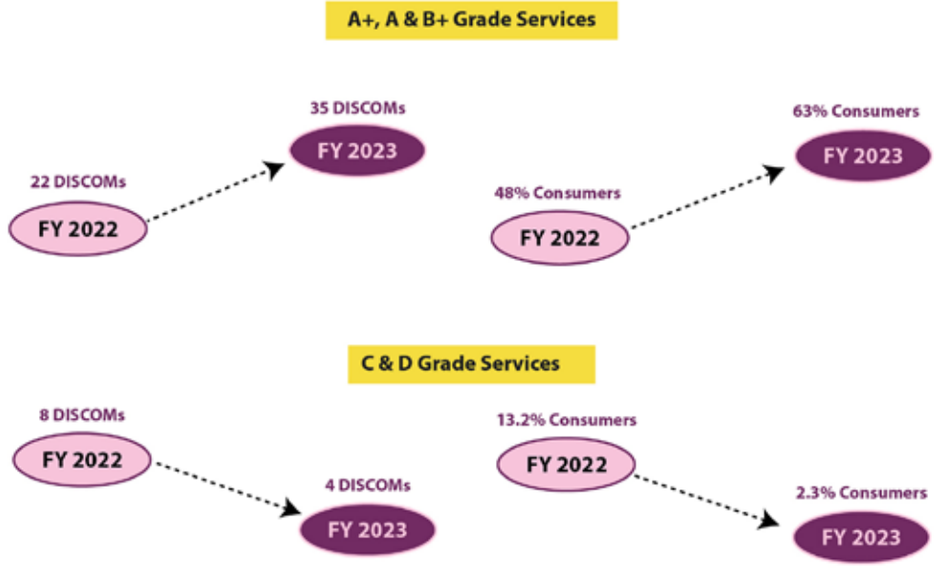


Figure: Spread of consumers across Grades

IMPROVEMENT IN PERFORMANCE OVER THE YEARS

An improvement in performance has been observed in the number of DISCOMs securing higher grades and the consumers receiving these services, indicating a positive outlook on a national level. Considering the far end of the grade scale, again there is improvement observed with a reduction in the number of DISCOMs and consumers across the lower grades ("C" and "D"). The below graphic summarises the improvement in FY 2022-23 over FY 2021-22.



None of the DISCOM were in A+ grade in CSRD-2022

GRADES OBTAINED BY DISCOMS AND POWER DEPARTMENTS FOR FY 2022-23

The data was finalized for 62 DISCOMs cumulatively serving ~32.4 crore consumers and accordingly they were considered for the grading activity. While some DISCOMs have secured leading positions with higher grades, many have been identified with parameters to improve upon. The table below indicates grades secured by DISCOMs corresponding to each of the 4 key parameters.

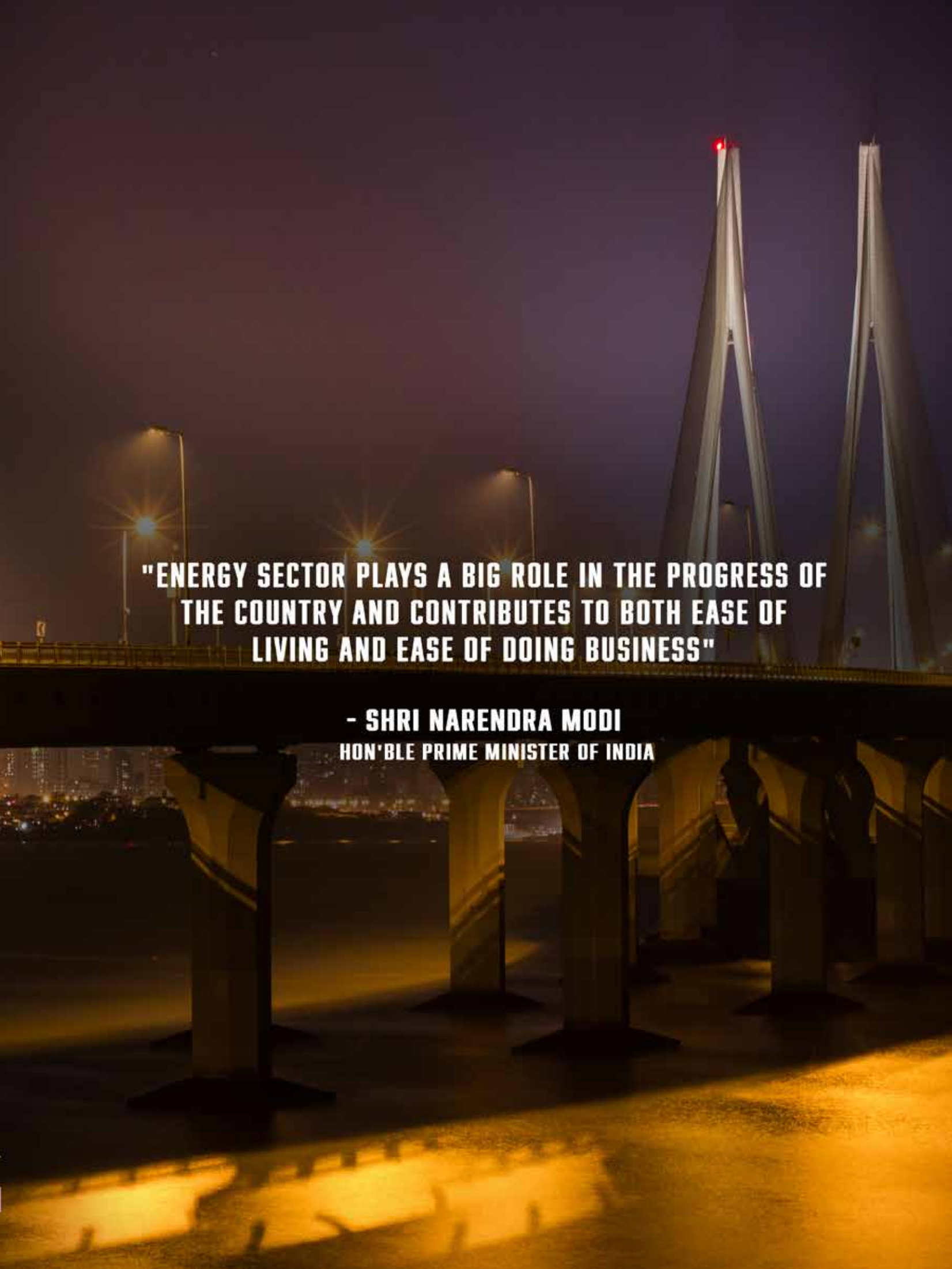
S. No.	State / UT	DISCOM	Operational Reliability (45 Marks)	Connection & other Services (10 Marks)	Metering, Billing & Collection (35 Marks)	Fault Rectification & Grievance Redressal (10 Marks)	Final Grade (100 Marks)	Change in Grade from FY22
1	Delhi	BRPL	A+	A	A+	B+	A+	↑
2	Delhi	BYPL	A+	A	A	B	A+	↑
3	Delhi	TPDDL	A+	A	A	B+	A+	↑
4	Uttar Pradesh	NPCL	A+	A+	A+	A+	A+	↑
5	Andhra Pradesh	APCPDCL	A+	B+	B+	A	A	↑
6	Andhra Pradesh	APEPDCL	A+	A	B	A	A	↔
7	Andhra Pradesh	APSPDCL	A+	B	B+	A	A	↔
8	Maharashtra	AEML	A+	A	B	B	A	↔
9	Manipur	MSPDCL (SCS)	A+	A	B+	B+	A	↑
10	Tamil Nadu	TANGEDCO	A+	A	B+	A+	A	↑
11	Telangana	TSNPDCL	A+	A	B+	A+	A	↑
12	Telangana	TSSPDCL	A+	A	B+	A	A	↔
13	Assam	APDCL (SCS)	A	C+	B+	B+	B+	↑
14	Bihar	SBPDCL	B+	C+	B	A	B+	↑
15	Goa	Goa PD	A	A	C	A	B+	↑
16	Gujarat	DGVCL	A+	A+	C	A+	B+	↑
17	Gujarat	MGVCL	A+	A	D	A	B+	↔
18	Gujarat	UGVCL	A+	A	C	A	B+	↔
19	Haryana	DHBVNL	B+	A	C+	A	B+	↑
20	Haryana	UHBVNL	B+	A	B+	A+	B+	↑
21	Karnataka	BESCOM	A	A+	C+	A	B+	↔
22	Karnataka	CESCOM	B+	A+	C+	A+	B+	↑
23	Kerala	KSEBL	A+	A	C	A	B+	↔
24	Madhya Pradesh	MPMKVVCL	A	A+	B	B+	B+	↔
25	Madhya Pradesh	MPPaKVVCL	A	A+	C+	A+	B+	↑
26	Madhya Pradesh	MPPoKVVCL	B+	A+	C+	A+	B+	↑
27	Maharashtra	TPCL	A+	C+	B	B	B+	↔
28	Odisha	TPCODL	A	B+	C+	A	B+	↑
29	Odisha	TPNODL	A	B+	B	A	B+	↑
30	Odisha	TPWODL	A	A+	C	A	B+	↑
31	Punjab	PSPCL	A+	C	B	B+	B+	↔
32	Rajasthan	AVVNL	B+	A+	B	A+	B+	↑

S. No.	State / UT	DISCOM	Operational Reliability (45 Marks)	Connection & other Services (10 Marks)	Metering, Billing & Collection (35 Marks)	Fault Rectification & Grievance Redressal (10 Marks)	Final Grade (100 Marks)	Change in Grade from FY22
33	Uttar Pradesh	KESCO	A	D	B+	B	B+	⬇
34	Uttarakhand	UPCL (SCS)	A	A	B	A	B+	⟷
35	West Bengal	WBSEDCL	A	A	C+	A	B+	⬆
36	Andaman & Nicobar Islands	A&N PD (SCS)	A	B	D	C+	B	*
37	Bihar	NBPDCL	B+	B+	C+	A+	B	⬆
38	Chandigarh	CED	B+	B+	C	D	B	⟷
39	Chhattisgarh	CSPDCL	A+	A	D	A	B	⟷
40	Gujarat	PGVCL	A	A	D	B	B	⟷
41	Karnataka	GESCOM	B+	A+	D	B+	B	⬆
42	Karnataka	HESCOM	B	A	C	A+	B	⬆
43	Karnataka	MESCOM	B+	A+	C	B+	B	⬆
44	Ladakh	Ladakh PDD (SCS)	A+	D	D	D	B	⬆
45	Maharashtra	BEST	A+	D	C	D	B	⬆
46	Maharashtra	MSEDCL	A+	D	C	C	B	⬇
47	Odisha	TPSODL	A	D	C	C	B	⬆
48	Puducherry	PED	A+	B	D	D	B	⬆
49	Rajasthan	JdVVNL	A	D	C+	A+	B	⟷
50	Rajasthan	JVVNL	B	B	C+	A+	B	⟷
51	Tripura	TSECL (SCS)	A	B	C	B+	B	⟷
52	Uttar Pradesh	DVVNL	C+	A	C+	A+	B	⬆
53	Uttar Pradesh	MVVNL	C+	A	C+	A+	B	⬆
54	Uttar Pradesh	PuVVNL	C+	A+	C+	A+	B	⬆
55	Himachal Pradesh	HPSEBL	C+	A	C	B+	C+	⟷
56	Mizoram	Mizoram PD (SCS)	B+	B+	D	D	C+	*
57	Sikkim	Sikkim PD (SCS)	B+	C+	C+	D	C+	*
58	Uttar Pradesh	PVVNL	C	A	C+	A+	C+	⟷
59	Arunachal Pradesh	Arunachal PD (SCS)	C	C	C	C+	C	*
60	Jammu & Kashmir	KPDCL (SCS)	D	B+	D	B+	C	⬆
61	Jharkhand	JBVNL	C	C+	D	D	C	⬆
62	Jammu & Kashmir	JPDCL (SCS)	D	C+	D	B	D	⟷

EXCLUDED DISCOMS

S.No.	State / UT	DISCOM	Remarks
1	Dadra & Nagar Haveli and Daman & Diu	DNHDDPCL	Non Participation
2	Gujarat	TPL Dahej	Non Participation
3	Gujarat	TPL Ahmedabad	Non Participation
4	Gujarat	TPL Surat	Non Participation
5	West Bengal	CESC	Non Participation
6	Lakshadweep	LED (SCS)	Data Insufficiency
7	Meghalaya	MePDCL (SCS)	Data Insufficiency
8	Nagaland	Nagaland PD (SCS)	Data Insufficiency

Note:
1. Serial no. across the tables DONOT represent any ranking whatsoever amongst the graded DISCOMs
2. SCS – Special Category State (states categorized by NITI Aayog)
⬆ Grades higher than CSRD-2022 ⬌ Same grades as CSRD-2022 ⬇ Lower grades than CSRD-2022
✱ These DISCOMs did not participate in FY2022, hence no data available for comparision.



"ENERGY SECTOR PLAYS A BIG ROLE IN THE PROGRESS OF THE COUNTRY AND CONTRIBUTES TO BOTH EASE OF LIVING AND EASE OF DOING BUSINESS"

- SHRI NARENDRA MODI
HON'BLE PRIME MINISTER OF INDIA

TABLE OF CONTENT

1

NEED FOR A COMPREHENSIVE RATING EXERCISE

The rapid industrialization and enhanced customer expectations in India have accentuated the demand for reliable and quality electricity supply. In this evolving landscape, the Ministry of Power, Government of India, over the years has introduced various reforms and programmes enabling DISCOMs to enhance their capacities and ability to provide better services to consumers. The power distribution sector remains a crucial segment of the power sector value chain ensuring that the end consumers of entire value are reinforced by reliable services.

There are a range of services that a distribution company is obligated to provide to the electricity consumers starting from connecting the consumers to the electricity grid and maintaining service standards as per the regulations. Historically, DISCOMs have been working towards reduction in some of the perennial issues like theft, inefficient operations, poor financial conditions, inadequate system maintenance, etc.

In light of the above issues, the first 2 editions of the CSRD report (FY-21 and FY-22) had been published, adopting a holistic approach to evaluate the DISCOMs across 4 key parameters viz: (1) Operational Reliability (OR), (2) Connection & other Services (CoS), (3) Metering, Billing & Collection (MBC) and (4) Fault Rectification & Grievance Redressal (FRGR). The report seems to gather attention of the key stakeholders of the distribution sector like DISCOMs, regulators, policy makers and nonetheless consumers. The findings in the previous editions have catalyzed a positive shift, nudging DISCOMs to strive for heightened performance and delivering superior services.

Now, the growing notion of compliance to Standard of Performance (SoP) thrust upon need for a recurring review of the services to consumers. This becomes even more critical as the power system evolves. In continuation, the third edition of the report i.e. CSRD 2023 is formulated with an intent of making the DISCOMs realise their performances w.r.t peers via delving into micro level performance parameters and achieving improved service levels for consumers.

NEED TO ENSURE MONITORING OF THE SERVICES RENDERED BY DISCOMS

There is a need to ensure routine monitoring of the services rendered by DISCOMs for various objectives like identification of shortfalls in service rendered vis-a-vis standards, increased consumer awareness on the DISCOMs service obligations, connect more Nos. of consumers to the electricity grid, manage the complex and dense web of electricity network post completion of numerous infrastructure schemes, ensure that the Rules on Consumers Rights, 2020 (and amendments thereof) are implemented smoothly and assuring necessary penal actions / provisions against non-compliance to minimum service standards.

This annual ranking report shall be available to the public, creating pathways for greater accountability in the provision of electricity sector across states.

CSRD AT A GLANCE

TASK FORCE CREATION, INDUSTRY EXPERTS INVOLVEMENT

COMPREHENSIVE FRAMEWORK

4 KEY PARAMETERS
23 SUB PARAMETERS

750 DATA POINTS PER DISCOM
OR | COS | MBC | FRGR

7 STEP APPROACH
4 STAGES OF VERIFICATION

19 REGIONAL OFFICES INVOLVED

70
DISCOMs approached

180
Days exercise

32+
Crore Consumers

62 DISCOMs Participated across
32 States/Union Territories

India Gate, New Delhi

2

RATING OF UTILITIES

This chapter broadly provides an outlook of DISCOM-wise performance on the 4 key service parameters. Based on the predetermined methodologies, evaluation was conducted on the data submitted by the DISCOMs and subsequently scores were assigned. These scores were then converted into grades using a predefined grading system which was used to generate a comprehensive grade table. The following section delves into the sub-parameters wise performance and also from an ownership perspective, bringing to light the fast facts like the national level maximum / minimum / average values for a particular sub-parameter.

2.1 DISCOMs PERFORMANCE – OVERVIEW

In total, 70 DISCOMs were approached, out of which 5 DISCOMs were excluded due to non-participation and 3 were excluded due to insuffcient data. This left a total of 62 DISCOMs that were considered for the rating exercise. As previously mentioned, the data & information required were gathered for these 62 DISCOMs which collectively serve ~32.4 crore consumers and were therefore included in the marking and rating process.

A+ (4 DISCOMs)

Delhi: BRPL, BYPL, TPDDL
Uttar Pradesh: NPCL

B+ (23 DISCOMs)

Assam: APDCL
Bihar: SBPDCL
Goa: Goa PD
Gujarat: MGVCL, UGVCL, DGVCL
Haryana: UHBVNL, DHBVNL
Karnataka: BESCOM, CESCOM
Kerala: KSEBL
Madhya Pradesh: MPMKVVCL, MPPaKVVCL, MPPoKVVCL
Maharashtra: TPCL
Odisha: TPCODL, TPNODL, TPWODL
Punjab: PSPCL
Rajasthan: AVVNL
Uttarakhand: UPCL
Uttar Pradesh: KESCO
West Bengal: WBSEDCL

A (8 DISCOMs)

Andhra Pradesh: APCPDCL, APEPDCL, APSPDCL
Maharashtra: AEML
Manipur: MSPDCL
TamilNadu: TANGEDCO
Telangana: TSNPDCL, TSSPDCL

B (19 DISCOMs)

Andaman & Nicobar Islands: A&N PD
Bihar: NBPDCL
Chandigarh: CED
Chhattisgarh: CSPDCL
Gujarat: PGVCL
Karnataka: HESCOM, MESCOM, GESCOM
Ladakh: LADAKH PDD
Maharashtra: BEST, MSEDCL
Odisha: TPSODL
Puducherry: PED
Rajasthan: JdVVNL, JVVNL
Tripura: TSECL
Uttar Pradesh: DVVNL, PuVVNL, MVVNL

C+ (4 DISCOMs)

Himachal Pradesh: HPSEBL
Mizoram: Mizoram PD
Sikkim: Sikkim PD
Uttar Pradesh: PVVNL

C (3 DISCOMs)

Arunachal Pradesh: Arunachal PD
Jammu & Kashmir: KPDCL
Jharkhand: JBVNL

D (1 DISCOMs)

Jammu & Kashmir: JPDCL

Excluded (8 DISCOMs)

Daman & Diu: DNHDDPCL
Gujarat: TPLA, TPLD, TPLS
Meghalaya: MePDCL
Nagaland: NPD
Lakshadweep: LED
West Bengal: CESC

- Out of the 62 DISCOMs, 11 are special category DISCOMs from 10 states / UTs, while 8 are urban DISCOMs from 4 states / UTs.
- Out of the 4 DISCOMs that have secured A+ grade, 3 of them (BRPL, BYPL, TPDDL) are purely urban, and 1 DISCOM (NPCL) has a largely urban consumer base.
- Maximum concentration of DISCOMs - 42 Nos. (68%) is across B+ and B grade.

FAST FACTS:

DISCOMs Participated: 62

DISCOMs upto National Avg. Grade (B+): 35

2.1.1 DISCOMS Performance - Ownership and Demographic perspective

Evaluating the performance of DISCOMs from an ownership, demographics and geographical perspective is crucial as it allows for the identification of key factors like administrative set-up, terrain etc. which are inherent in nature and may have influence on their performance.

The below table gives an indication of the performance of the 10 Nos. of private and 52 Nos. of state owned DISCOMs across the grade scale. The maximum concentration is visible across the B+ and B grade i.e. 42 DISCOMs. No private DISCOM has secured a grade lower than B. Amongst the state owned DISCOMs, only 1 has secured the lowest grade i.e. D.

DISCOM ownership perspective								
Grades	A+	A	B+	B	C+	C	D	Total
Private DISCOMs	4	1	4	1	0	0	0	10
State Owned DISCOMs	0	7	19	18	4	3	1	52
Total	**4**	**8**	**23**	**19**	**4**	**3**	**1**	**62**

Simiarly, the table below indicates the grade spread across urban and general DISCOMs. As per their consumer base, there are 8 urban DISCOMs and 54 general DISCOMs (having both Rural & Urban Consumers). The maximum concentration of DISCOMs in general category is in B+ and B garde i.e. 38. No urban DISCOM has secured grade below B. Evidently, the urban DISCOMs have performed comparatively better than the general category ones.

DISCOM demography perspective								
Grades	A+	A	B+	B	C+	C	D	Total
Urban DISCOMs	3	1	2	2	0	0	0	8
General DISCOMs	1	7	21	17	4	3	1	54
Total	**4**	**8**	**23**	**19**	**4**	**3**	**1**	**62**

2.1.2 Sub-parameters coverage across key parameters

There are 23 pre-identified sub-parameters across the 4 key parameters, which are evaluated individually in subsequent sections.

OPERATIONAL RELIABILITY

CONNECTION & OTHER SERVICES

METERING, BILLING & COLLECTION

FAULT RECTIFICATION & GRIEVANCE REDRESSAL

Number of Sub parameters covered - 23			
Weightage			
45 Marks	10 Marks	35 Marks	10 Marks
1. Hours of Supply	1. Alignment of Regulations with Industry best practices	1. Average time (days) taken for replacement of defective meters	1. Consumers registered at 24X7 customer care call centre
2. Interruption Index	2. Presence of pre-determined demand charges for connections up to 150kW	2. Bills generated based on actual meter reading	2. Average Call Waiting Time (in seconds)
3. DT Failure rate	3. Applications processed through online portal	3. Bills generated on the basis of non-manual meter reading	3. Consumers receiving outage related updates
	4. Average deviation from SoP in time taken for providing connections	4. Billing frequency for domestic category consumers as per regulations	4. Deviation from specified time for complaint resolution
	5. No. of Prosumers/Lakh consumers	5. Bills generated for domestic consumers in a year	5. Grievance redressal mechanism (2 tier)
		6. Consumers receiving billing updates on mobile	6. Number of Consumer Grievance Redressal Forums (CGRFs) per 1 Lakh Consumers
		7. % of prepaid consumers	
		8. No. of tariff categories	
		9. % of consumers paying digitally	

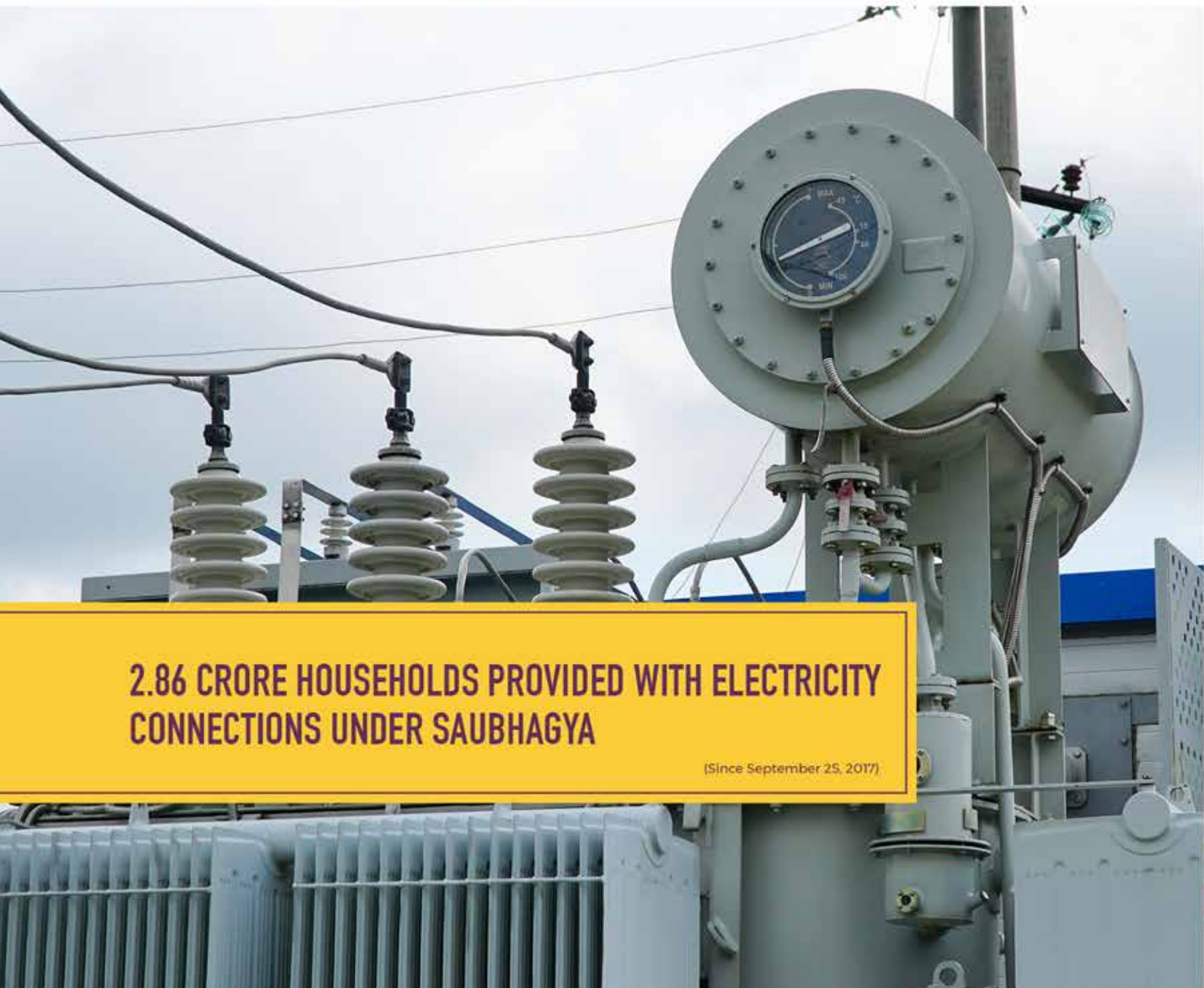
* *SoP: 'Standard of Performance' defind by state regulatory body*

2.2 OPERATIONAL RELIABILITY (OR)

This parameter measures the efficiency of the DISCOMs in delivering continuous power to the end consumers. It may be impacted by multiple factors including inadequate & inefficient Operation and Maintenance (O&M) practices, faulty equipment, improper load management for a prolonged period, etc.

The lower operational reliability may have varying impact on the DISCOMs in terms of reduced customer satisfaction levels, loss of revenue due to operational disruptions and increased cost of Operation and Maintenance (O&M).

The key sub-parameters, namely Hours of Supply (HoS), Interruption Index (II) and Distribution Transformer (DT) Failure Rate, across three categories of consumers (rural, urban and industrial) are considered to overall assess the OR. The data for FY 2022-23 corresponding to each sub-parameter has been collected for analysis.

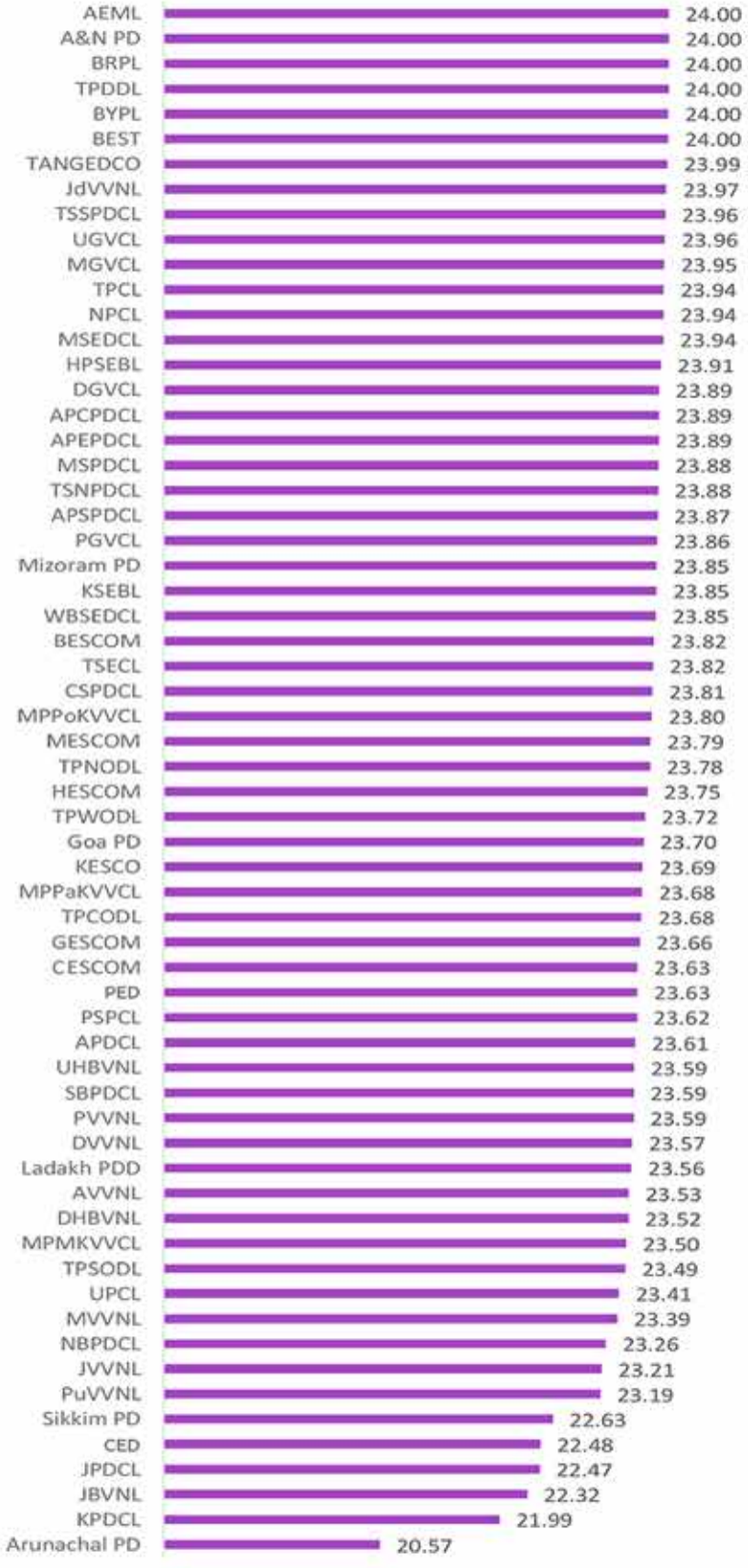


2.86 CRORE HOUSEHOLDS PROVIDED WITH ELECTRICITY CONNECTIONS UNDER SAUBHAGYA

(Since September 25, 2017)

ANALYSIS OF SUB-PARAMETERS

2.2.1 Hours of Supply (HoS) – Urban



FAST FACTS:

National Maximum 24 hours

National Average 23.59 hours

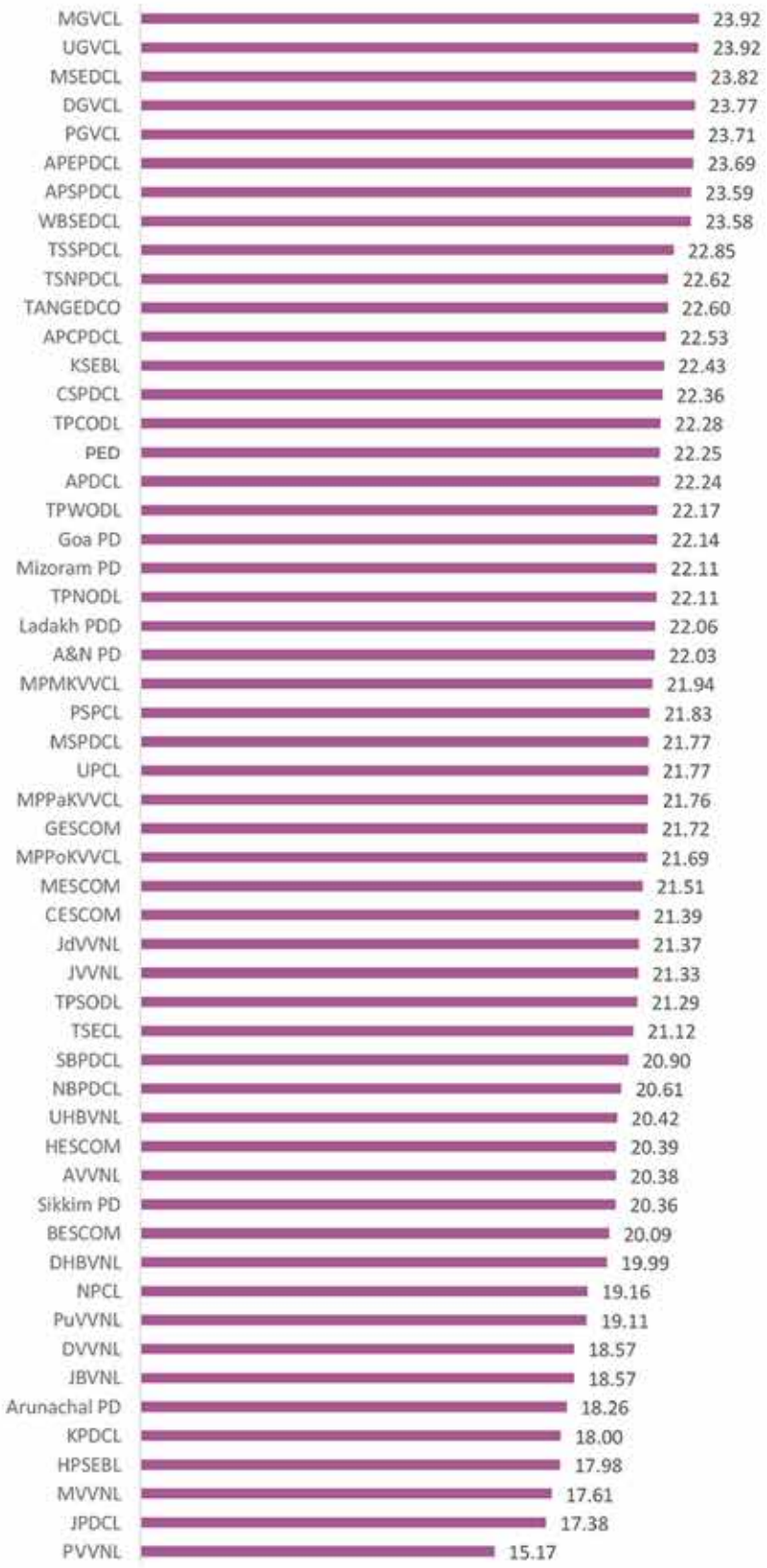
National Minimum 20.57 hours

KEY TAKEAWAYS:

- Leading DISCOMs (24 hours) are AEML, A&N PD*, BRPL, TPDDL, BYPL and BEST
- 9 out of the 10 Private DISCOMs have HoS greater than national average, only TPSODL has HoS slightly below national average
- 42 DISCOMs across 23 states/UTs have HoS above national average (23.59 Hours)

*A&N PD has majorly diesel-based generation capacity

2.2.2 Hours of Supply (HoS) – Rural



FAST FACTS:

National Maximum 23.92 Hours

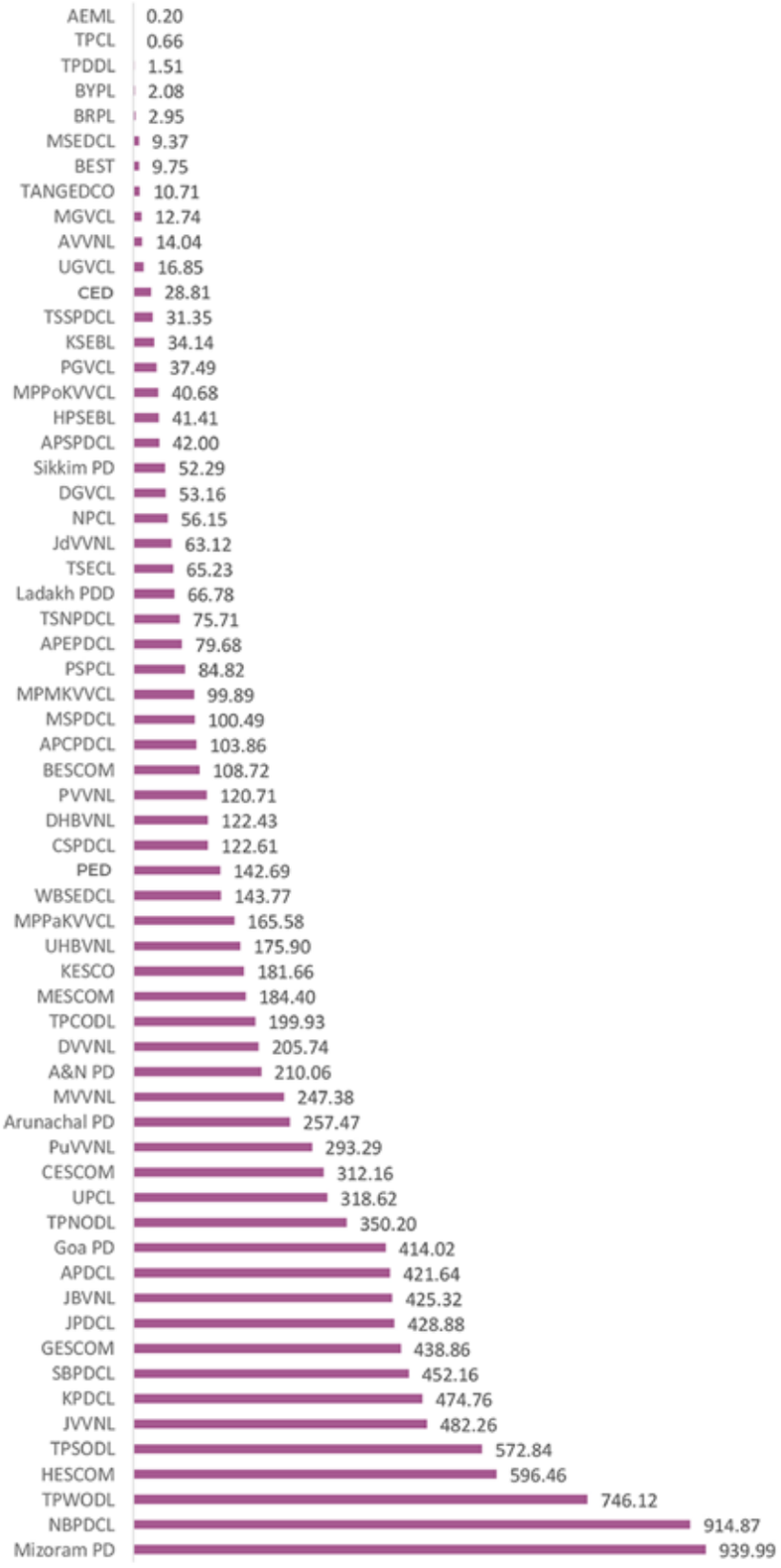
National Average 21.26 Hours

National Minimum 15.17 Hours

KEY TAKEAWAYS:

- Leading DISCOMs (more than 23.5 hours) are UGVCL, MGVCL, PGVCL & DGVCL (Gujarat), MSEDCL (Maharashtra), APSPDCL & APEPDCL (Andhra Pradesh) and WBSEDCL (West Bengal)
- DISCOMs below national average HoS – 19 DISCOMs
- DISCOM above national average HoS- 35 DISCOMs
- Private DISCOM below National average – NPCL (Uttar Pradesh)

2.2.3 Interruption Index (Urban)



FAST FACTS:

National Maximum
939.99

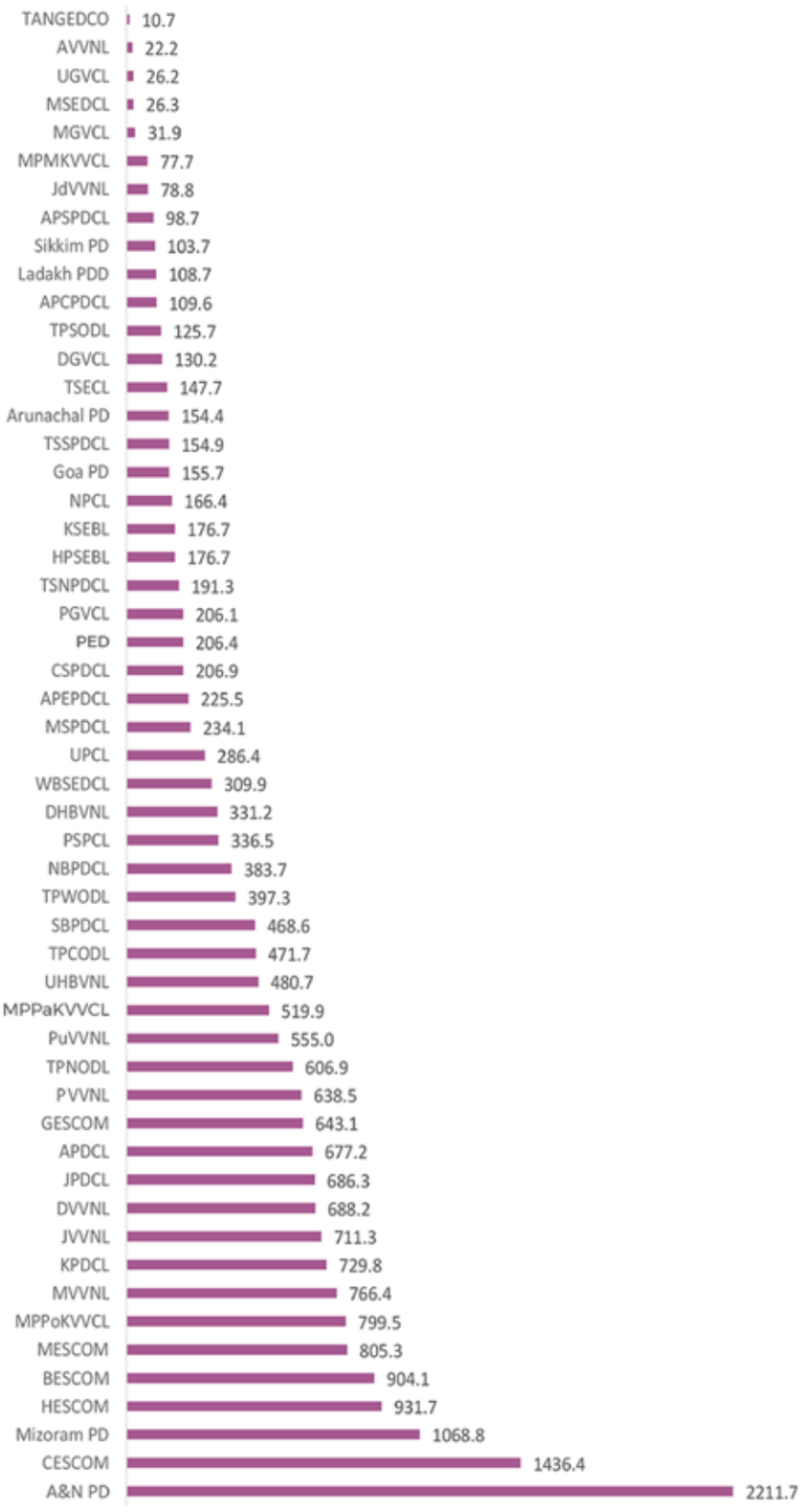
National Average
200.15

National Minimum
0.20

KEY TAKEAWAYS:

- Leading DISCOMs (less than 50 Interruptions / feeder / year) – 18 DISCOMs.
- No. of DISCOMs performing better than national average Interruption Index – 41 DISCOMs
- DISCOM performing poorer than national average Interruption Index – 21 DISCOMs
- Private DISCOMs performing poorer than national average Interruption Index – 3 DISCOMs: TPWODL, TPSODL and TPNODL (Odisha)

2.2.4 Interruption Index (Rural)



FAST FACTS:

National Maximum
2211.7

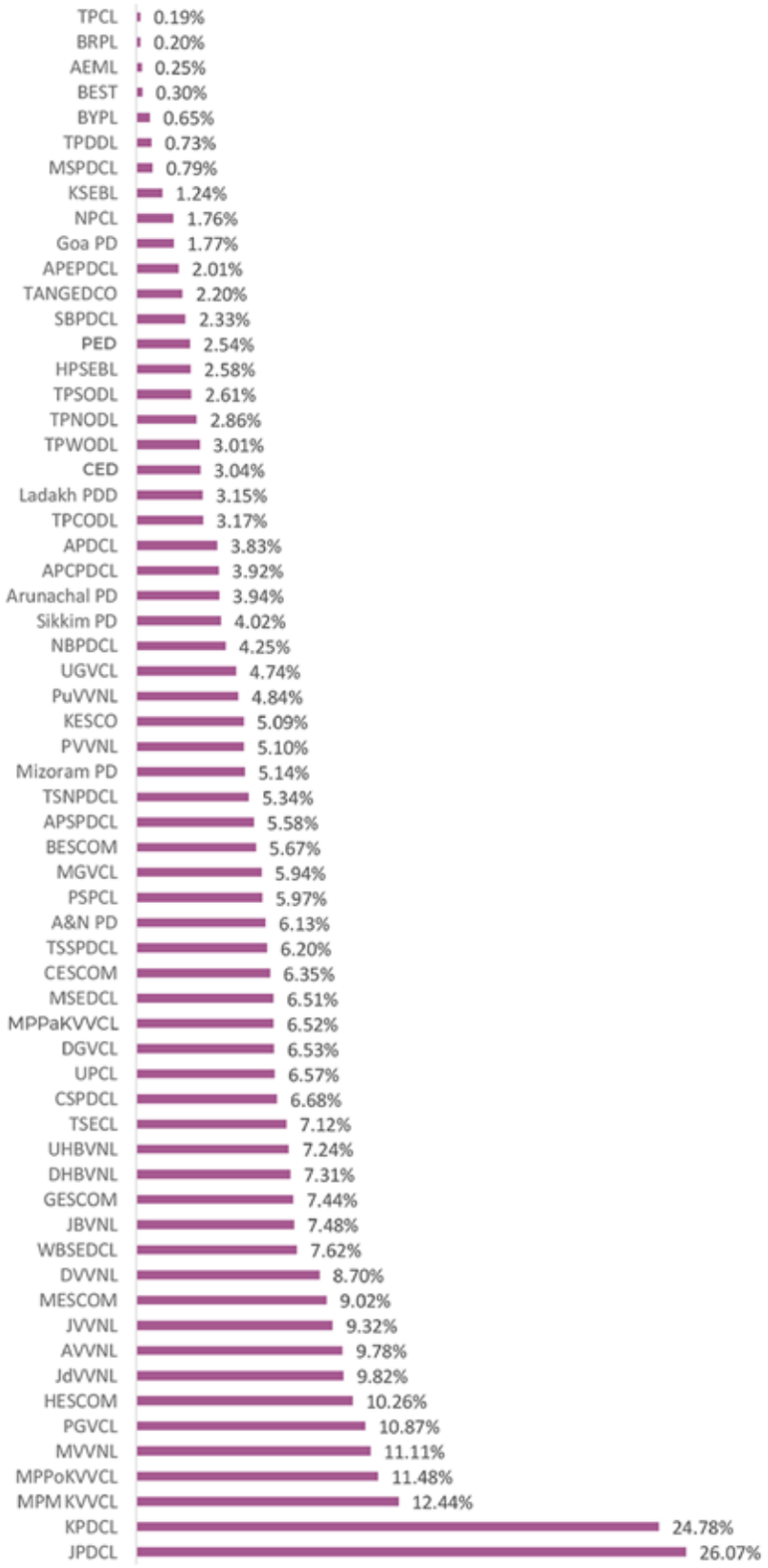
National Average
418.9

National Minimum
10.7

KEY TAKEAWAYS:

- Leading DISCOMs (less than 50 Interruptions / feeder / year) are MGVCL & UGVCL (Gujarat), TANGEDCO (Tamil Nadu), AVVNL (Rajasthan), and MSEDCL (Maharashtra)
- Nos. of DISCOMs performing better than national average Interruption Index – 32
- Nos. of DISCOM performing poorer than national average Interruption Index - 21

2.2.5 Distribution Transformer (DT) Failure Rate



FAST FACTS:

National Maximum
26.07%

National Average
5.81 %

National Minimum
0.19 %

KEY TAKEAWAYS:

- Leading DISCOMs in DT failure rate (less than 1% in FY2022-23) are TPCL, BRPL, AEML, BEST, BYPL, TPDDL and MSPDCL
- Leader with lowest DT failure among special category state is MSPDCL (Manipur) - 0.79%
- Highest DT failure rates – JPDCL (26.07 %) and KPDCL (24.78%)

2.3 CONNECTION AND OTHER SERVICES (COS)

This parameter measures time, convenience and effort of the consumer in availing a new connection from the DISCOMs. It also assesses the extent of technology enablement in application processing and renewable energy adoption among the consumers (prosumers). It aims at bringing uniformity by alignment of timelines in SoP regulations and predetermined demand charges for connections up to 150kW vis-à-vis industry best practices.

ANALYSIS OF SUB-PARAMETERS

2.3.1 Alignment of regulations with industry best practices (w.r.t. timelines)

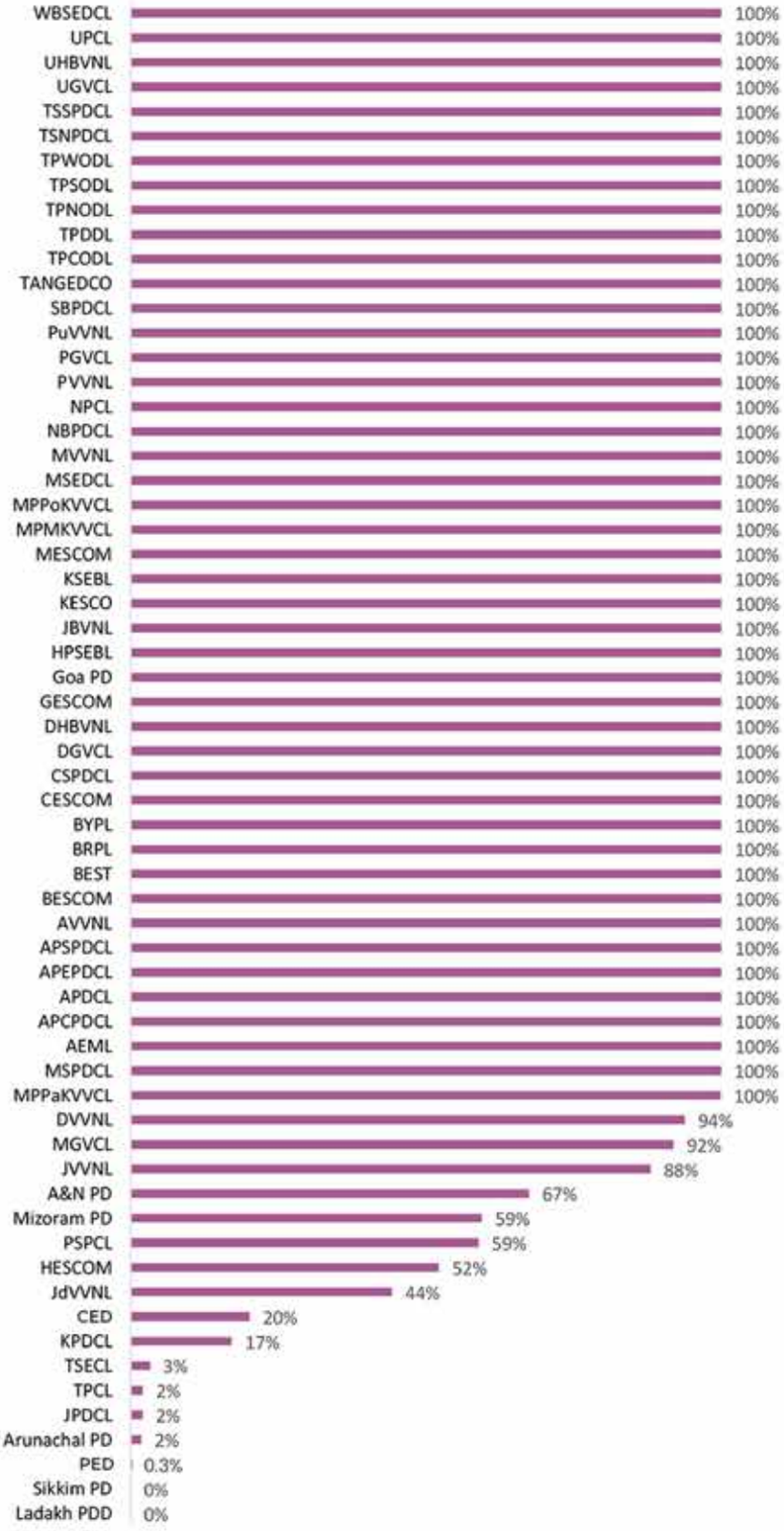
- Best practices are referred to the timelines stated in Electricity (Rights of consumers) rules, 2020 covering 7 key aspects across release of connections, testing of meters, replacement of meters, issuance of no-dues certificate, provision of payment of claims, feasibility of rooftop solar & connection of rooftop solar after installation.

- DISCOMs lagging in aligning to industry best practices are JPDCL, JBVNL, Sikkim PD, TPCL and Arunachal PD. These DISCOMs align with less than 4 out of the 7 regulations assessed for the ratings.

2.3.2 Presence of predetermined demand charges for connection (up to 150 kW)

- All the DISCOMs have complied to notification of predetermined demand charges for connections up to 150 kW except 2 DISCOMs: Arunachal PD and A&N PD.

2.3.3 Applications processed through online portal



FAST FACTS:

National Maximum
100%

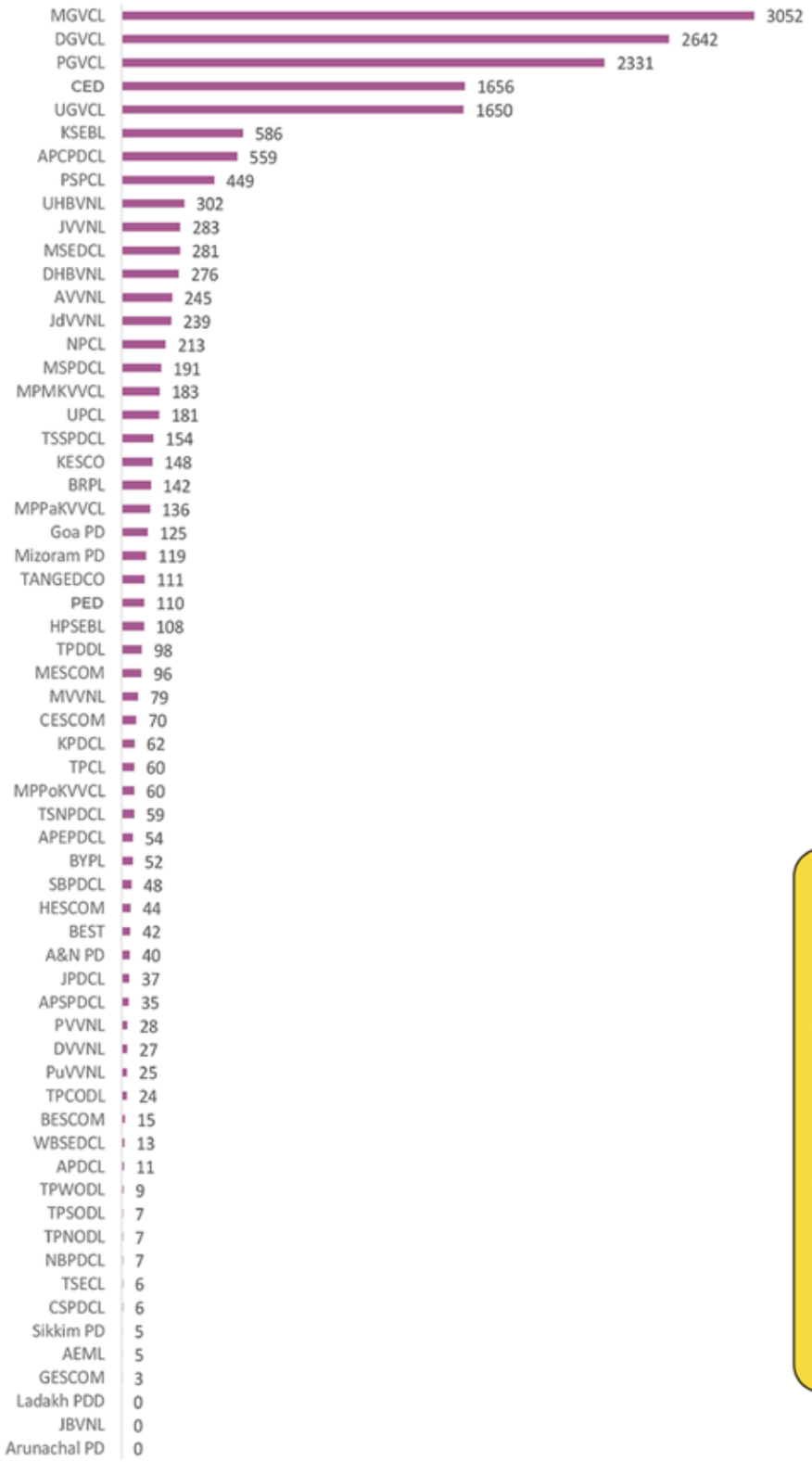
National Average
82%

National Minimum
0%

KEY TAKEAWAYS:

- DISCOMs with 100% online application processing : 45 DISCOMs
- DISCOMs adhering to hybrid model (manual and online mode): 15 DISCOMs
- DISCOMs with non-compliance to online application processing: Sikkim PD and Ladakh PDD

2.3.4 Prosumers per lakh consumers (under net metering / gross metering)



FAST FACTS:

DISCOMs	Avg. Prosumers (per lakh)
Gujarat DISCOMs	2419
Rest of India	137
National Avg.	284

KEY TAKEAWAYS:

- Leading DISCOMs with prosumers (>1000 per lakh consumers) – 5 DISCOMs: MGVCL, DGVCL, PGVCL, CED and UGVCL
- DISCOM with maximum prosumers – MGVCL (3052 per lakh consumers), ~10 times the national average (284 per lakh consumers)

2.3.5 Average deviation from SoP* in time taken for providing connection

- 52 DISCOMs are adhering to state SoP timelines for releasing new connection.
- There are 3 DISCOMs with high deviation w.r.t. SoP timelines (>50%) - BEST, MSEDCL and KESCO.

** SoP: 'Standard of Performance' defind by state regulatory body*

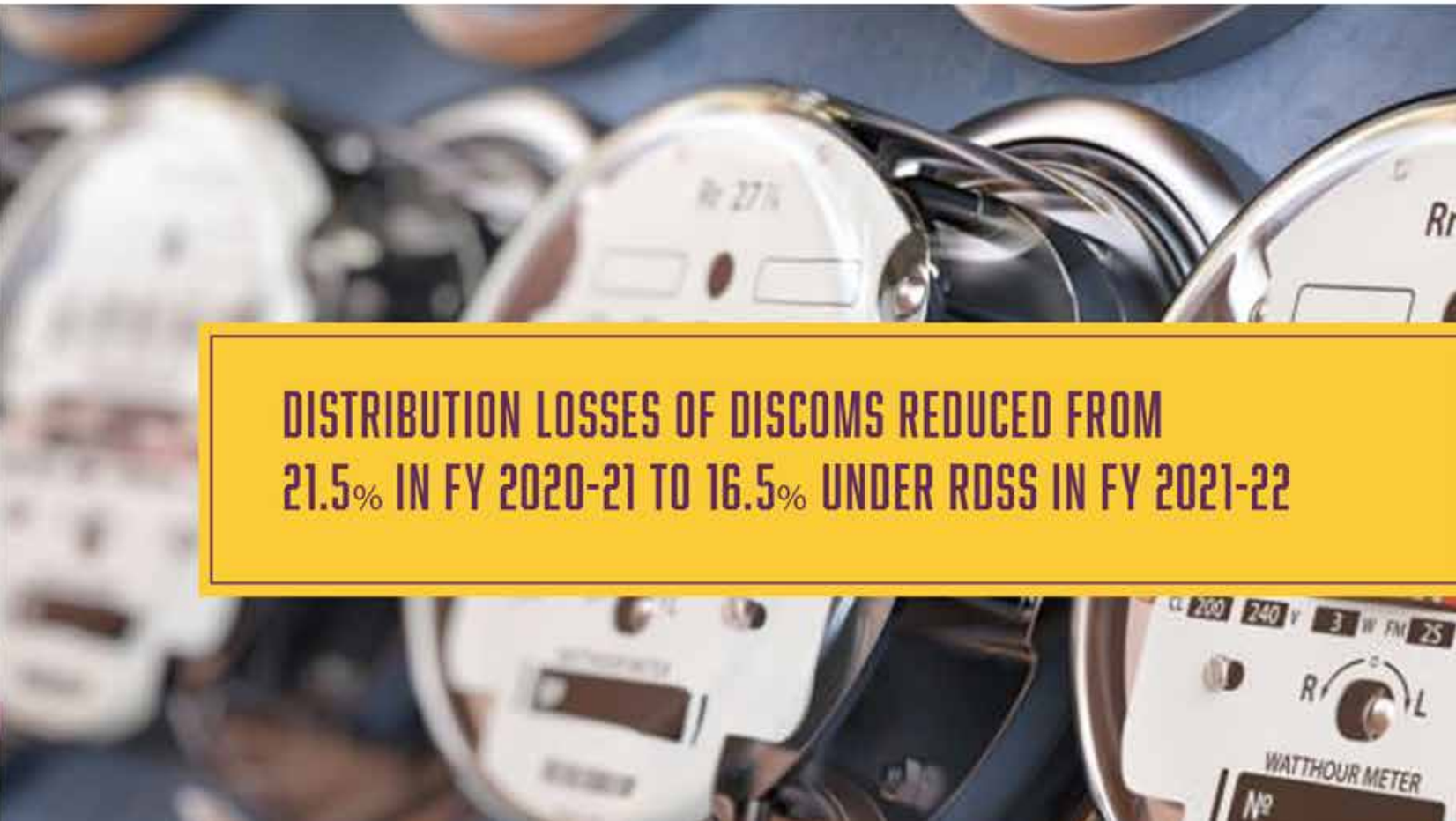
2.4 METERING, BILLING AND COLLECTION (MBC)

This parameter focuses on three critical streams of DISCOM operations - collecting meter data, generating / issuing of bills and revenue collection process. Herein, DISCOMs are assessed across 9 sub-parameters covering some of the crucial aspects such as time taken to replace defective meters, billing accuracy, modes of meter reading, billing frequency, quantum of bills generated, billing updates to consumers, prepaid consumers, tariff categories and consumers paying digitally.

ANALYSIS OF SUB-PARAMETERS

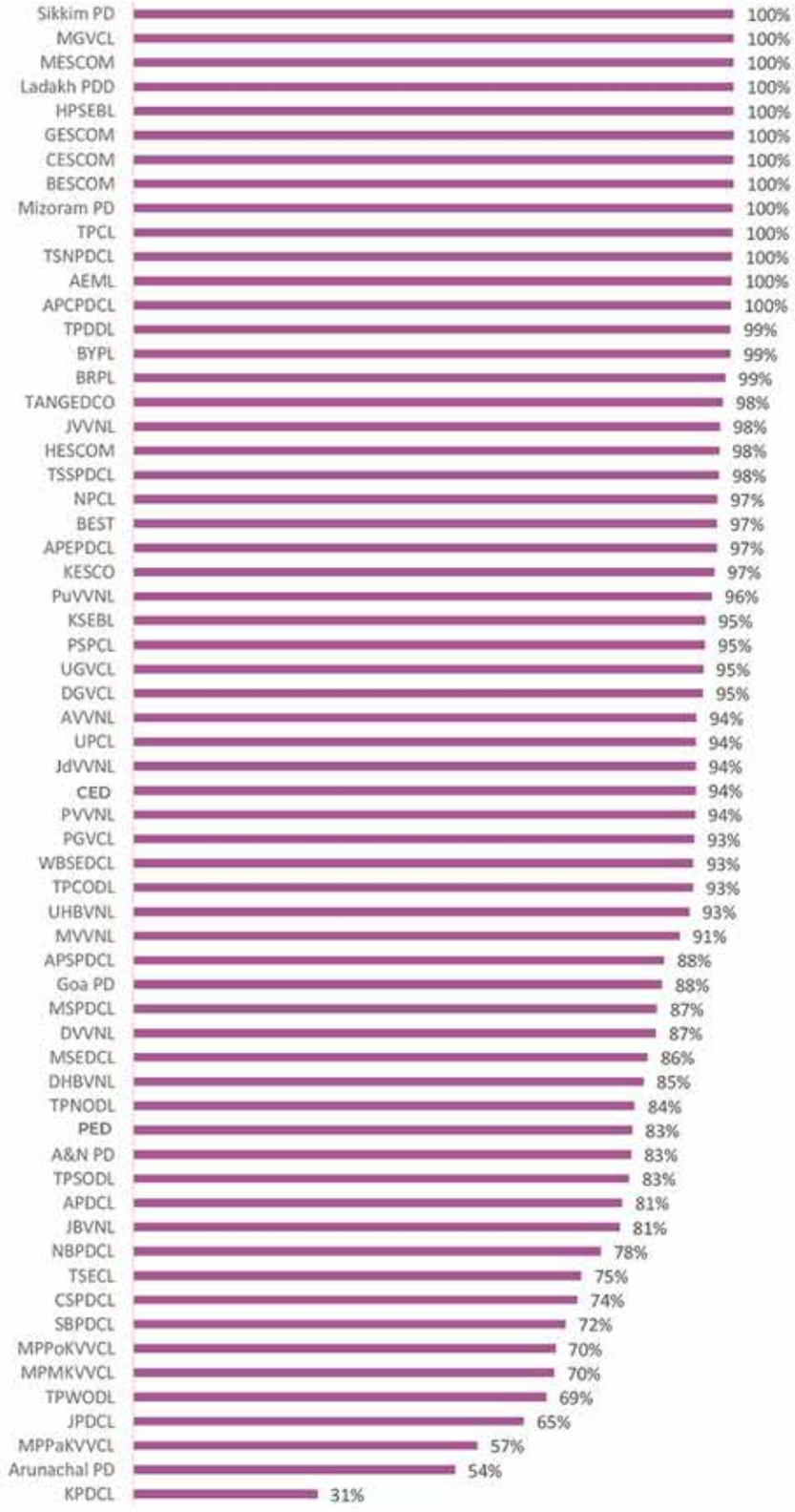
2.4.1 Average time taken for replacement of defective meters

- The leading DISCOMs i.e. MPMKVVCL, TPWODL and BESCOM replace defective meters within 24 Hrs in urban areas and there are 4 DISCOMs namely GESCOM, Arunachal PD, BESCOM and BRPL that replace defective meters within 2 days in rural areas.



DISTRIBUTION LOSSES OF DISCOMS REDUCED FROM 21.5% IN FY 2020-21 TO 16.5% UNDER RDSS IN FY 2021-22

2.4.2 Bills generated based on actual meter reading



FAST FACTS:

National Maximum 100%

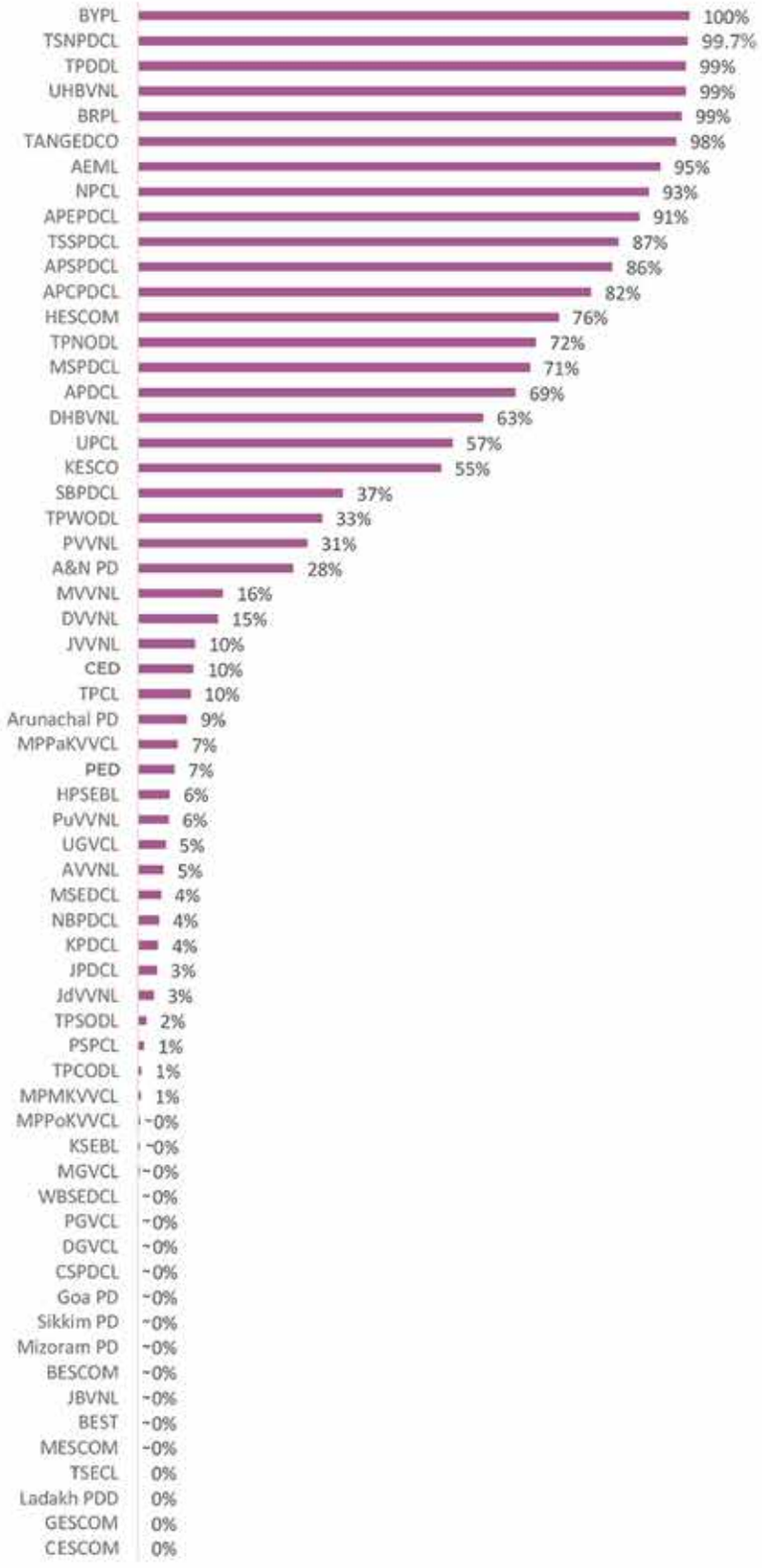
National Average 89%

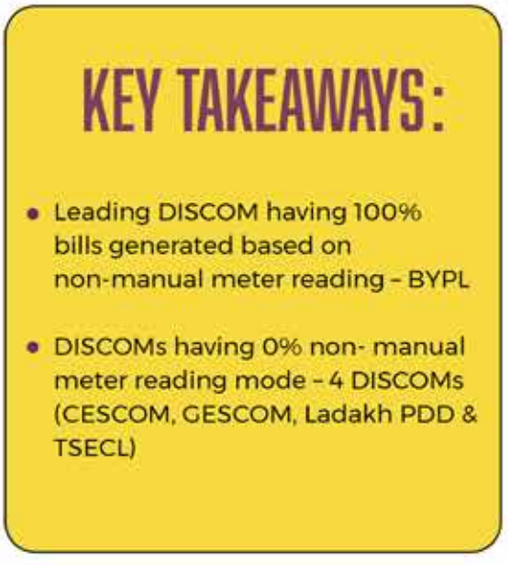
National Minimum 31%

KEY TAKEAWAYS:

- 13 Leading DISCOMs (100% of total bills generated) – TSNPDCL, AEML, Mizoram PD, TPCL, APCPDCL, BESCOM, CESCOM, GESCOM, HPSEBL, Ladakh PDD, MESCOM, MGVCL and Sikkim PD
- 39 DISCOMs are exceeding national average
- 4 DISCOMs amongst special category states above national average - Ladakh PDD, Sikkim PD, UPCL and Mizoram PD

2.4.3 Bills generated based on non - manual meter reading



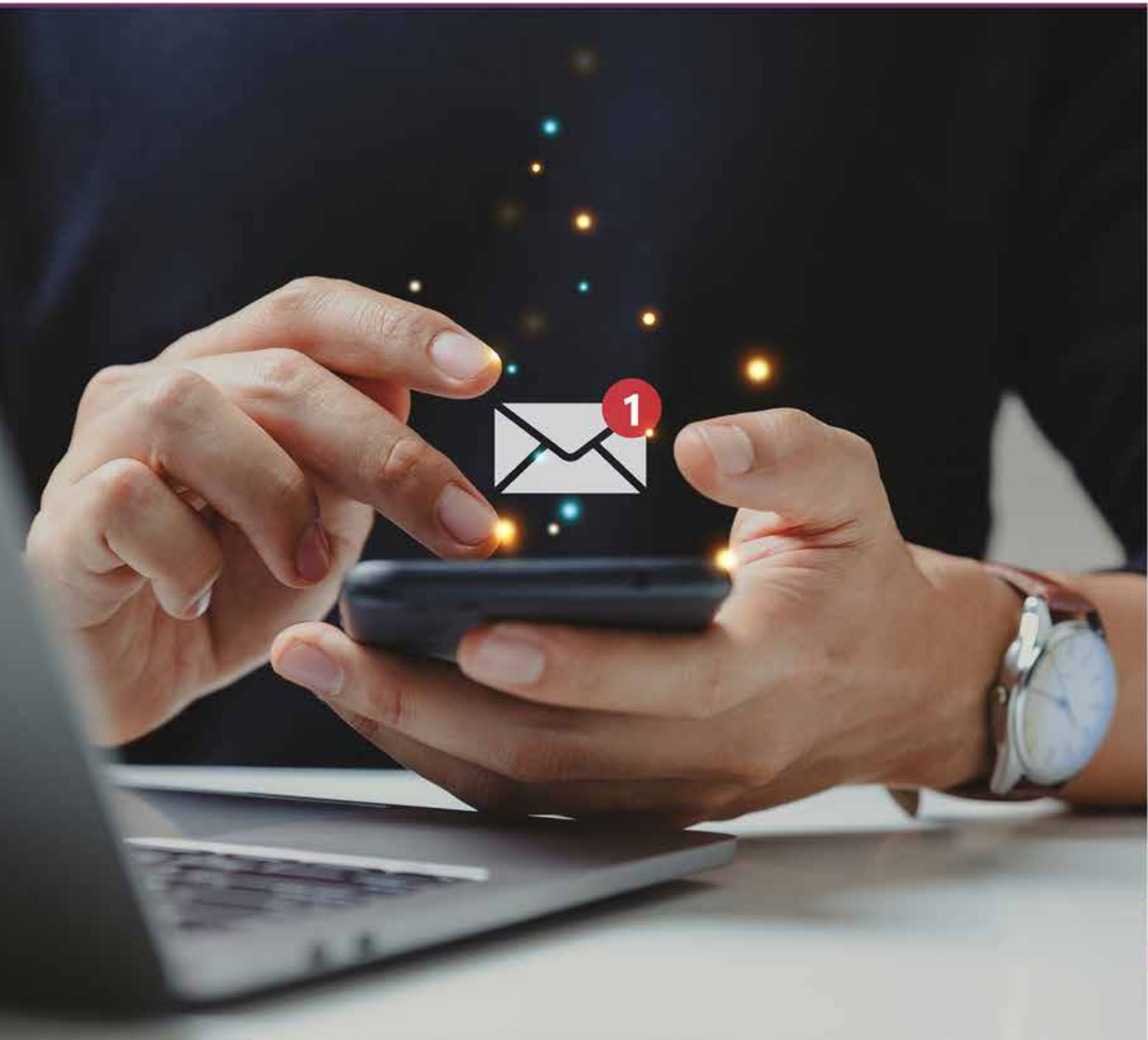


2.4.4 Billing frequency for domestic category consumers as per regulations

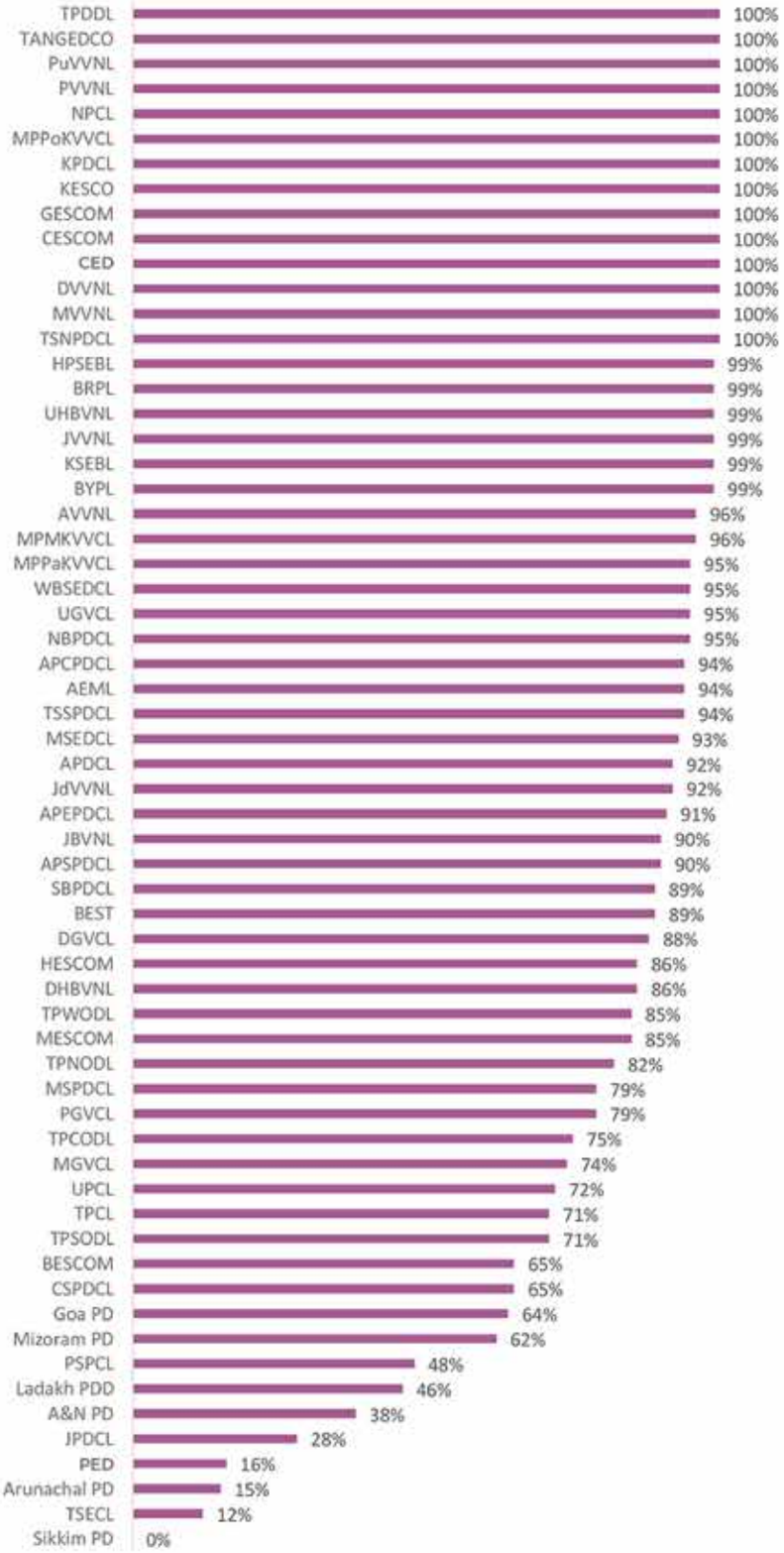
- Billing frequency for domestic category consumers is monthly in 51 DISCOMs, bi-monthly in 4 DISCOMs and multiple billing cycles in 7 DISCOMs.

2.4.5 Bills generated for domestic consumers in a year

- DISCOMs with lower bills generated for domestic consumers in a year (<80%) – 6 DISCOMs : TPWODL, Ladakh PDD, JVVNL, CESCOM, GESCOM and JBVNL.



2.4.6 Percentage of consumers receiving billing alerts



FAST FACTS:

National Maximum
100%

National Average
82%

National Minimum
0%

KEY TAKEAWAYS:

- Leading DISCOMs facilitating billing alerts to consumers (100%) – 14 DISCOMs across 8 states / UTs: TPDDL, TANGEDCO, TSNPDCL, CED, NPCL, KESCO, MPPoKVVCL, PVVNL, KPDCL, DVVNL, MVVNL, PuVVNL, CESCOM and GESCOM
- DISCOMs facilitating billing alerts to consumers above national average (82%) - 42 DISCOMs

2.4.7 Prepaid consumers

- Leading DISCOMs with high prepaid consumers (>10%) – 7 DISCOMs viz MSPDCL, PSPCL, KESCO, NPCL, TSECL, SBPDCL and Sikkim PD.
- DISCOMs with lower prepaid consumers (<1%), including DISCOMs without prepaid metering) – 46 DISCOMs.
- MSPDCL has reported the highest proportion of prepaid consumers - 86%

FAST FACTS:

National Maximum
86%

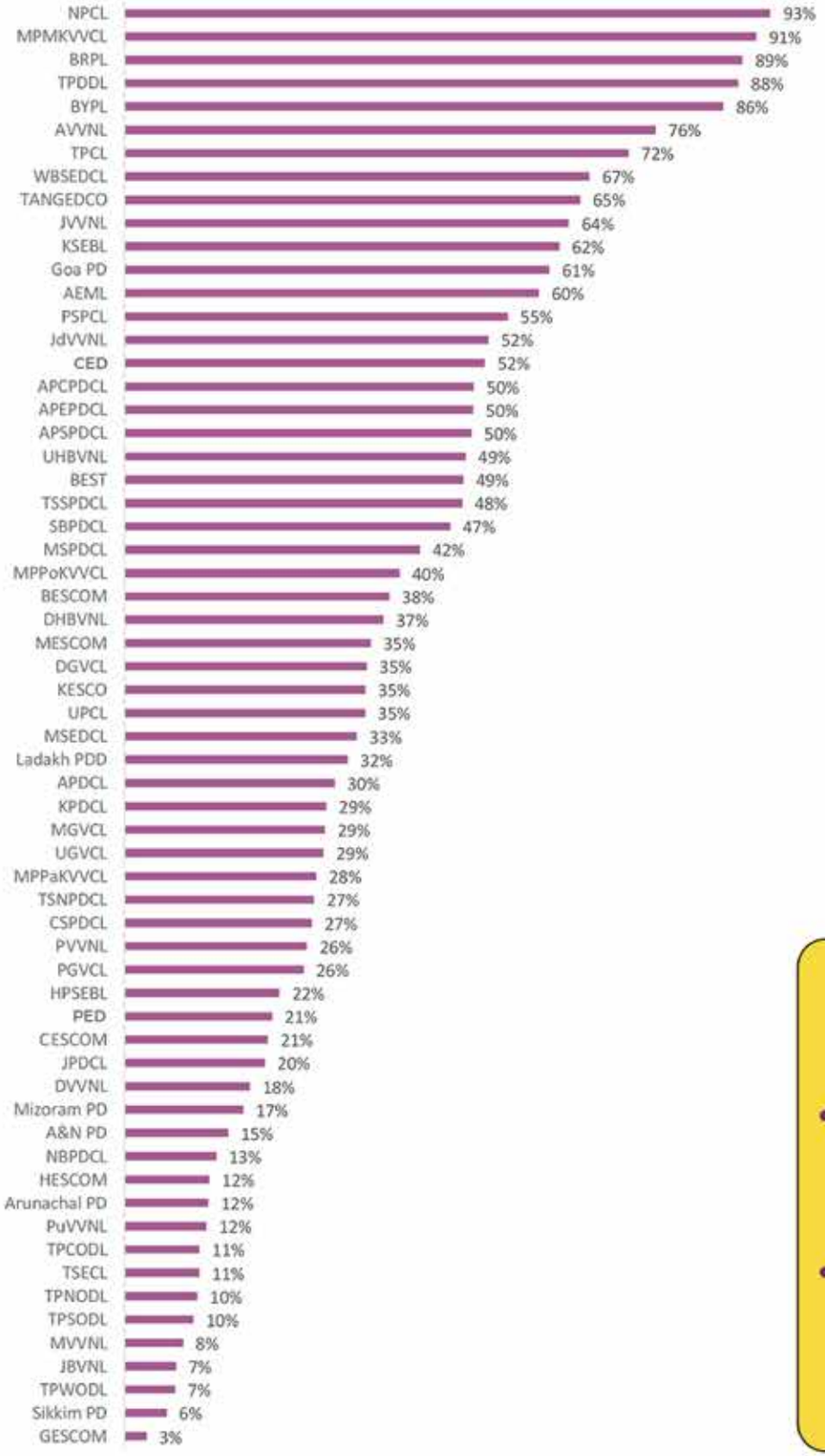
National Average
3.9%

National Minimum
0%

2.4.8 Number of tariff categories

- DISCOMs with number of tariff categories less than national average (56) – 41 DISCOMs.

2.4.9 Percentage of bills paid digitally



FAST FACTS:

National Maximum
93%

National Average
38%

National Minimum
3%

KEY TAKEAWAYS:

- Leading DISCOMs (>80% bills paid digitally) – 5 DISCOMs: NPCL, MPMKVVCL, BRPL, TPDDL and BYPL
- DISCOMs with proportion of consumers paying digitally above national average (38%) – 26 DISCOMs across 16 states / UTs

2.5 FAULT RECTIFICATION AND GRIEVANCE REDRESSAL (FRGR)

FRGR includes parameters that ensure adequate recording and timely resolution of consumer complaints across the DISCOMs, focusing to ensure consumer connect through the complaint resolution process.

ANALYSIS OF SUB-PARAMETERS

2.5.1 (24x7) customer care call centre

- All the DISCOMs have established 24X7 customer call centre for registering / resolution of consumer grievances except 5 DISCOMs, namely BEST, CED, Ladakh PDD, Mizoram PD and Sikkim PD.

2.5.2 Average call waiting time (ACWT) at the call centre

- There are 8 DISCOMs with ACWT < 5 seconds namely TPCL, PVVNL, BYPL, AVVNL, MSEDCL, MPPaKVVCL, MPPoKVVCL and MGVCL.

  There are 21 DISCOMs with ACWT > national average (21.47 seconds)

2.5.3 Consumers receiving outage related updates on mobile

- There are 13 DISCOMs with 100% compliance to outage alerts on mobile, namely TSNPDCL, CED, TPDDL, PSPCL, JVVNL, MVVNL, KESCO, TANGEDCO, PVVNL, MPPoKVVCL, PuVVNL, CESCOM and NPCL.
- There are 6 DISCOMs reporting no outage alerts to consumers, namely JPDCL, HPSEBL, TSECL, Ladakh PDD, Mizoram PD and Sikkim PD.

2.5.4 Deviation from specified time for complaint resolution

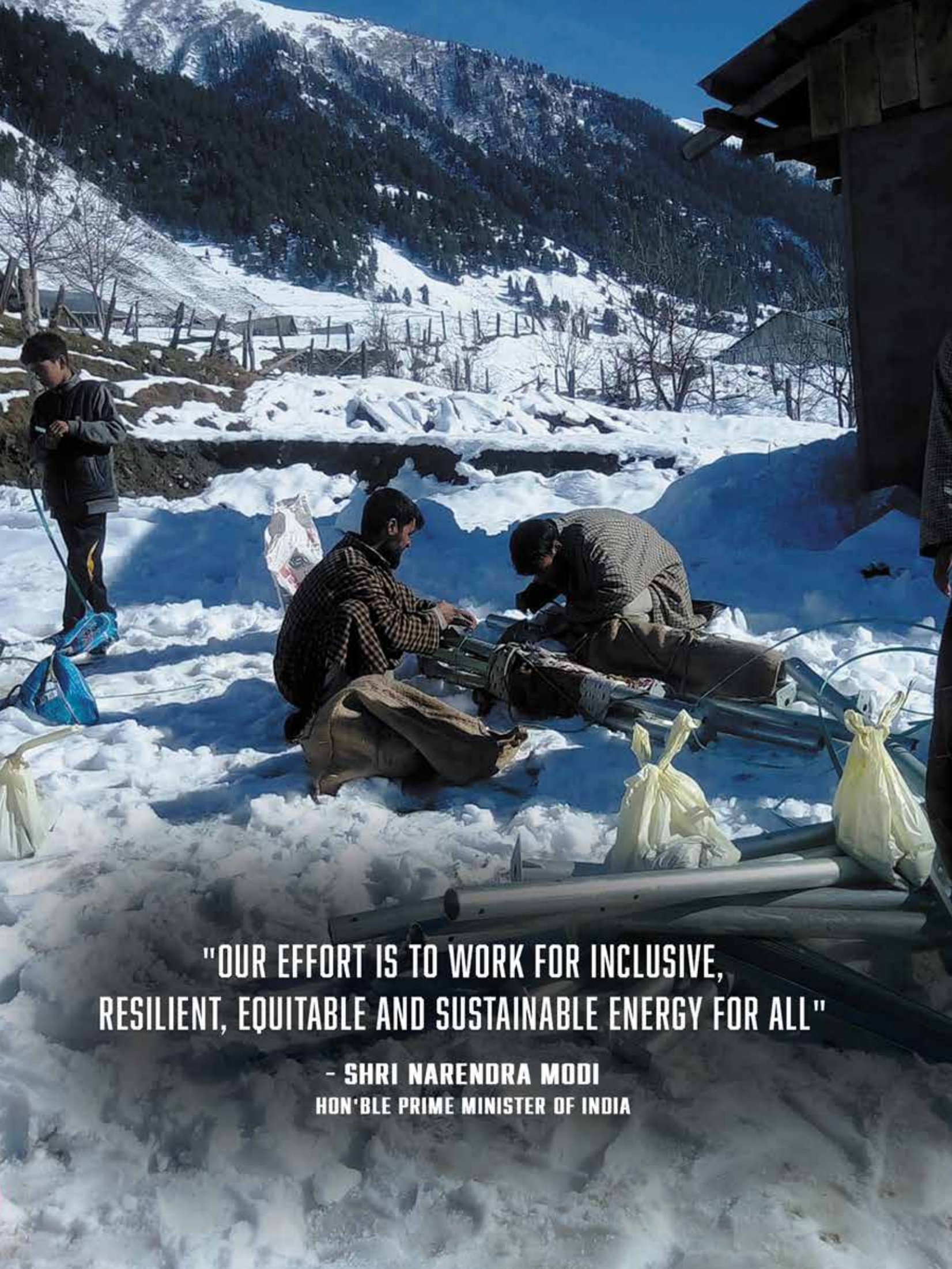
- Out of the 62 DISCOMs, 50 DISCOMs, on an average, resolve complaints within specified timelines.
- 5 DISCOMs take more than specified time on an average to resolve the complaints.
- There are 3 DISCOMs with greater than 100% deviation from the specified time for complaint resolution, namely APDCL (Assam), TPSODL (Odisha) and MSEDCL (Maharashtra).
- 7 DISCOMs did not submit sufficient data or satisfactory evidence or this parameter.

2.5.5 Grievance redressal mechanism (two tier)

- There are 60 DISCOMs with two-tier grievance redressal mechanism (at circle & corporate level).
- There are 2 DISCOMs with no presence of two-tier grievance redressal mechanism, namely MESCOM and Arunachal PD.

2.5.6 Number of CGRFs per 1 lakh consumers

- Leading DISCOM with more than 10 established CGRFs per lakh consumers – Ladakh PDD



"OUR EFFORT IS TO WORK FOR INCLUSIVE,
RESILIENT, EQUITABLE AND SUSTAINABLE ENERGY FOR ALL"

- SHRI NARENDRA MODI

HON'BLE PRIME MINISTER OF INDIA


HALEEM
BAKERY
FAMILY RESTAURANT
SHAADAN
PEARLS
SHAADAN
PEARLS
PEARLS
& BAKERY
PEARLS

Charminar, Hyderabad

3

KEY FINDINGS

One of the key objectives of the CSRD exercise has been to create a common platform for the DISCOMs to enable learning from peer performance. While some DISCOMs have secured leading positions with higher grades, many have been identified with parameters to improve upon. The following section delves into the parameter-wise performance summary and gives a comparative performance outlook of CSRD-2023 with the previous CSRD reports.

3.1 DISCOMs and consumer spread across the grade scale

Analysis has been carried out on the performance of the states / DISCOMs w.r.t the key performance parameters and the quantum of consumers served to bring out actionable insights. Overall, 32.4 crore electricity consumers are being served by the 62 DISCOMs considered for grading. It has been indicated in the previous sections also that a desirable performance scenario would give maximum spread of DISCOMs and consumers spread across the highest grades.

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	4	8	23	19	4	3	1
Consumer Spread	2%	21.7%	39%	32%	3%	2%	0.3%

- 4 DISCOMs have secured the highest grade "A+" and 8 DISCOMs have secured "A" grade this year.
- Maximum Nos. of DISCOMs (23) have secured the "B+" grade and 1 DISCOM has secured "D" grade.
- Overall, 24 % consumers experience "A+" or "A" grade services and on the contrary, 2.03% consumers experience the lower grade services i.e "C" and "D".

3.2 Grade spread of DISCOMs across the key parameters

The below table represents the grade specific spread of the DISCOMs across the 4 key parameters: OR, CoS, MBC and FRGR. The parameter with greater count of DISCOMs in "A+" or "A" indicates a desirable performance in general, the parameter with greater count of DISCOMs in "C" or "D" indicates inferior performance in general by DISCOMs.

Grades	OR	CoS	MBC	FRGR
A+	23	12	2	17
A	16	24	2	17
B+	12	7	9	11
B	2	5	9	6
C+	4	6	15	2
C	3	2	14	2
D	2	6	11	7
Total	**62 DISCOMs**			

- At an overall level, DISCOMs have performed comparatively better across the 3 key parameters: OR, CoS and FRGR with 39, 36 and 34 DISCOMs securing "A+" or "A" grade respectively.
- On the MBC front, meagre 4 DISCOMs have secured "A+" or "A" and the maximum DISCOMs 25 Nos. have secured "C" or "D" grade.
- Under the OR parameter, the maximum number of DISCOMs have secured the highest grade i.e "A+" indicating a better in general performance under this highest weighted parameter (45 Marks).
- Similarly, in the MBC parameter, a high 11 Nos. of DISCOMs have secured the lowest grade i.e."D" indicating, in general, an inferior performance under this parameter.

3.3 Parameter specific services to the consumers

The below section indicates the spread of consumers and the DISCOMs across the 4 key parameters.

3.3.1 Operational Reliability (OR)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	23	16	12	2	4	3	2
Consumer Spread	46%	23%	14%	3%	9%	4%	1%

- Out of 32.4 crore consumers, 14.9 crore (46%) consumers are experiencing "A+" grade services and are served by 23 DISCOMs.
- A low 0.22 crore (1%) are experiencing "D" grade OR services by 2 DISCOMs.
- Considering "A+" and "A" graded DISCOMs as the benchmark performers, it may be inferred that 69% of the overall consumers received superior OR services.
- On the contrary, DISCOMs graded "C" and "D" in the OR parameter, cumulatively serve 5% of the overall consumers indicating the consumer base receiving inferior level of OR services.

3.3.2 Connection and Other Services (CoS)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	12	24	7	5	6	2	6
Consumer Spread	18%	50%	7%	4%	6%	3%	12%

- Out of 32.4 crore consumers, 5.96 crores (18%) are served by 12 DISCOMs with "A+" grade and 3.75 crore (12%) consumers served by 6 DISCOMs are experiencing "D" grade services under CoS parameter.
- Considering "A+" and "A" graded DISCOMs as the benchmark performers, it may be inferred that 68% of the overall consumers received superior level of CoS.
- DISCOMs graded "C" and "D" under CoS, cumulatively serve 15% of the overall consumers, indicating a significant consumer base receiving relatively inferior CoS.

3.3.3 Metering, Billing, and Collection (MBC)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	2	2	9	9	15	14	11
Consumer Spread	0.9%	1.2%	21.9%	13%	33.6%	21%	8.4%

- Under this parameter 0.68 crore consumers (2.1%) spread across 4 DISCOMs have experienced"A+" and "A" grade services.
- Around 6.8 crore consumers (21%) and 2.7 crore consumers (8.4%) spread across 14 and 11 DISCOMs with "C" and "D" grade services respectively under MBC, indicating a cumulative 29.4% of the consumers experiencing relatively inferior services under this parameter.

3.3.4 Fault Rectification and Grievance Redressal (FRGR)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	17	17	11	6	2	2	7
Consumer Spread	38.6%	33.8%	11.8%	3.9%	0.1%	9.6%	2.2%

- Out of 32.4 crore consumers, 12.5 crore (38.6%) are served by 17 DISCOMs while 0.71 crore (2.2%) are experiencing "D" grade services.
- Considering "A+" and "A" graded DISCOMs as the benchmark performers, it is evident that ~72% of the overall consumers faced superior FRGR services.
- DISCOMs graded "C" and "D" under FRGR, cumulatively serving 11.8% of the overall consumers, indicating a significant consumer base experiencing inferior FRGR services.

3.3.5 Performance symmetry across the parameters

Assessing the performance in terms of similar grades secured by DISCOMs across the 4 key parameters gives an insight into performance consistency at an overall level. This will help in identification of DISCOMs with high or low grades across multiple parameters.

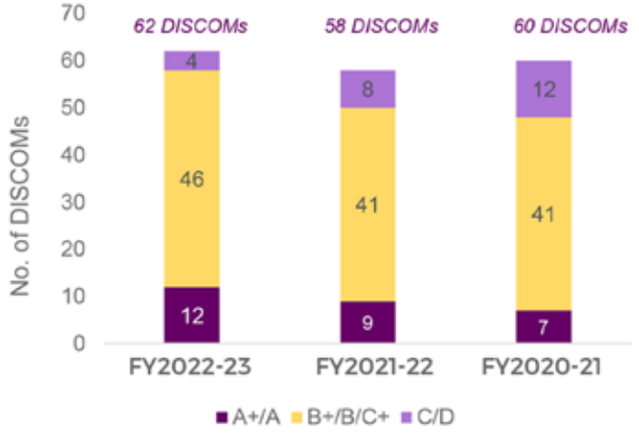
DISCOM Grades	DISCOM count with similar grades			
	All 4 Parameters	In 3 Parameters	In 2 Parameters	In 1 Parameters
A+	1[a]	1	8[b]	31[c]
A	0	3	14	22
B+	0	0	10	19
B	0	0	3	16
C+	0	0	4	19
C	0	1	2	14
D	0	1	6	11

- [a]Only 1 DISCOM has secured "A+" grade across all the 4 key parameters viz NPCL.
- [b]8 DISCOMs have secured "A+" grades in 2 parameters and [c]31 DISCOMs have secured "A+" grade in 1 parameter amongst the 4 parameters.
- 18 DISCOMs have attained lowest grades of "D" in at least one parameter.
- There is a significant drop-off when looking at DISCOMs that maintain high grades across multiple parameters, which indicates the challenges to achieve high performance consistently across all evaluated areas.

3.4 Grade Spread of DISCOMs over last 3 years (FY 2021-2023)

The below table and graphic indicates the change in spread of DISCOMs across the grade scale over the 3 CSRD editions i.e. FY 2020-21, FY 2021-22 and FY 2022-23. The Nos. of DISCOMs participating for the grading exercise have increased from 60 in FY 2020-21 to 62 in FY 2022-23 amongst 70 DISCOMs in India.

Grades	FY2022-23	FY2021-22	FY2020-21
A+	4	0	2
A	8	9	5
B+	23	13	9
B	19	16	15
C+	4	12	17
C	3	4	5
D	1	4	7
Total	**62**	**58**	**60**



Other key observations on the grade specific performance at national level are:

- The proportion of DISCOMs securing higher grades (A+/A) is increasing and the DISCOMs securing lower grades (C/D) is decreasing year-on-year.
- The maximum spread of DISCOMs over the years is observed across B+/B/C+ category.
- There is a positive trend showing DISCOMs obtaining A+/A grades over the three years, increasing from 7 Nos. in 2021, to 9 Nos. in 2022, and then to 12 Nos. in 2023.
- The number of DISCOMs obtaining B+/B/C+ grades also increased significantly from 41 Nos. in both 2021 and 2022 to 46 Nos. in 2023.
- There is a decrease in Nos. of DISCOMs securing lowest grades i.e. C/D grades, starting from 12 Nos. in 2021, dropping to 8 Nos. in 2022, and further down to 4 Nos. in 2023. This year-over-year change in DISCOMs from 33.33% from 2021 to 2022 and an even larger 50% decrease from 2022 to 2023 indicates an improvement in these DISCOMs towards consumer services.

Furthermore, over the last 3 years, 5 DISCOMs namely BYPL (Delhi), BRPL (Delhi), TPDDL (Delhi), TSSPDCL (Telangana) and APSPDCL (Andhra Pradesh) have consistently secured top grades (A+/A). On the contrary, except 3 DISCOMs namely JPDCL & KPDCL (Jammu & Kashmir) and JBVNL (Jharkhand), no DISCOM has obtained C/D grade consistently from FY 2021-23.

3.5 Change in grade spread in FY 2022-23

The below table gives an outlook of the change in the grade spread of the DISCOMs across the 4 key parameters in FY 2022-23 over the FY 2021-22 rating exercise. At a national level, this will enable identification of parameters vis-à-vis grades in which there is a significant shift in Nos. of DISCOMs falling in a particular grade and parameter.

Grades	OR	CoS	MBC	FRGR
A+	11[a]	0	2	-3
A	-3	4[b]	-2	4[d]
B+	1	-3	5	0
B	-5	-1	5	1
C+	1	3	1	-2
C	-3	0	1	2
D	-2	-3	-12[c]	-2
Total	**58 DISCOMs***			

Note: For the purpose of comparison, the tabulation of changes in only 58 DISCOMs which were involved in both FY 2021-22 and FY 2022-23, has been undertaken, with the exclusion of 4 additional DISCOMs (A&N PD, Mizoram PD, Sikkim PD and Arunachal PD) that were exclusively engaged in FY 2022- 23

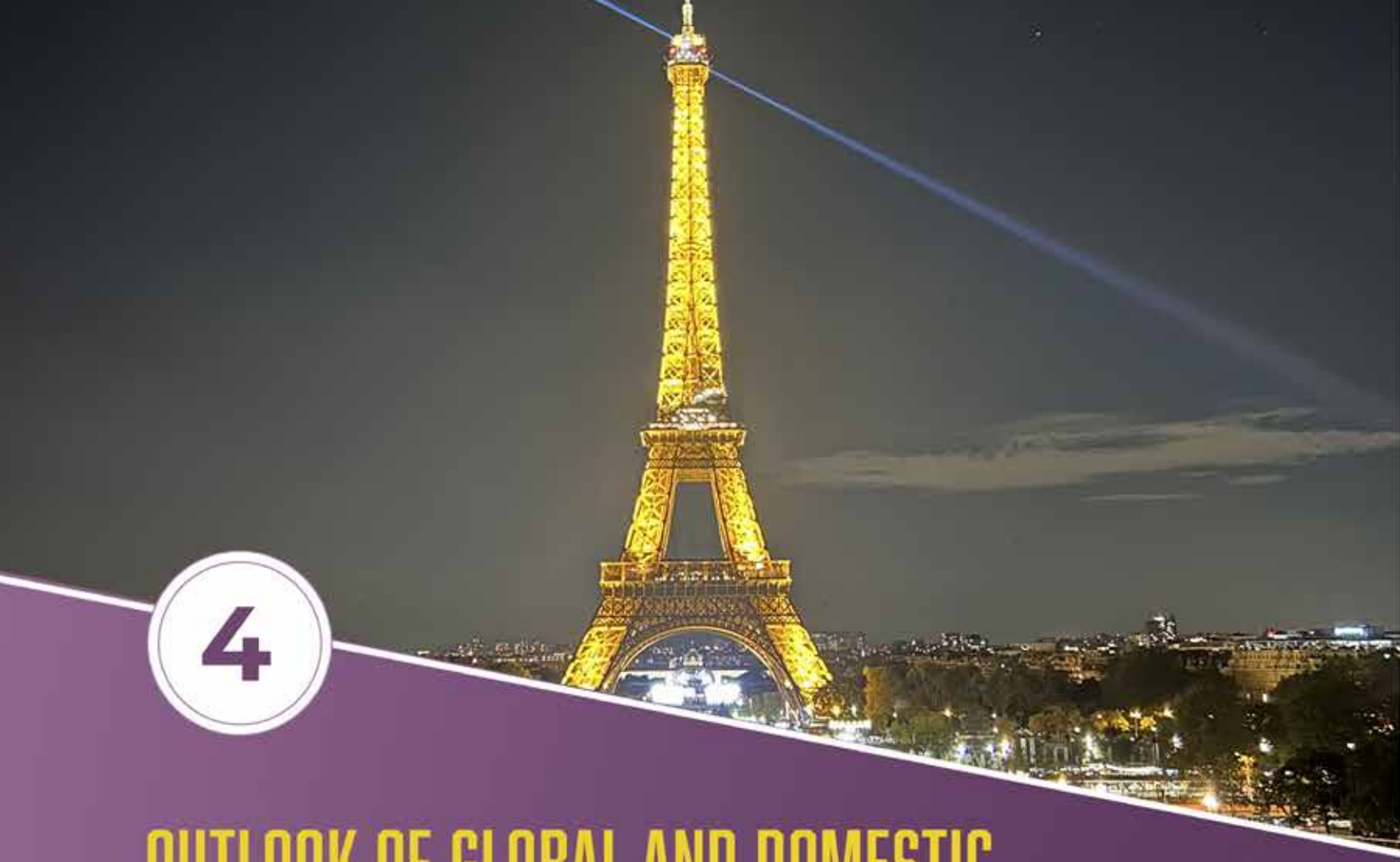
Basis the above table, it is evident that across some grades corresponding to a particular performance parameter, there are positive, negative or no changes in the spread of DISCOMs. From an overall performance perspective, it is desirable that there are positive changes in DISCOM count across the higher grades corresponding to the 4 key service parameters.

Some categories saw improvements in Nos. of DISCOMs, while others witnessed declines or remained the same.

- [a]Maximum shift in the highest grade i.e. "A+" is observed in the OR parameter, with addition of 11 DISCOMs in FY 2022-23.
- [b]Under CoS, maximum increase in DISCOMs is observed in "A" category with an addition of 4 DISCOMs from other, majorly lower, grades.
- [c]MBC parameter witnessed a maximum shift of DISCOMs across all broad parameters, with a shift of 12 DISCOMs from lowest grade "D" to higher grades.
- [d]Under FRGR, maximum shift in DISCOMs is observed in "A" category with an addition of 4 DISCOMs to "A" grade.

It is noteworthy that the MBC parameter saw a noticeable decrease in DISCOM count in "D"grade whereas the OR category saw a noticeable increase in "A+" grade DISCOMs. Many DISCOMs improved their performance in the FRGR category also and moved up in grades. Based on the above findings, it is important that the DISCOMs take note of their performances across the various sub-parameters and take corrective actions.

Chhatrapati Shivaji Maharaj Terminus, Mumbai



4

OUTLOOK OF GLOBAL AND DOMESTIC BEST PRACTICES IN ELECTRICITY DISTRIBUTION

Globally, electricity distribution sector has witnessed numerous reforms and innovations contributing to efficient functioning and resilient services to the end electricity consumers. A customer-focused approach is taking a center-stage across the functioning of the global power utilities and have pushed them for adoption of innovative measures across their various service areas. Several initiatives adopted have led to improved reliability of electricity supply, limited power outages and restoration of electrical services through automated systems.

Across the globe, electricity consumers are getting more engaged with their electricity suppliers and the system has evolved to the extent that it is facilitating the consumers in choosing their suppliers. This empowerment of the consumers to choose their suppliers brings in a healthy competition and gives a thrust to reliable services. The power utilities supplying electricity to the end consumers face varying challenges in terms of geography, demographic profile, climatic challenges, etc. To maintain the consumer service standards and business continuity, a range of technical and commercial interventions are put in place.

Based on the research done for this report, some of the practices seem to be noteworthy and may be explored for replication by DISCOMs in India. The intervention areas range from improved and resilient distribution infrastructure, consumer-friendly billing practices, lower response times, improved grievance handling, smart / IT interventions, etc. Many global and Indian utilities / DISCOMs use cutting-edge technologies along with mature and tested practices. They have enabled streamlined mechanisms for operations, metering, billing and consumer-focused strategies to achieve increased operational efficiency and reliability, minimized downtimes and improved consumer satisfaction.

Some of the larger and matured global economies have been focusing on the key enablers for industrial growth in which electricity plays a key role. Some of these global utilities can be considered as benchmarks for not just Indian power utilities but the global ones also. Hence, adoption of best practices of global and Indian DISCOMs can be adaptable strategy for some of the Indian DISCOMs that are not performing as per benchmark service standards. These DISCOMs may re-engineer their practices, modernize, innovate and enhance their service quality by plugging the gaps via technical and commercial interventions.

SOME OF THE BEST PRACTICES FOLLOWED BY DISCOMS / UTILITIES ACROSS THE GLOBE ARE:

Illustration Practice - I

Practice Head: Operational Reliability	**Country Name:** Canada (Northern Illinois, US)	**Utility Name:** Commonwealth Edison

Performance outlook:

In FY2020-21, ComEd provided reliable energy 99.98% of the times and 80% or 3.3 million of ComEd customers experienced either zero or only one interruption which seemed a fairly good performance. ComEd's 2021 SAIFI with reportable storms on record stood at 0.70 and favorable by 49% compared to the five-year pre-EIMA average. Without reportable storms, SAIFI was 0.50.

Key features of the practice:

ComEd continues to proactively improve the performance of the distribution system through strategic investments directly targeting reliability and resiliency to the benefit of customers. Investments in system performance focus on:

1) Resiliency and underground cable insulation programs to reduce outage frequency and duration

2) Distribution automation technology to recover faster from the electrical faults providing operational flexibility and enabling renewables' integration

3) Condition-based maintenance by leveraging data analytics and operational intelligence to drive high value and high impact preventative maintenance

4) Improving system reliability through systematic replacement of obsolete equipment

Illustration Practice - II

Practice Head: Reliability of power supply	**Country Name:** Canada (Mississauga)	**Utility Name:** Alectra Utilities

Performance outlook:

In 2022, the average no. of hours for which power to a customer was interrupted (excluding major event days) was 0.88 hours, compared to 0.98 hours in 2021 and average no. of times that power to a customer was interrupted was 1.07, compared to 1.15 occurrences in 2021.

Key features of the practice:

To improve this metric, Alectra Utilities has established plans to proactively identify sections of underground cable for remediation in order to mitigate cable failure and outage events.

Illustration Practice - III

Practice Head: DT Failure rate	**Country Name:** United States (Northern Illinois)	**Utility Name:** Commonwealth Edison

Performance outlook:

The DISCOM has reported less than 0.5% DT failure rate in FY 2017-18.

Key features of the practice:

1) Almost 1/3rd of their maintenance inspectors is certified to fly Unmanned Aerial Systems (UAS), or drones with a robust imaging platform featuring truck mounted Pan-Tilt-Zoom (PTZ) cameras and all-terrain vehicles. This helps in keeping a tap on the condition of critical equipment like powerlines, DTs, etc. Also, their enhanced vegetation management program is another essential component of our reliability strategy.

2) Lower purchase process time for some critical components associated with the distribution transformers, purchase is initiated as and when the inventory levels fall below a threshold level.

3) 345kV / 138kV auto transformers which are at risk of failure have been replaced by 345kV circuit breaker to improve reliability at a substation in DuPage County.

Illustration Practice - IV

Practice Head: Call waiting time	**Country Name:** Canada (Mississauga)	**Utility Name:** Alectra Utilities

Performance outlook:

In FY2021-22, Alectra Utilities' Customer Service Representatives ("CSR") received 5,27,916 calls from customers, ~over 2,000 calls per working day. Over the course of the year, CSRs answered 70.69% of incoming calls within 30 seconds, exceeding the Ontario Energy Board's (OEB) target of 65%.

Key features of the practice:

The Distribution System Code (DSC) requires that electricity distributors answer calls within 30 seconds, at least 65% of the time. The performance on this aspect is impacted by the volume of customer calls that are received by the call center on various service areas like billing inquiries, customer move-ins and outs, news about the electricity market in the media, conservation and demand management programs, power outages, etc.

Illustration Practice - V

Practice Head: Billing accuracy	**Country Name:** Canada (Mississauga)	**Utility Name:** Alectra Utilities

Performance outlook:

In 2022, Alectra Utilities issued ~13 million customer bills and achieved a billing accuracy performance of 99.71%. This performance exceeds the mandated target of 98% as specified by the Ontario Energy Board (OEB).

Key features of the practice:

Alectra Utilities' sustained attention to details and thorough business management processes have contributed to a billing accuracy measure of over 99.5% in each of the last five years. The utility continues to carefully monitor billing accuracy results to identify opportunities for improvement.

Illustration Practice - VI

Practice Head: Measuring consumer satisfaction	**Country Name:** United States (Northern Illinois)	**Utility Name:** Commonwealth Edison

Performance outlook:

ComEd has been recognized as one of the top electric utilities in the US for customer satisfaction by J.D. Power (consumer intelligence company in the US). The DISCOM conducts a yearly customer satisfaction survey on reliability and customer service (using a single independent research firm) to improve operational reliability and consumer satisfaction levels by collecting and analyzing customer feedback on various aspects of their service, such as power quality, outage management, billing, communication and customer care.

Key features of the practice:

In FY2021-22, the survey involved telephonic interviews among 600 randomly selected residential customers and 400 randomly selected non-residential customers addressing various topics, including reliability performance, customer service performance, billing performance, tree trimming performance and understanding of services.

Illustration Practice - VII

Practice Head: Operational reliability & outages	**Country Name:** Chile	**Utility Name:** ENEL (Chile)

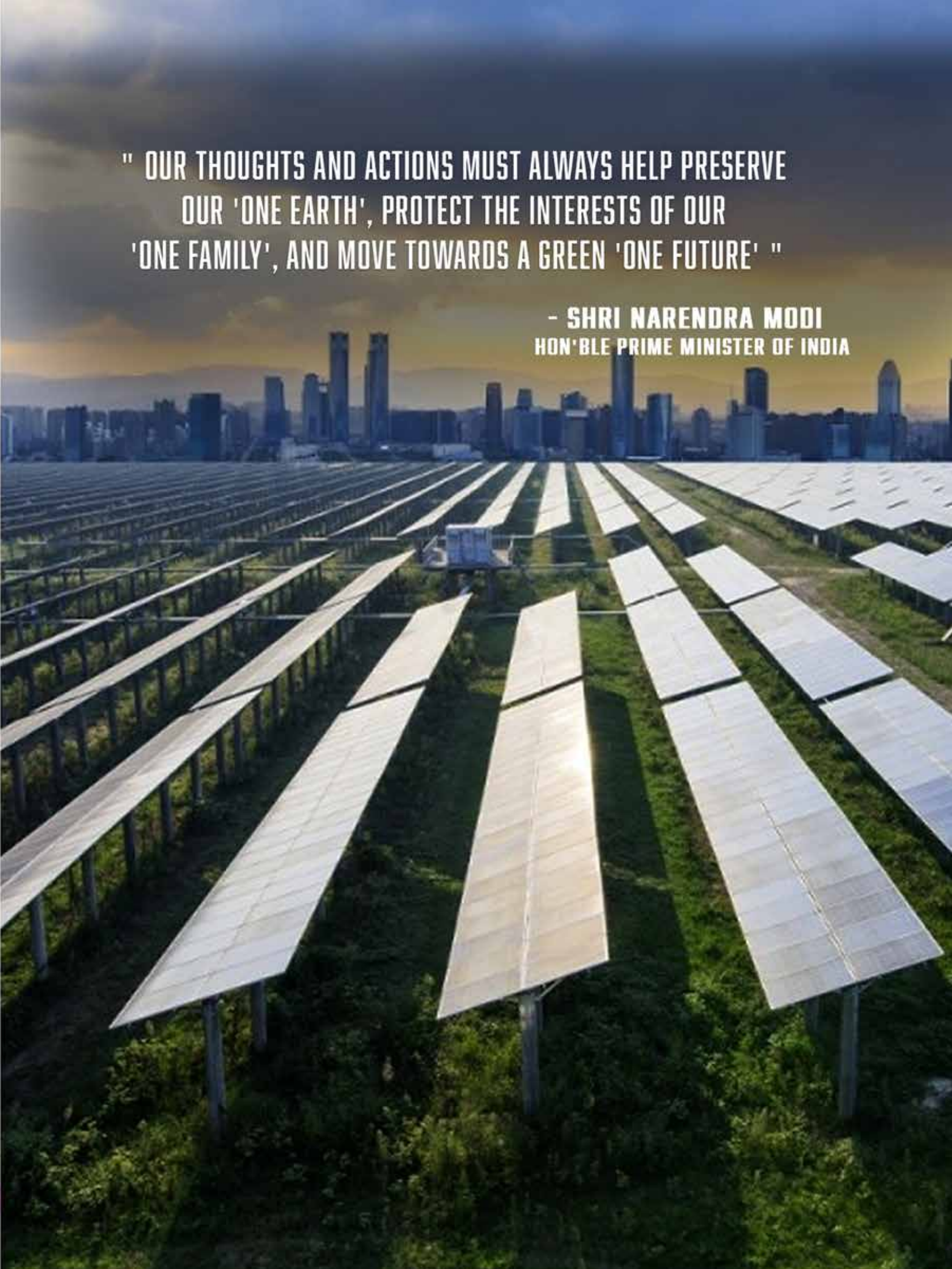
Performance outlook:

The SAIFI of 1.3 and SAIDI of 145 minutes in FY2021-22.

Key features of the practice:

ENEL has created the Advanced Distribution Management System (ADMS), Feeder Automation (FA) system, Advanced Metering Infrastructure (AMI) and other solutions to improve better system control and monitoring. Furthermore, the utility has implemented the lithium battery energy storage system, which quickly delivers power within 0.2 seconds, contributing to a shorter length of interruption and enhancing reliability.

Note: The above-mentioned practices are based on limited secondary research done for the purpose of including some aspects of global best practices in this report. Primary information collection & collation via stakeholder interviews or discussion with the global power utilities is not a part of this report.


" OUR THOUGHTS AND ACTIONS MUST ALWAYS HELP PRESERVE
OUR 'ONE EARTH', PROTECT THE INTERESTS OF OUR
'ONE FAMILY', AND MOVE TOWARDS A GREEN 'ONE FUTURE' "
- SHRI NARENDRA MODI
HON'BLE PRIME MINISTER OF INDIA

DOMESTIC BEST PRACTICES:

Indian DISCOMs have made noticeable progress in improving the practices and system to elevate their service levels. Noteworthy initiatives like the increasing adoption of digital and advanced technologies, constant improvement in infrastructure quality / specification, consumer friendly billing practices, lower response times, improved grievance handling, etc. are already in place across select DISCOMs in India. Some of the notable practices pertain to both state and privately owned utilities serving a diverse mix of consumers.

The emphasis on addressing consumer needs indicate the global trend, positioning Indian DISCOMs to elevate service quality and align with the evolving expectations of consumers, which have been further reinforced by the release of Rights of Consumers Rules 2020 (and amendments thereof). As the electricity distribution landscape evolves, some of the illustrations listed below serve as a reference for other Indian DISCOMs, fostering a path forward for continuous improvement and sustained consumer satisfaction.

Illustration Practice - I

Practice Head:	**State / Country Name:** Uttar Pradesh (India)	**Utility Name:** Noida Power Company Limited (NPCL)
1. Network monitoring 2. Better consumer response		

Performance outlook:

1. Surveillance of network through drones to enhance network security and performance of network via regular monitoring of lines.
2. WhatsApp bot-based services to facilitate consumer convenience. Consumers could register complaints related to various issues such as billing, defective meters, burnt meters, power outages, incorrect readings and electricity theft.

Key features of the practice:

1. Efficient inspections by drones which significantly reduce the time and resources required for manual inspections of electrical infrastructure, enabling faster and more thorough assessments. Drones provide a proactive approach to detect and prevent unauthorized access, security breaches, or physical damages to network facilities. Drones are also facilitating the AI learning-based theft detection & landbase digitization. Electricity theft causes significant harm to power grids deteriorating power supply quality and reducing operating profits. The drones aid in detecting electrical wire on the top of the buildings via orthomosaic imagery using deep Learning module on ArcGIS platform.
2. WhatsApp bot-based solution was made LIVE for consumers in May-2022, with an aim to integrate different consumer-focused services and deliver accurate response within seconds to consumer requests by offering a user-friendly platform.

Illustration Practice - II

Practice Head:	State / Country Name:	Utility Name: Brihanmumbai Electric Supply & Transport Undertaking (BEST)
1. Operational reliability & outages 2. Reduction in DT failure	Maharashtra (India)	

Performance outlook:

1. BEST has implemented various preventive and proactive maintenance practices to reduce the DT failure rates. Constant inspection and key component replacements have enabled in lowering the DT failure rates to 0.3%.
2. BEST has carried out digitalization of underground cabling network, enabling it to better monitor and manage the power supply.

Key features of the practice:

1. BEST has a robust mechanism for preventive and proactive maintenance of transformers. Best practices like visual inspection of substation & equipment, regular replacement of silica gel, periodic oil filtering every 3 years and ensuring periodic maintenance of all equipment have been put in place to monitor the health of transformers. This has majorly benefitted in significant reduction in transformer failure rate thereby ensuring optimum asset utilization, reduction in power interruptions leading to better consumer satisfaction and periodic maintenance aiding in ensuring network reliability by improving SAIFI / SAIDI metrics.
2. BEST has carried out digitalization of underground cabling network. As part of the initiative, digitized plans are formulated which are clearly marked and periodically updated. Cable size, type, data of cable laying and joints are leveraged to create a unique nomenclature for ease of identification. Distribution pillars, street lighting etc. are tagged and mapped. With a digital interface, consumer details are available on a single click. This approach of digitizing underground network benefitted the utility by enhancing network reliability through remote access to the underground business, eases process of release of new connections, helps in future network expansion / development plans, eases the process of cable replacement especially in case of multiple joints etc.

Illustration Practice - III

Practice Head: Consumer experience enhancement	**State / Country Name:** Chhattisgarh (India)	**Utility Name:** Chhattisgarh State Power Distribution Company Limited (CSPDCL)

Performance outlook:

For the convenience of electricity consumers, the DISCOM has launched a mobile application (Mor Bijlee) for ease of service delivery to the consumers.

Key features of the practice:

Mobile app (Mor Bijlee) has been developed in local language to address consumer service delivery issue. It has been downloaded more than 13 lakh times in the state and is a big success in ensuring timely delivery of various services through its more than 50 features. This ensures ease of availing various services related to electricity.

Illustration Practice - IV

Practice Head: Customer service	**Country Name:** Gujarat (India)	**Utility Name:** Madhya Gujarat Vij Company Limited (MGVCL)

Performance outlook:

MGVCL has a 24x7 customer care call center with an average waiting time of 0.1 seconds for registering complaints. It also has a single window service center named "Janseva Kendra" to provide an adequate grievance redressal mechanism.

Key features of the practice:

1) Under the Janseva Kendra, all subdivision offices are equipped with consumer help-desks where consumers / visitors can avail the following services / information.
2) Consumer care center – This center offers 24-hour service to consumers and registers complaints through a toll-free number.
3) WhatsApp facility for lodging power interruption information – This facility provides information such as power failure, etc. to consumers.
4) Consumer Portal – This portal allows MGVCL consumers to avail online facilities like energy bill and firm quotation payment, new connection application, load increment / reduction, name transfer, change of tariff, disconnection, shifting, reconnection, etc.
5) Urja Mitra – This service empowers citizens of the country by providing free and advanced power outage information on their fingertips through vernacular SMS / push notifications on mobile phones.

Illustration Practice - V

Practice Head: Grievance redressal	**Country Name:** Tamil Nadu (India)	**Utility Name:** Tamil Nadu Generation & Distribution corporation Ltd. (TANGEDCO)

Performance outlook:

TANGEDCO takes much lesser time than specified as per the state SoP for resolving complaints through call centers with a negative deviation of -61% in rural areas and -45% in urban areas.

Key features of the practice:

Consumers can register their grievances by calling the 24x7 customer care cell under the Minnagam scheme. TANGEDCO has also launched a social media cell that would monitor the electricity-related grievances posted on Facebook, Twitter and Instagram. The staff register all the complaints in the database and forward them to the concerned Superintending Engineer and other engineers through WhatsApp. The consumers will receive an SMS after their grievance is resolved.

Illustration Practice - VI

Practice Head: Reliability and customer satisfaction	**Country Name:** Maharashtra (India)	**Utility Name:** Adani Electricity Mumbai Limited (AEML)

Performance outlook:

DT failure rate stands at 0.25% in FY 2022-23. AEML takes much lesser time in complaints resolution through call center than specified by Maharashtra Electricity Regulatory Commission (MERC) with a negative deviation of -89%.

Key features of the practice:

AEML's Mumbai distribution business has implemented an Enterprise GIS solution developed by Esri India. The GIS-based Outage Management System (OMS) has replaced its legacy application, a call-based Complaint Management System (CMS). The Enterprise GIS solution is aimed to minimize average complaint management time by focusing on network abnormalities rather than customer calls, thus, improving the overall reliability of the electrical system. The system determines the "most probable" location of fault that has taken place in the field on receipt of power outage complaints. With the accurate knowledge of outages & associated up-to-date distribution networks, dispatching outage crew and carrying out the field operations is improved.

Some of the practices adopted by the Indian DISCOMs are noteworthy and at par with some of the best performing global utilities. However, there is a still need for improvement in order to adhere to the mandated service standards.

Note: The above-mentioned practices are selective, based on limited research and interactions done with a few Indian DISCOMs for the purpose of including some aspects of domestic best practices in this report.

Golden Temple, Amritsar

5

WAY FORWARD

The Consumer Service Rating of DISCOMs (CSRD) report has played a key role in evaluating the performance of DISCOMs based on some key parameters concerning consumer services. The report has been instrumental in highlighting the strengths and weaknesses of the DISCOMs as well as identifying the areas of improvement. It aims to create a culture of transparency, accountability and consumer-oriented approach in the power distribution sector.The parameters considered for assessment in the report have provided DISCOMs with a holistic view of their standing as a service provider in comparison to peer DISCOMs in the country. The second edition (CSRD-2022) of the report was able to garner attention of all the key stakeholders and most importantly the DISCOMs, who have taken progressive measures in improving their performance.

Similarly, the third edition of this report is intended to have incremental impact and further nudge the DISCOMs in improving upon all the service parameters. Some of the DISCOMs have exhibited advancement across various service parameters in comparison to preceding editions of the CSRD report. However, there are still some DISCOMs that need to introspect their operational practices for improvement.

Going forward, the DISCOMs need to advance as the power distribution system evolves and consumers expectation on the service level increases. In light of the above, changes and enhancements in the methodology and parameter coverage is envisaged for subsequent editions of the report to make it more comprehensive, robust and relevant. Some of the probable interventions would be as follows:

- Re-evaluation of existing parameters and bringing necessary refinements to align with topographical variations and distinct consumer profiles.
- Introduction of new sub-parameters to capture the emerging trends and challenges in the power distribution sector, such as digitalization, electric vehicle charging infrastructure, etc.
- Aligning the report with the national and state policies and regulations on power sector reforms.
- Strengthening the data collection, validation and analysis process by using standardized formats, online platforms, third-party audits, etc.
- Facilitating more inter-DISCOM interaction and other stakeholders via workshops, webinars, conferences, etc. to share best practices and promote inter-se learning.

Nevertheless, the CSRD report has affirmed its relevance in the dynamic power distribution sector and we are committed to further refining it to ensure a holistic and inclusive scope concerning the parameters examined and exemplary practices adopted by DISCOMs across the country.

Amba Vilas Palace, Mysore

6

APPROACH TO CSRD

The Consumer Service Rating of DISCOMs (CSRD) exercise has been designed and structured with an objective to comprehensively assess the current performance levels of DISCOMs across some key consumer service parameters. During the development of CSRD, a methodological approach was followed in identification and selection of performance parameters that inevitably impact electricity consumers and their satisfaction levels. In general, although a few of these parameters are being monitored closely by DISCOMs, majority are still not being regularly monitored and tracked for improvement. Hence, this report monitors these parameters which have a much greater impact on the consumers than the DISCOMs' operations and finances.

The overall approach to the CSRD rating entailed planning, parameter identification, data collection, verification, validation, confirmation and grading involving multiple stakeholders in deriving a rating as per a predefined grade scale.

KEY CHALLENGES FACED DURING CSRD EXERCISE

PLANNING

- Designing inclusive and comprehensive framework for CSRD and detailing all the dependents of the exercise
- Freezing the rating methodology

IDENTIFICATION

- Identification of key relevant parameters amongst an exhaustive list of performance parameters across the DISCOMs

COLLECTION

- Ensuring timely data submissions by DISCOMs on the online portal
- Frequent data updates / corrections / amendments by DISCOMs

VERIFICATION

- Incomplete data submissions by DISCOMs
- Availability of limited system-based evidence with DISCOMs against the submitted data

VALIDATION

- Designing a methodology / assumption to address the gaps in data submitted by DISCOMs

CONFIRMATION

- Timely feedback / confirmation from DISCOMs in data gaps and subsequent data

The overall designing of the approach involved detailing the key tasks to be undertaken by various stakeholders in this exercise. The scoring methodology was approved by MoP, which was adopted for undertaking the CSRD FY 2020-21 exercise. The same scoring methodology has been referenced for the subsequent 2 editions i.e., FY 2021-22 and FY 2022-23 to generate a comparative report for the first three editions, based on the learnings and stakeholder feedback, the grading approach for the subsequent editions shall be amended.

CONSUMER - CENTERIC PARAMETERS

Operational Reliability

- Parameters related to reliability of power supply such as hours of supply, Interruption Index and DT failure rate
- Quality has not been included as a parameter because of unavailability of data

Connection & Other Services

- Parameters related to ease of availing a new service connection like time taken for issuing a new connection and presence of online process
- Prosumers in DISCOM consumer mix

Metering, Billing & Collection

- Parameters depicting efficiency in metering, billing and collection
- Parameters depicting commercial loss reduction
- Parameters critical to enhance standards of consumer service like bill updates, etc

Fault Rectification & Grievance Redressal

- Parameters to ensure adequate recording and timely resolution of consumer complaints
- Parameters on intimating consumers regarding outages

Data Collection Methodology:

The data collection for CSRD FY22-23 has been carried out on the Revamped Distribution Sector Scheme (RDSS) portal, an online IT enabled system which facilitates monitoring of other key ongoing initiatives under RDSS.

To increase the authenticity of the data furnished by the DISCOMs and diminish the likelihood of manual errors during data entry and uploading of evidence documents, a tri-layered structure has been instituted at the DISCOMs' end, namely (1) DISCOM Data Enterer (DDE), (2) DISCOM Data Reviewer (DDR), and (3) DISCOM Data Approver (DDA). The architectural objective of the portal was to facilitate a more systematized and organized visualization of parameters and the alignment of corresponding documents, which aided in a significant reduction in time and effort required for data authentication and validation.

In order to ensure that the CSRD exercise could be conducted in a timely and effective manner, all of REC Limited's Regional Offices (ROs) were operationalized during the data collection phase and instructed to liaise with the designated nodal officers of the respective DISCOMs. In addition, numerous one-on-one interactions, video conferences and national workshops were conducted with DISCOM officials to ensure the envisaged objective is achieved.

MARKING METHODOLOGY

Post identification and selection of the key performance parameters and sub parameters, the intricacies were administered in assigning weightages to ensure allocation of optimum marks to each parameter based on their respective perceived criticality and impact on consumer perception. Accordingly, a prudent weightage to the 4 broad parameters was assigned, the cumulative weightages being a maximum of 100 Marks.

Operational Reliability	45 Marks	Connection & Other Services	10 Marks
Metering, Billing & Collection	35 Marks	Fault Rectification & Grievance Redressal	10 Marks

Both absolute and relative marking approach were adopted with majority of sub-parameters being evaluated on an absolute scale, enabling comparison across years. However, wherever the benchmarking data was not available, a relative scale was used.

DATA VALIDATION

The information obtained from the DISCOMs was verified at multiple levels on the basis of: (i) data checking of each parameter (ii) data triangulation and analytics (iii) evidence documents / reports submitted by DISCOMs.

The evidence gathered from DISCOMs like (i) system generated reports (ii) regulatory filings-mandatory to submit wherever applicable (iii) other central and state data repositories / portal with similar data, etc. (iv) manually filled data, mandatorily signed and stamped by MD / ED / Director of the respective DISCOM.

KEY VALIDATION ACTIVITIES

- *Validation against evidence*: After receiving data from DISCOMs, the same has been cross verified against the submitted evidence.

- *Validation through trail check:* We have collected a detailed break-up of the aggregate data (particularly for Hours of Supply and Interruption Index) submitted by DISCOMs on a sample basis and verified its accuracy. For reliability and quality of supply-related parameters, a system-based measurement approach was followed and Rural Feeder management system (RFMS) was also referred for validating the figures.

- *Finalization of key OR sub parameters:* Given the deviations observed during the verification process across multiple sources within a DISCOM, the final Hours of Supply and Interruption Index values were arrived with the help of a detailed methodology.

GRADING METHODOLOGY

CSRD is an exercise wherein DISCOMs are rated both on absolute as well as relative scale. Accordingly, to achieve a grading of DISCOMs, the score range was segregated across 7 segments.

Grade Scale	A+	A	B+	B	C+	C	D
Score Range	>90	80-90	70-80	60-70	50-60	40-50	<40

KEY CHALLENGES ENVISAGED DURING CSRD EXERCISE:

As this was envisaged to be an extensive exercise involving multiple stakeholders, numerous challenges were expected as listed below:

- Providing training to all the DISCOMs and briefing the processes involved in data submission along with corresponding evidence documents.
- Ensuring timely data submissions by DISCOMs on the online portal.
- Frequent data updates / corrections / amendments by DISCOMs.
- Availability of limited system-based evidence with DISCOMs against the submitted data.
- Timely feedback / confirmation from DISCOMs in data gaps and subsequent data.

DATA COLLECTION AND VALIDATION LIMITATIONS

Further, while examining the data gaps, aberrations were identified and subsequently many DISCOMs were asked to resubmit the data post discussions and clarifications. However, there are still some data / information outliers (data point that differ significantly from generally reported data by peer DISCOMs) across a few DISCOMs like (1) abnormally low or high data points than the national averages (2) non availability of granular level of supporting documents for validation.

MARKING METHODOLOGY

S. No.	Parameter	Marks	Type of Marking
1. Operational Reliability (45 Marks)			
1.1	Hours of Supply (Urban, Rural, Industrial)	34	Absolute
1.2	Interruption Index (Urban, Rural, Industrial)	7	Absolute
1.3	DT Failure Rate	4	Absolute
2. Connection and Other Services (10 marks)			
2.1	Alignment of regulations with industry best practices w.r.t timelines	0 (-2)	Absolute
2.2	Predetermined demand charges for New Connection up to 150kW	0 (-1)	Absolute
2.3	Applications processed through online portal	2	Relative (Proportionate)
2.4	Avg. deviation from SoP in time taken for providing connection	7	Absolute
2.5	Prosumers (under net or gross metering)	1	Relative (Proportionate)
3. Metering, Billing and Collection (35 marks)			
3.1	Avg time taken for replacing defective meters (Urban)	1	Relative (Proportionate)
3.2	Avg time taken for replacing defective meters (Rural)	1	Relative (Proportionate)
3.3	Bills generated based on actual meter reading	4	Absolute
3.4	Bills generated based on non-manual meter reading	7	Relative (Proportionate)
3.5	Billing frequency for domestic consumers as per regulations	0 (-1)	Absolute
3.6	Bills generated for domestic consumers in a year	3	Absolute
3.7	Consumers receiving billing updates on mobile	3	Absolute
3.8	Number of Prepaid consumers	8	Relative
3.9	Tariff categories (incl. sub-categories and slabs)	2	Relative (Proportionate)
3.10	Number of consumers paying digitally	6	Relative (Proportionate)
4. Fault Rectification and Grievance Redressal (10 marks)			
4.1	24x7 customer call center (common code '1912')	2	Absolute
4.2	Average call waiting time at the call center	1	Absolute
4.3	Consumers receiving outage updates on mobile	2	Absolute
4.4	Deviation from specified time for complaints resolution through call center	4	Absolute
4.5	Adequacy of Grievance Redressal Mechanism	1	Relative + Absolute
Total Marks: 100			

ANNEXURES

Annexure-A

State-level aggregate grades and performance outlook

State	Total DISCOMs	DISCOMs spread across grades						
		A+	A	B+	B	C+	C	D
Andaman & Nicobar Islands	1				1			
Andhra Pradesh	3		3					
Arunachal Pradesh	1						1	
Assam	1			1				
Bihar	2			1	1			
Chandigarh	1				1			
Chhattisgarh	1				1			
Delhi	3	3						
Goa	1			1				
Gujarat	4			3	1			
Haryana	2			2				
Himachal Pradesh	1					1		
Jammu & Kashmir	2						1	1
Jharkhand	1						1	
Karnataka	5			2	3			
Kerala	1			1				
Ladakh	1				1			
Madhya Pradesh	3			3				
Maharashtra	4		1	1	2			
Manipur	1		1					
Mizoram	1					1		
Odisha	4			3	1			
Puducherry	1				1			
Punjab	1			1				
Rajasthan	3			1	2			
Sikkim	1					1		
Tamil Nadu	1		1					
Telangana	2		2					
Tripura	1				1			
Uttar Pradesh	6	1		1	3	1		
Uttarakhand	1			1				
West Bengal	1			1				
Total	**62**	**4**	**8**	**23**	**19**	**4**	**3**	**1**

Annexure-B

(i) Performance across parameters - Operational Reliability

States	DISCOM	Hours of Supply			Interruption Index			DT Failure Rate
		Rural	Urban	Industrial	Rural	Urban	Industrial	
Andaman & Nicobar Islands	A&N PD	22.0	24.0	-	2211.7	210.1	-	6.1%
Andhra Pradesh	APCPDCL	22.5	23.9	24.0	109.6	103.9	44.7	3.9%
Andhra Pradesh	APEPDCL	23.7	23.9	23.9	225.5	79.7	77.3	2.0%
Andhra Pradesh	APSPDCL	23.6	23.9	23.9	98.7	42.0	7.1	5.6%
Arunachal Pradesh	Arunachal PD	18.3	20.6	19.7	154.4	257.5	635.8	3.9%
Assam	APDCL	22.2	23.6	23.9	677.2	421.6	96.6	3.8%
Bihar	NBPDCL	20.6	23.3	23.5	383.7	914.9	307.8	4.2%
Bihar	SBPDCL	20.9	23.6	23.6	468.6	452.2	6.3	2.3%
Chandigarh	CED	-	22.5	23.1	-	28.8	12.1	3.0%
Chhattisgarh	CSPDCL	22.4	23.8	23.7	206.9	122.6	112.6	6.7%
Delhi	BRPL	-	24.0	24.0	-	2.9	1.0	0.2%
Delhi	BYPL	-	24.0	-	-	2.1	-	0.7%
Delhi	TPDDL	-	24.0	-	-	1.5	-	0.7%
Goa	Goa PD	22.1	23.7	23.5	155.7	414.0	108.2	1.8%
Gujarat	DGVCL	23.8	23.9	23.5	130.2	53.2	15.0	6.5%
Gujarat	MGVCL	23.9	24.0	23.9	31.9	12.7	12.9	5.9%
Gujarat	PGVCL	23.7	23.9	21.8	206.1	37.5	33.9	10.9%
Gujarat	UGVCL	23.9	24.0	24.0	26.2	16.8	11.1	4.7%
Haryana	DHBVNL	20.0	23.5	23.4	331.2	122.4	13.6	7.3%
Haryana	UHBVNL	20.4	23.6	23.7	480.7	175.9	60.2	7.2%
Himachal Pradesh	HPSEBL	18.0	23.9	23.8	176.7	41.4	5.6	2.6%
Jammu & Kashmir	JPDCL	17.4	22.5	21.6	686.3	428.9	172.7	26.1%
Jammu & Kashmir	KPDCL	18.0	22.0	23.6	729.8	474.8	117.3	24.8%
Jharkhand	JBVNL	18.6	22.3	-	-	425.3	-	7.5%
Karnataka	BESCOM	20.1	23.8	23.8	904.1	108.7	122.4	5.7%
Karnataka	CESCOM	21.4	23.6	23.5	1436.4	312.2	206.2	6.3%
Karnataka	GESCOM	21.7	23.7	23.7	643.1	438.9	72.3	7.4%
Karnataka	HESCOM	20.4	23.8	23.4	931.7	596.5	235.1	10.3%
Karnataka	MESCOM	21.5	23.8	23.8	805.3	184.4	93.8	9.0%
Kerala	KSEBL	22.4	23.9	23.9	176.7	34.1	22.5	1.2%
Ladakh	Ladakh PDD	22.1	23.6	-	108.7	66.8	-	3.1%
Madhya Pradesh	MPMKVVCL	21.9	23.5	23.7	77.7	99.9	23.7	12.4%
Madhya Pradesh	MPPaKVVCL	21.8	23.7	23.8	519.9	165.6	30.5	6.5%
Madhya Pradesh	MPPoKVVCL	21.7	23.8	23.9	799.5	40.7	151.5	11.5%
Maharashtra	AEML	-	24.0	-	-	0.2	-	0.3%
Maharashtra	BEST	-	24.0	-	-	9.8	-	0.3%
Maharashtra	MSEDCL	23.8	23.9	23.8	26.3	9.4	13.0	6.5%
Maharashtra	TPCL	-	23.9	-	-	0.7	-	0.2%

States	DISCOM	Hours of Supply			Interruption Index			DT Failure Rate
		Rural	Urban	Industrial	Rural	Urban	Industrial	
Manipur	MSPDCL	21.8	23.9	23.8	234.1	100.5	61.7	0.8%
Mizoram	Mizoram PD	22.1	23.9	23.0	1068.8	940.0	140.0	5.1%
Odisha	TPCODL	22.3	23.7	23.7	471.7	199.9	141.5	3.2%
Odisha	TPNODL	22.1	23.8	23.8	606.9	350.2	148.5	2.9%
Odisha	TPSODL	21.3	23.5	-	125.7	572.8	-	2.6%
Odisha	TPWODL	22.2	23.7	23.7	397.3	746.1	73.0	3.0%
Puducherry	PED	22.2	23.6	-	206.4	142.7	-	2.5%
Punjab	PSPCL	21.8	23.6	23.8	336.5	84.8	21.5	6.0%
Rajasthan	AVVNL	20.4	23.5	21.4	22.2	14.0	30.6	9.8%
Rajasthan	JdVVNL	21.4	24.0	23.9	78.8	63.1	39.8	9.8%
Rajasthan	JVVNL	21.3	23.2	22.9	711.3	482.3	198.2	9.3%
Sikkim	Sikkim PD	20.4	22.6	22.4	103.7	52.3	39.7	4.0%
Tamil Nadu	TANGEDCO	22.6	24.0	24.0	10.7	10.7	2.6	2.2%
Telangana	TSNPDCL	22.6	23.9	24.0	191.3	75.7	1.2	5.3%
Telangana	TSSPDCL	22.8	24.0	24.0	154.9	31.3	7.8	6.2%
Tripura	TSECL	21.1	23.8	23.5	147.7	65.2	12.0	7.1%
Uttar Pradesh	DVVNL	18.6	23.6	23.9	688.2	205.7	66.9	8.7%
Uttar Pradesh	KESCO	-	23.7	23.8	-	181.7	133.8	5.1%
Uttar Pradesh	MVVNL	17.6	23.4	23.7	766.4	247.4	60.9	11.1%
Uttar Pradesh	NPCL	19.2	23.9	23.8	166.4	56.1	61.2	1.8%
Uttar Pradesh	PVVNL	15.2	23.6	23.7	638.5	120.7	138.5	5.1%
Uttar Pradesh	PuVVNL	19.1	23.2	23.7	555.0	293.3	7.2	4.8%
Uttarakhand	UPCL	21.8	23.4	23.3	286.4	318.6	77.2	6.6%
West Bengal	WBSEDCL	23.6	23.8	23.8	309.9	143.8	77.3	7.6%
National Average		**21.26**	**23.59**	**23.48**	**418.85**	**200.15**	**83.92**	**5.8%**

Note: "-" means data not available / insufficient data or evidence doc

Annexure-B

(ii) Performance across parameters - Connection and other Services

States	DISCOM	Alignment of Regulations with industry best practices w.r.t timelines	(A) Presence of predetermined demand charges for connections up to 150kW	Applications processed through online portal (submission till approval)	Average deviation from SoP in time taken for providing connection	No. of Prosumers per Lakh consumers
Andaman & Nicobar Islands	A&N PD	4	No	67%	-35%	40
Andhra Pradesh	APCPDCL	5	Yes	100%	-44%	559
Andhra Pradesh	APEPDCL	5	Yes	100%	-66%	54
Andhra Pradesh	APSPDCL	5	Yes	100%	-43%	35
Arunachal Pradesh	Arunachal PD	2	No	2%	-86%	0
Assam	APDCL	6	Yes	100%	6%	11
Bihar	NBPDCL	4	Yes	100%	-14%	7
Bihar	SBPDCL	4	Yes	100%	5%	48
Chandigarh	CED	5	Yes	20%	-57%	1656
Chhattisgarh	CSPDCL	6	Yes	100%	-57%	6
Delhi	BRPL	4	Yes	100%	-64%	142
Delhi	BYPL	6	Yes	100%	-66%	52
Delhi	TPDDL	4	Yes	100%	-56%	98
Goa	Goa PD	5	Yes	100%	-39%	125
Gujarat	DGVCL	7	Yes	100%	-51%	2642
Gujarat	MGVCL	4	Yes	92%	-76%	3052
Gujarat	PGVCL	6	Yes	100%	-45%	2331
Gujarat	UGVCL	4	Yes	100%	-73%	1650
Haryana	DHBVNL	6	Yes	100%	-11%	276
Haryana	UHBVNL	6	Yes	100%	-49%	302
Himachal Pradesh	HPSEBL	6	Yes	100%	0%	108
Jammu & Kashmir	JPDCL	3	Yes	2%	-33%	37
Jammu & Kashmir	KPDCL	6	Yes	17%	-69%	62
Jharkhand	JBVNL	3	Yes	100%	2%	0
Karnataka	BESCOM	7	Yes	100%	-77%	15
Karnataka	CESCOM	7	Yes	100%	-73%	70
Karnataka	GESCOM	7	Yes	100%	-66%	3
Karnataka	HESCOM	-	Yes	52%	-90%	44
Karnataka	MESCOM	7	Yes	100%	-14%	96
Kerala	KSEBL	4	Yes	100%	-72%	586
Ladakh	Ladakh PDD	7	Yes	0%	-2%	0
Madhya Pradesh	MPMKVVCL	7	Yes	100%	-63%	183
Madhya Pradesh	MPPaKVVCL	7	Yes	100%	-86%	136
Madhya Pradesh	MPPoKVVCL	7	Yes	100%	-53%	60
Maharashtra	AEML	6	Yes	100%	-38%	5

States	DISCOM	Alignment of Regulations with industry best practices w.r.t timelines	(A) Presence of predetermined demand charges for connections up to 150kW	Applications processed through online portal (submission till approval)	Average deviation from SoP in time taken for providing connection	No. of Prosumers per Lakh consumers
Maharashtra	BEST	4	Yes	100%	54%	42
Maharashtra	MSEDCL	6	Yes	100%	201%	281
Maharashtra	TPCL	3	Yes	2%	-98%	60
Manipur	MSPDCL	5	Yes	100%	-81%	191
Mizoram	Mizoram PD	5	Yes	59%	-23%	119
Odisha	TPCODL	4	Yes	100%	-35%	24
Odisha	TPNODL	6	Yes	100%	2%	7
Odisha	TPSODL	4	Yes	100%	5%	7
Odisha	TPWODL	7	Yes	100%	-56%	9
Puducherry	PED	5	Yes	0%	-41%	110
Punjab	PSPCL	7	Yes	59%	10%	449
Rajasthan	AVVNL	7	Yes	100%	-19%	245
Rajasthan	JdVVNL	7	Yes	44%	10%	239
Rajasthan	JVVNL	7	Yes	88%	-3%	283
Sikkim	Sikkim PD	3	Yes	0%	-20%	5
Tamil Nadu	TANGEDCO	6	Yes	100%	-79%	111
Telangana	TSNPDCL	6	Yes	100%	-73%	59
Telangana	TSSPDCL	6	Yes	100%	-75%	154
Tripura	TSECL	5	Yes	3%	-65%	6
Uttar Pradesh	DVVNL	7	Yes	94%	-36%	27
Uttar Pradesh	KESCO	5	Yes	100%	60%	148
Uttar Pradesh	MVVNL	7	Yes	100%	-17%	79
Uttar Pradesh	NPCL	7	Yes	100%	-82%	213
Uttar Pradesh	PVVNL	6	Yes	100%	-46%	28
Uttar Pradesh	PuVVNL	7	Yes	100%	-29%	25
Uttarakhand	UPCL	5	Yes	100%	-80%	181
West Bengal	WBSEDCL	5	Yes	100%	-62%	13
National Average		**5**	**-**	**82%**	**-38%**	**284**

Note: "-" means data not available / insufficient data or evidence doc

Annexure-B

(iii) Performance across parameters – Metering, Billing and Collection

States	DISCOM	Average time taken for replacement of defective meters (Rural)	Average time taken for replacement of defective meters (Urban)	Bills generated based on actual meter reading	Bills generated on the basis of non-manual meter reading	% of domestic consumer being billed monthly	Bills generated for domestic category consumers in a year	Consumers receiving billing updates on mobile	Prepaid consumers	Tariff categories (incl. sub-categories and slabs)	Number of consumers paying digitally
Andaman & Nicobar Islands	A&N PD	33	5.0	83%	28%	63.4%	97%	38%	0%	38	15%
Andhra Pradesh	APCPDCL	13	12.0	100%	82%	100%	99%	94%	0%	45	50%
Andhra Pradesh	APEPDCL	5	3.2	97%	91%	100%	99%	91%	0%	49	50%
Andhra Pradesh	APSPDCL	8	5.9	88%	86%	100%	100%	90%	0%	49	50%
Arunachal Pradesh	Arunachal PD	2	1.9	54%	9%	93.6%	90%	15%	9%	34	12%
Assam	APDCL	32	33.8	81%	69%	97.8%	100%	92%	5%	41	30%
Bihar	NBPDCL	15	13.6	78%	4%	89.5%	100%	95%	5%	37	13%
Bihar	SBPDCL	8	9.9	72%	37%	98.9%	97%	89%	12%	37	47%
Chandigarh	CED	-	27.0	94%	10%	0.0%	100%	100%	0%	20	52%
Chhattisgarh	CSPDCL	17	12.6	74%	0%	100%	100%	65%	0%	111	27%
Delhi	BRPL	-	1.7	99%	99%	100%	97%	99%	0%	24	89%
Delhi	BYPL	-	1.7	99%	100%	99.8%	100%	99%	0%	24	86%
Delhi	TPDDL	-	2.8	99%	99%	92.4%	100%	100%	0%	24	88%
Goa	Goa PD	8	7.9	88%	0%	89.0%	100%	64%	0%	42	61%
Gujarat	DGVCL	24	6.7	95%	0%	0.5%	100%	88%	0%	52	35%
Gujarat	MGVCL	25	24.8	100%	0%	0.1%	100%	74%	0%	25	29%
Gujarat	PGVCL	46	38.4	93%	0%	2.2%	99%	79%	0%	70	26%
Gujarat	UGVCL	42	33.8	95%	5%	0.5%	100%	95%	0%	63	29%
Haryana	DHBVNL	19	15.3	85%	63%	0.0%	100%	86%	0%	42	37%
Haryana	UHBVNL	3	2.6	93%	99%	20.8%	86%	99%	0%	23	49%
Himachal Pradesh	HPSEBL	18	7.3	100%	6%	91.1%	100%	99%	0%	35	22%
Jammu & Kashmir	JPDCL	7	7.0	65%	3%	96.0%	99%	28%	0%	27	20%
Jammu & Kashmir	KPDCL	3	4.0	31%	4%	100%	98%	100%	0%	84	29%
Jharkhand	JBVNL	-	-	81%	0%	100%	64%	90%	0%	36	7%
Karnataka	BESCOM	2	0.4	100%	0%	100%	100%	65%	1%	78	38%
Karnataka	CESCOM	20	18.1	100%	0%	100%	74%	100%	0%	120	21%
Karnataka	GESCOM	2	1.3	100%	0%	100%	73%	100%	0%	56	3%
Karnataka	HESCOM	-	-	98%	76%	99.9%	99%	86%	0%	83	12%
Karnataka	MESCOM	11	8.2	100%	0%	100%	100%	85%	0%	50	35%
Kerala	KSEBL	28	27.6	95%	0%	0.8%	99%	99%	0%	37	62%
Ladakh	Ladakh PDD	5	3.0	100%	0%	100%	76%	46%	0%	84	32%
Madhya Pradesh	MPMKVVCL	3	1.0	70%	1%	99.9%	100%	96%	2%	40	91%
Madhya Pradesh	MPPaKVVCL	2	1.6	57%	7%	99.2%	100%	95%	2%	40	28%
Madhya Pradesh	MPPoKVVCL	10	10.9	70%	0%	100%	100%	100%	3%	40	40%

States	DISCOM	Average time taken for replacement of defective meters (Rural)	Average time taken for replacement of defective meters (Urban)	Bills generated based on actual meter reading	Bills generated on the basis of non-manual meter reading	% of domestic consumer being billed monthly	Bills generated for domestic category consumers in a year	Consumers receiving billing updates on mobile	Prepaid consumers	Tariff categories (incl. sub-categories and slabs)	Number of consumers paying digitally
Maharashtra	AEML	-	3.3	100%	95%	100%	100%	94%	0%	42	60%
Maharashtra	BEST	-	86.9	97%	0%	100%	100%	89%	0%	24	49%
Maharashtra	MSEDCL	289	227.7	86%	4%	100%	100%	93%	0%	53	33%
Maharashtra	TPCL	-	7.3	100%	10%	100%	100%	71%	0%	22	72%
Manipur	MSPDCL	7	7.0	87%	71%	100%	97%	79%	86%	35	42%
Mizoram	Mizoram PD	15	5.0	100%	0%	100%	98%	62%	0%	14	17%
Odisha	TPCODL	18	22.9	93%	1%	100%	92%	75%	1%	47	11%
Odisha	TPNODL	7	7.6	84%	72%	93.1%	100%	82%	1%	47	10%
Odisha	TPSODL	47	46.7	83%	2%	88.9%	97%	71%	0%	47	10%
Odisha	TPWODL	3	0.9	69%	33%	100%	79%	85%	0%	47	7%
Puducherry	PED	15	15.0	83%	7%	100%	100%	16%	0%	43	21%
Punjab	PSPCL	42	39.0	95%	1%	3.8%	96%	48%	43%	44	55%
Rajasthan	AVVNL	16	8.2	94%	5%	4.2%	94%	96%	0%	65	76%
Rajasthan	JdVVNL	26	20.5	94%	3%	10.9%	98%	92%	0%	65	52%
Rajasthan	JVVNL	46	27.6	98%	10%	65.3%	76%	99%	0%	61	64%
Sikkim	Sikkim PD	3	2.1	100%	0%	100%	100%	0%	12%	29	6%
Tamil Nadu	TANGEDCO	8	9.6	98%	98%	0.0%	100%	100%	0%	33	65%
Telangana	TSNPDCL	3	1.8	100%	100%	100%	100%	100%	0%	81	27%
Telangana	TSSPDCL	6	6.2	98%	87%	100%	100%	94%	0%	81	48%
Tripura	TSECL	13	4.6	75%	0%	80.8%	100%	12%	15%	37	11%
Uttar Pradesh	DVVNL	6	2.2	87%	15%	100%	98%	100%	3%	122	18%
Uttar Pradesh	KESCO	-	3.4	97%	55%	100%	100%	100%	19%	112	35%
Uttar Pradesh	MVVNL	12	8.8	91%	16%	100%	98%	100%	1%	149	8%
Uttar Pradesh	NPCL	2	2.8	97%	93%	100%	100%	100%	17%	93	93%
Uttar Pradesh	PVVNL	11	3.6	94%	31%	100%	99%	100%	0%	148	26%
Uttar Pradesh	PuVVNL	6	2.5	96%	6%	100%	87%	100%	0%	102	12%
Uttarakhand	UPCL	25	23.2	94%	57%	2.7%	94%	72%	1%	55	35%
West Bengal	WBSEDCL	71	65.8	93%	0%	0.1%	100%	95%	0%	134	67%
National Average		**20.9**	**16.9**	**89%**	**30%**	**76%**	**96%**	**82%**	**3.9%**	**56**	**38%**

Note: "-" means data not available / insufficient data or evidence doc

Annexure-B

(iv) Performance across parameters – Fault Rectification and Grievance Redressal

States	DISCOM	24x7 customer care call center	Facilities	Type of complaints attended	Average call waiting time at the call center	Consumers receiving outage related updates on mobile	Deviation from specified time for complaints resolution through call center (Rural)	Deviation from specified time for complaints resolution through call center (Urban)	Adequacy of Grievance Redressal Mechanism (Two Tier)	Number of CGRF's per 1 Lakh consumers
Andaman & Nicoba Islands	A&N PD	38%	0	4	-	14%	0%	0%	Yes	1
Andhra Pradesh	APCPDCL	100%	6	4	16.9	94%	-44%	-24%	Yes	0
Andhra Pradesh	APEPDCL	100%	8	4	6.2	91%	-67%	-53%	Yes	0
Andhra Pradesh	APSPDCL	100%	8	4	30.8	86%	-19%	-16%	Yes	0
Arunachal Pradesh	Arunachal PD	1%	3	4	20.9	6%	-100%	-57%	No	2
Assam	APDCL	100%	6	4	25.3	92%	-68%	613%	Yes	0
Bihar	NBPDCL	100%	7	4	29.9	88%	-4%	-1%	Yes	0
Bihar	SBPDCL	100%	7	4	29.9	73%	1%	0%	Yes	0
Chandigarh	CED	0%	0	0	-	100%	-	-	Yes	0
Chhattisgarh	CSPDCL	99%	7	4	8.0	65%	-68%	-51%	Yes	0
Delhi	BRPL	100%	8	4	8.3	99%	-	-72%	Yes	1
Delhi	BYPL	100%	8	4	4.0	99%	-	-57%	Yes	0
Delhi	TPDDL	100%	8	4	6.0	100%	-	-67%	Yes	0
Goa	Goa PD	100%	7	4	11.2	64%	-69%	-65%	Yes	2
Gujarat	DGVCL	100%	8	4	26.6	88%	-79%	-81%	Yes	2
Gujarat	MGVCL	100%	5	4	0.1	83%	-37%	6%	Yes	0
Gujarat	PGVCL	100%	5	4	-	79%	-3%	72%	Yes	5
Gujarat	UGVCL	100%	6	4	14.8	95%	-87%	-59%	Yes	0
Haryana	DHBVNL	98%	8	4	22.0	86%	-70%	-22%	Yes	0
Haryana	UHBVNL	99%	8	4	29.6	99%	-79%	-80%	Yes	0
Himachal Pradesh	HPSEBL	100%	6	4	49.5	0%	0%	0%	Yes	0
Jammu & Kashmir	JPDCL	100%	4	4	60.0	0%	-53%	-4%	Yes	1
Jammu & Kashmir	KPDCL	100%	7	4	94.5	18%	-80%	-81%	Yes	8
Jharkhand	JBVNL	90%	0	0	-	90%	-	-	Yes	0
Karnataka	BESCOM	100%	5	4	8.3	81%	-79%	-16%	Yes	0
Karnataka	CESCOM	100%	7	4	25.0	100%	-19%	-19%	Yes	0
Karnataka	GESCOM	100%	8	4	6.3	0%	-37%	-31%	Yes	0
Karnataka	HESCOM	100%	5	4	5.6	83%	-83%	-37%	Yes	0
Karnataka	MESCOM	100%	1	4	20.0	85%	-86%	-87%	No	0
Kerala	KSEBL	100%	8	4	39.2	99%	-20%	1%	Yes	0
Ladakh	Ladakh PDD	0%	0	3	-	0%	-	-	Yes	16
Madhya Pradesh	MPMKVVCL	96%	8	4	-	96%	-5%	-72%	Yes	0

States	DISCOM	24x7 customer care call center	Facilities	Type of complaints attended	Average call waiting time at the call center	Consumers receiving outage related updates on mobile	Deviation from specified time for complaints resolution through call center (Rural)	Deviation from specified time for complaints resolution through call center (Urban)	Adequacy of Grievance Redressal Mechanism (Two Tier)	Number of CGRF's per 1 Lakh consumers
Madhya Pradesh	MPPaKVVCL	100%	7	4	2.0	95%	-78%	-63%	Yes	0
Madhya Pradesh	MPPoKVVCL	100%	8	4	1.7	100%	-38%	-19%	Yes	0
Maharashtra	AEML	100%	8	4	9.8	94%	-	-89%	Yes	0
Maharashtra	BEST	0%	0	0	-	89%	-	-	Yes	0
Maharashtra	MSEDCL	100%	8	4	2.6	93%	276%	27%	Yes	0
Maharashtra	TPCL	100%	8	4	4.4	71%	-	-51%	Yes	0
Manipur	MSPDCL	10%	6	4	-	50%	-74%	-41%	Yes	4
Mizoram	Mizoram PD	0%	0	4	-	0%	-	-	Yes	4
Odisha	TPCODL	100%	8	4	8.6	75%	-71%	-74%	Yes	0
Odisha	TPNODL	99%	8	4	26.0	82%	-23%	-27%	Yes	0
Odisha	TPSODL	98%	7	4	23.2	71%	91%	686%	Yes	0
Odisha	TPWODL	100%	8	4	26.8	40%	-33%	-12%	Yes	0
Puducherry	PED	99%	1	4	-	29%	-	-	Yes	0
Punjab	PSPCL	100%	7	4	25.6	100%	-23%	20%	Yes	1
Rajasthan	AVVNL	100%	8	4	3.4	97%	-69%	-65%	Yes	0
Rajasthan	JdVVNL	100%	8	4	22.3	92%	-20%	-62%	Yes	0
Rajasthan	JVVNL	100%	7	4	28.5	100%	-57%	-57%	Yes	0
Sikkim	Sikkim PD	0%	0	0	-	0%	-	-	Yes	5
Tamil Nadu	TANGEDCO	100%	6	4	15.6	100%	-61%	-45%	Yes	0
Telangana	TSNPDCL	100%	7	4	18.1	100%	-41%	-23%	Yes	0
Telangana	TSSPDCL	100%	7	4	16.9	94%	-22%	-41%	Yes	0
Tripura	TSECL	100%	6	4	24.8	0%	-22%	-8%	Yes	3
Uttar Pradesh	DVVNL	100%	8	4	7.8	94%	-70%	-80%	Yes	1
Uttar Pradesh	KESCO	100%	8	4	82.3	100%	-	-37%	Yes	0
Uttar Pradesh	MVVNL	100%	8	4	12.8	100%	-66%	-64%	Yes	0
Uttar Pradesh	NPCL	100%	8	4	19.0	100%	-46%	-44%	Yes	2
Uttar Pradesh	PVVNL	100%	8	4	4.3	100%	-65%	-45%	Yes	1
Uttar Pradesh	PuVVNL	100%	8	4	7.6	100%	-97%	-97%	Yes	0
Uttarakhand	UPCL	100%	8	4	13.3	72%	-9%	2%	Yes	0
West Bengal	WBSEDCL	95%	7	4	89.4	95%	-69%	-44%	Yes	0
National Average		**87%**	**6.10**	**3.73**	**21.5**	**74%**	**-40%**	**-13%**	**-**	**1**

Note: "-" means data not available / insufficient data or evidence doc

Annexure-C

Category specific consumer coverage

State	DISCOM	Total Consumers (in lakh)	Category-specific consumer coverage						
			Rural	Urban	Domestic	Non-Domestic / Commercial	Industrial	Agricultural	Others
Andaman & Nicobar Islands	A&N PD	1.48	58%	42%	84%	14%	0%	0%	2%
Andhra Pradesh	APCPDCL	49.55	56%	44%	80%	9%	0%	9%	1%
Andhra Pradesh	APEPDCL	68.54	65%	35%	84%	9%	0%	4%	2%
Andhra Pradesh	APSPDCL	69.00	55%	45%	73%	8%	1%	16%	2%
Arunachal Pradesh	Arunachal PD	2.94	44%	56%	87%	12%	0%	0%	1%
Assam	APDCL	65.47	85%	15%	92%	5%	0%	1%	2%
Bihar	NBPDCL	106.48	86%	14%	91%	6%	1%	1%	1%
Bihar	SBPDCL	62.09	71%	29%	86%	8%	1%	5%	1%
Chandigarh	CED	2.33	0%	100%	86%	12%	1%	0%	1%
Chhattisgarh	CSPDCL	61.56	70%	30%	81%	7%	1%	11%	1%
Delhi	BRPL	29.28	0%	100%	87%	12%	0%	0%	0%
Delhi	BYPL	18.66	0%	100%	78%	21%	0%	0%	0%
Delhi	TPDDL	19.22	0%	100%	85%	13%	1%	0%	0%
Goa	Goa PD	6.89	68%	32%	80%	16%	1%	2%	1%
Gujarat	DGVCL	35.64	52%	48%	78%	12%	3%	6%	1%
Gujarat	MGVCL	34.48	55%	45%	82%	11%	0%	6%	1%
Gujarat	PGVCL	57.86	57%	43%	67%	11%	2%	19%	1%
Gujarat	UGVCL	40.17	74%	26%	76%	9%	2%	10%	2%
Haryana	DHBVNL	40.37	60%	40%	80%	10%	2%	8%	0%
Haryana	UHBVNL	32.59	55%	45%	78%	10%	1%	10%	0%
Himachal Pradesh	HPSEBL	27.59	82%	18%	83%	12%	1%	1%	2%
Jammu & Kashmir	JPDCL	11.18	69%	31%	86%	10%	1%	2%	1%
Jammu & Kashmir	KPDCL	11.07	63%	37%	84%	15%	1%	0%	1%
Jharkhand	JBVNL	49.26	73%	27%	93%	6%	0%	1%	0%
Karnataka	BESCOM	111.70	13%	87%	78%	10%	2%	9%	2%
Karnataka	CESCOM	36.40	63%	37%	74%	8%	1%	13%	4%
Karnataka	GESCOM	35.21	66%	34%	74%	9%	2%	12%	3%
Karnataka	HESCOM	51.78	73%	27%	68%	8%	2%	19%	3%
Karnataka	MESCOM	26.00	66%	34%	71%	9%	2%	15%	3%
Kerala	KSEBL	135.23	80%	20%	76%	18%	1%	4%	0%
Ladakh	Ladakh PDD	0.64	69%	31%	82%	13%	3%	0%	2%
Madhya Pradesh	MPMKVVCL	49.50	61%	39%	73%	7%	1%	19%	0%
Madhya Pradesh	MPPaKVVCL	58.33	65%	35%	68%	8%	1%	23%	1%
Madhya Pradesh	MPPoKVVCL	64.58	72%	28%	74%	7%	1%	18%	0%
Maharashtra	AEML	25.49	0%	100%	82%	17%	1%	0%	0%

State	DISCOM	Total Consumers (in lakh)	Category-specific consumer coverage						
			Rural	Urban	Domestic	Non-Domestic / Commercial	Industrial	Agricultural	Others
Maharashtra	BEST	10.30	0%	100%	74%	25%	1%	0%	1%
Maharashtra	MSEDCL	287.45	66%	34%	75%	7%	1%	15%	1%
Maharashtra	TPCL	7.56	0%	100%	94%	5%	1%	0%	0%
Manipur	MSPDCL	5.12	63%	37%	94%	6%	0%	0%	0%
Mizoram	Mizoram PD	2.80	40%	60%	85%	5%	0%	0%	10%
Odisha	TPCODL	29.72	81%	19%	91%	7%	0%	1%	1%
Odisha	TPNODL	20.65	86%	14%	92%	5%	0%	1%	1%
Odisha	TPSODL	23.34	80%	20%	93%	4%	0%	1%	1%
Odisha	TPWODL	20.99	81%	19%	90%	5%	0%	4%	1%
Puducherry	PED	4.51	40%	60%	82%	13%	3%	2%	0%
Punjab	PSPCL	102.37	64%	36%	73%	12%	2%	14%	0%
Rajasthan	AVVNL	58.43	73%	27%	80%	8%	1%	10%	1%
Rajasthan	JdVVNL	46.12	71%	29%	81%	8%	1%	10%	0%
Rajasthan	JVVNL	51.41	59%	41%	78%	9%	2%	11%	0%
Sikkim	Sikkim PD	1.26	78%	22%	87%	10%	1%	0%	2%
Tamil Nadu	TANGEDCO	327.80	53%	47%	72%	11%	2%	7%	8%
Telangana	TSNPDCL	54.20	52%	48%	66%	8%	0%	23%	2%
Telangana	TSSPDCL	98.11	43%	57%	74%	11%	1%	13%	1%
Tripura	TSECL	9.59	49%	51%	89%	8%	1%	1%	2%
Uttar Pradesh	DVVNL	63.78	57%	43%	88%	5%	1%	5%	1%
Uttar Pradesh	KESCO	6.93	0%	100%	83%	13%	2%	0%	2%
Uttar Pradesh	MVVNL	89.90	54%	46%	91%	6%	0%	3%	0%
Uttar Pradesh	NPCL	1.26	17%	83%	91%	4%	4%	1%	1%
Uttar Pradesh	PVVNL	70.83	59%	41%	84%	7%	1%	7%	1%
Uttar Pradesh	PuVVNL	97.58	84%	16%	90%	6%	0%	4%	1%
Uttarakhand	UPCL	25.64	68%	32%	87%	10%	1%	2%	1%
West Bengal	WBSEDCL	218.92	81%	19%	88%	10%	1%	2%	0%
Total Consumers (in lakhs)		**3235.13**							

Note: "-" means data not available / insufficient data or evidence doc

ANNEXURE-D

Framework – Description and Measurement of Parameters

Parameter	Description & Measurement Method	Data Source
Operational Reliability *(45 Marks)*		
Hours of Supply *(34 Marks)*	• Average daily electricity supply duration (in hours) in urban, rural and industrial 11 kV feeders • Feeders at higher voltage level will not be included • Mixed feeders will be classified basis the dominant consumer type (number of consumers to be considered and not quantum of connected load) • Agricultural and standby feeders (which remain unutilized for full month) not to be considered for calculation • For ease of calculation, average will not be weighted by number of consumers or load on the feeders • Scheduled as well as unscheduled outages included • Interruptions of less than 5 mins to be neglected	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis FMS and/or evidence documents[1] shared by DISCOMs
Feeder Interruption Index *(7 Marks)*	• Interruption index formula = Total No. of interruptions for all feeders in a category in a year/Avg no. of feeders in a category • Feeders at 11kV voltage level will be included • Only unscheduled outages included • Interruptions of less than 5 minutes to be neglected	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
DT Failure Rate *(4 Marks)*	• Number of DT failures as a percentage of total DTs • Total DTs = Average of the number of DTs at the beginning and end of the period under consideration • All DTs across all voltage levels (excluding agricultural DTs) to be considered for assessment	During initial year(s), data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Connection and Other Services *(10 Marks)*		
Alignment of regulations with industry best practices w.r.t timelines *(Negative 2 Marks for non-alignment)*	• Alignment of regulation (SoP/supply code) with industry best practices with respect to timelines as highlighted below: – Release of connection: < 7 days in metro cities, < 15 days in other municipal areas and < 30 days in rural areas – Testing of meters: < 30 days of receipt of the complaint from the consumer – Replacement of meters: < 24 hours in urban areas and < 72 hours in rural areas – Issuance of no dues certificates: < 7 days from the receipt of final payment – Provision for payment of claims on deviation from SoP: Payment of claims made by consumers against non-adherence of Standards of Performance (SoP) by the utility	Copy of regulations notified by the regulatory commission

1 Evidence documents may include system generated reports, regulatory filings, independent body reports etc.

Parameter	Description & Measurement Method	Data Source
	– Assessing feasibility of rooftop solar installation: < 20 days – Connection of rooftop solar after installation: < 30 days from the date of submission of installation certificate	
Predetermined demand charges for connections up to 150kW *(Negative 1 Marks for non-alignment)*	• Whether regulations provide for having predetermined demand charges for new connections up to 150kW	Copy of regulations notified by the regulatory commission
Applications processed through online portal *(2 Marks)*	• Number of applications of new electricity connection processed and approved online (submission till approval) vis-à-vis the total applications approved in the period to be considered • An application shall be treated to have been processed online even if it is received in physical format provided it is entered into the computer system and the remaining processing is predominantly online	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Average deviation from SoP in time taken for providing connection *(7 Marks)*	• Each category of consumers for which a different timeline for providing electricity connection starting from date of receipt of application to energization of meter, as specified in 'Standard of Performance' (SoP) defined by state regulatory body, shall be considered as a category • Category wise average deviation (+/-) in percentage from specified timeline shall be calculated • DISCOM average deviation in percentage shall be calculated, weighted by the number of connections of each category given in the period under consideration	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
No. of Prosumers per Lakh consumers *(1 Mark)*	• Prosumers (under net or gross metering) per lakh of total number of consumers, as on the end of the period under consideration	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Metering, Billing and Collection *(35 Marks)*		
Replacement of Defective Meters *(1+1 Mark)*	• Average time taken for replacement of defective meters in – Urban areas – Rural areas	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Bills generated based on actual meter reading *(4 Marks)*	• Percentage of bills generated on actual readings vis-à-vis total bills generated. • Only actual meter readings from working meters to be considered (not including provisional, average, flat rate and unmetered billing, faulty/burnt meter, locked premises etc.) • Total bills generated to include metered and unmetered connections	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Bills generated through non-	• Bills generated through non-manual meter reading process (i.e., smart meters, AMR meters, port-based/ Bluetooth/IR	Data to be submitted by DISCOM along with

Parameter	Description & Measurement Method	Data Source
manual meter reading *(7 Marks)*	handheld meter reading devices, OCR, etc.) vis-à-vis total bills generated shall be calculated • On the basis of this, DISCOMs shall be categorized into deciles	supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Billing frequency for domestic category consumers as per regulations *(Negative1 mark for non-monthly billing)*	• DISCOMs are to submit the SoP for billing frequency of Domestic Category consumers. • No. of consumers in each billing frequency to be submitted.	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Number of bills generated for domestic category consumers *(3 Marks)*	• Parameter to be calculated based on the data provided for total no. of bills generated & Billing frequency of Domestic category consumers • All bills generated for all consumer under domestic category in a year – Full marks	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Consumers receiving billing updates on mobile *(3 Marks)*	• Percentage of consumers receiving bills on mobile • Would be measured as (Total no. of Consumers provisioned to receive billing alerts/Total no. of consumers)	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Prepaid consumers *(8 Marks)*	• Consumers under prepaid metering as a percentage of total number of consumers as at the end of the period under consideration, shall be calculated	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Tariff categories (incl. sub-categories and slabs) *(2 Marks)*	• Number of tariff categories including subcategories and tariff slabs	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Number of bills paid digitally *(6 Marks)*	• Percentage of bills paid through digital channels (net-banking, credit/debit cards, UPI, payment wallets, etc.) vis-à-vis total number of bills generated – Prepaid consumers making payments digitally to be included in calculation of the percentage	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs

Parameter	Description & Measurement Method	Data Source
Fault Rectification and Grievance Redressal *(10 Marks)*		
24x7 customer care call center with common code '1912' *(2 Marks)*	• Coverage will be calculated as a % of consumers covered by the Toll Free 24x7 Call Center, as at the end of the period under consideration. • Equipped with modern features. – IVRS facility – Computer telephony integration – Automatic call distributor systems – System built complaint escalation mechanism – Status alert to consumer. – Mechanism for verification of closure of complaints – Data analytics for insights – Message chatbots • Types of complaints registered – Supply – Commercial – Safety	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Average customer call waiting time *(1 Mark)*	• Average wait time (in seconds) for consumers (on 24x7 consumer care call center helpline) while calling for registration of complaints (from call connection to initiation of conversation with consumer care representative)	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Outage alerts through registered mobile *(2 Marks)*	• DISCOM shall be marked based on the percentage of consumers registered to received outage alerts being provided by the DISCOM.	During initial year(s), data to be submitted by DISCOMs along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs.
Deviation from specified time for complaints resolution through call center *(4 Marks)*	• Category wise average deviation (+/-) in percentage from the specified timeline in resolving the complaint shall be calculated. • DISCOM average deviation in percentage shall be calculated, with 2 marks for Rural & Urban category each • DISCOM to provide the SoP as well the category of complaints, for which data is provided.	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs
Adequacy of Grievance Redressal Mechanism *(1 Mark)*	• Whether two tier grievance redressal mechanism has been established by the DISCOM as per regulations specified by the SERC/JERC or not? • Whether adequate number of Consumer Grievance Redressal Forums (CGRF) have been established. Calculated as number of CGRFs per 1,00,000 consumers. • Only the latest issued orders shall be considered as evidence.	Data to be submitted by DISCOM along with supporting documents. REC/REC ROs to validate the data basis evidence documents shared by DISCOMs

ANNEXURE-E

Marking Methodology Framework

Parameter	Unit	Marks	Scoring
Operational Reliability *(45 Marks)*			
Hours of Supply	Hours / day	34	Rural (Total marks for Rural = A) • HoS > 22 hrs *(Full Marks)* • HoS <16 hrs *(No Marks)* • 16 <= HoS <=22 hrs *(Proportionate Marks)* Urban (Total marks for Urban = B) • HoS = 24 hrs (Full Marks) • HoS < 17 hrs *(No Marks)* • 17 <= HoS < 24 hrs *(Proportionate Marks)* Industrial (4 marks) • HoS = 24 hrs (Full Marks) • Under < 23 hrs (No Marks) • 23 <= HoS < 24 hrs (Proportionate Marks) (A+B) to constitute 30 marks where ratio of A and B is determined basis proportion of Rural & Urban consumers and in DISCOMs which do not have any industrial consumers, (A+B) to constitute 34 Marks.
Interruption Index (II)	Interruptions / Feeder / Year	7	Rural (Total marks for Rural = X) • II < 60 (Full Marks) • II >720 (No Marks) • 60 <= II <= 720 (Proportionate Marks) Urban (Total marks for Rural = Y) • II < 20 (Full Marks) • II > 420 (No Marks) • 20 <= II <= 420 (Proportionate Marks) Industrial (1 mark) • <10 (Full Marks) • >280 (No Marks) • 10<= II <= 280 (Proportionate Marks) (X + Y) to constitute 6 marks where ratio of X and Y is determined basis proportion of Rural & Urban feeders and in DISCOMs which do not have any industrial feeders, (A+B) to constitute 7 Marks.
DT Failure Rate	%	4	• Failure at <= 4% *(Full Marks)* • Failure at >14% *(No Marks)* • 4% < Failure <= 14% *(Proportionate Marks)*

Parameter	Unit	Marks	Scoring
Connection and Other Services (10 Marks)			
Alignment of regulations with industry best practices w.r.t Timelines i. Release of connection ii. Testing of meters iii. Replacement of meters iv. Issuance of no dues certificates to applicants v. Provision for payment of claims on deviation from SoP vi. Assessing feasibility of rooftop solar installation vii. Connection of rooftop solar after installation	Yes/No	0 (-2)	• If all the 7 parameters are aligned to industry best practices (0 Mark) • Non-alignment of any of the 7 parameters (-2/7 Mark each)
Presence of predetermined demand charges for connections up to 150kW	Yes/No	0 (-1)	• Yes *(0 Marks)* • No *(-1 Mark)*
Applications processed through online portal (Submission till approval)	%	2	• Highest % (Full marks) • Lowest % (No Marks) • Remaining (Proportionate Marks)
Average deviation from SoP in time taken for providing connection	%	7	• X (Average days taken) = Sum product of Total no. of connections released monthly & Average days taken for release of new connection) / Total no. of connections released for the year • Y (Deviation from SoP) = (X-SoP Day)/SoP If Y: • Within prescribed SoP timelines *(Full Marks)* • >20% Deviation from SoP *(No marks)* • 0 - 20% Deviation *(Proportionate Marks)* Marks are divided for each category of consumers as follows: • Full Marks for each category: (Number of connections released in the particular category / Total number of Connections released) * 7
No. of Prosumers (under net or gross metering)	per lakh consumers	1	• Highest % *(Full marks)* • Lowest % *(No Marks)* • Remaining *(Proportionate Marks)*

Parameter	Unit	Marks	Scoring
Metering, Billing and Collection *(35 marks)*			
Average time taken (days) for replacement of defective meters (Urban)	Days	1	Least No. of days *(Full marks)* Highest No. of days *(No Marks)* Remaining *(Proportionate Marks)* For Urban DISCOMs, 0 marks to be allocated for this parameter and 2 marks to be allocated for the parameter "Average time taken (days) for replacement of defective meters (Urban)"
Average time taken (days) for replacement of defective meters (Rural)	Days	1	
Bills generated based on actual meter reading	%	4	• >95% (Full Marks) • <65% (No Marks) • >=65% and <=95% (Proportionate Marks)
Bills generated on the basis of non-manual meter reading	%	7	• Highest % *(Full marks)* • Lowest % *(No Marks)* • Remaining *(Proportionate Marks)*
Billing frequency for domestic category consumers as per regulations	Monthly/ Bimonthly	0 (-1)	If domestic consumers are: • Billed completely on monthly cycle *(0 Marks)* • Various billing cycles *(Proportionate Negative Marks based on % of non-monthly billing cycle)*
Bills generated for domestic category consumers in a year	Number	3	• All bills generated for domestic consumers as per SoP *(Full Marks)* • Otherwise *(Marks proportionate to % bills generated vis-à-vis no. of bills to be generated as per SoP)*
Consumers receiving billing updates on mobile	%	3	If billing alerts are provisioned for • All consumers - Full Marks • Some consumers - Proportionate marks
Prepaid consumers	%	8	• Highest % (Full marks) • Lowest % (No Marks) • Remaining (Proportionate Marks)
Tariff categories (incl. sub-categories and slabs)	Number	2	• Least No. of categories *(Full Marks)* • Highest No. of categories *(No Marks)* • Remaining *(Proportionate Marks)*
Number of consumers paying digitally	%	6	• Highest % *(Full Marks)* • Lowest % *(No Marks)* • Remaining *(Proportionate Marks)*

Parameter	Unit	Marks	Scoring
Fault Rectification and Grievance Redressal *(10 marks)*			
24x7 customer care call center with common code '1912'	(a) % (b) Yes/No (c) Yes/No	2	• (a) Coverage (33.33% marks of total): Proportionate marks, based on the % of consumers covered. • (b) Equipped with modern features (33.33% marks of total) – 5 or more modern features *(Full Marks)* – 4 Modern features (Half Marks) – Less than 4 features (No Marks) • (c) Types of complaints registered (33.33% marks of total) – Supply, commercial, safety *(Full Marks)* – Supply & commercial *(Half Marks)* – Supply & safety *(Half Marks)* – Only Outages *(No Marks)*
Average call waiting time at the call center	Seconds	1	• < 30 seconds *(Full Marks)* • >120 seconds or no call center *(No Marks)* • Remaining *(Proportionate Marks)*
Consumers receiving outage related updates on mobile	%	2	• If Outage alerts are provisioned for all consumers - Full Marks • Otherwise - Proportionate marks as follows: >= 75% - <100 >= 50% - <75 >= 25% - <50 < 25
Deviation from specified time for complaints resolution through call center (Rural & Urban)	%	2 + 2	Average Time taken for resolving all complaints (within and beyond SoP) for Rural and Urban: • 100% Within specified limit *(Full marks)* • >20% Deviation over limit *(No marks)* • Deviation 0 - 20% *(Proportionate marks)*
Adequacy of Grievance Redressal Mechanism	Yes/No	1 (0.5 + 0.5)	• Two Tier Grievance Redressal Mechanism (50% marks of total) – Present *(Full marks)* – Not Present *(No marks)* • Number of CGRFs per 1 Lakh consumers (50% marks of total) – Highest (Full Marks) – Lowest (No Marks) – Remaining (Proportionate Marks)

ANNEXURE-F

Working Sheet

1. Operational Reliability

a. Hours of Supply & Interruption Index

Availability of RFMS / NPP Data Set		Final Value for HoS / Interruptions Index
Scenario I	For all the months	Weighted Average (RFMS- 60% & CSRD- 40%)
Scenario II	Few months (Value for missing Month= (CSRD of respective month) *(1 – Deviation[a]))	Weighted Average (RFMS- 60% & CSRD- 40%)
Scenario III	No Month (Value for missing Month= (CSRD of respective month) *(1 – NAD[b]))	Weighted Average (RFMS- 60% & CSRD- 40%)

[a]Deviation %: (Avg CSRD – Avg RFMS) / (Avg CSRD)

1. *Avg RFMS – Average RFMS figures for all the months for which RFMS data is available.*
2. *Avg NPP – Average NPP figures for all the months for which NPP data is available.*
3. *NAD – National Average Deviation (HOS/II)*
4. *RFMS – Rural Feeder Monitoring System*
5. *NPP – National Power Portal*

Note:

i. *Avg CSRD: Average taken of all 12 months CSRD data filled by DISCOM.*
ii. *Avg RFMS: Average taken of all the months for which RFMS data is available.*

[b]NAD (National Average Deviation) %: (Avg CSRD – Avg RFMS) / (Avg CSRD)

Note:

a) *Avg CSRD: Yearly average value of all the DISCOMs.*
b) *Avg RFMS: Yearly average value of all the DISCOMs which are available.*

In the CSRD exercise, we compare the annual average (calculated from the monthly figures) Hours of supply and Interruption Index based on data sheet sent by the DISCOM and the RFMS / UFMS data.

HoS Calculation

The total marks assigned to the HoS parameter is 34 which is further divided into 3 categories Rural, Urban & Industrial. Marks distribution are as follows:

i. Rural + Urban = 30 Marks
   - Rural = 30* (Total No. of Rural consumers / Total Nos. of Consumers)
   - Urban = 30* (Total No. of Urban consumers / Total Nos. of Consumers)

ii. Industrial = 4 Marks

Note: For DISCOMs with No industrial consumers, weightage for the Rural + Urban will be 34 Marks

Interruption Index Calculation

A total 7 marks assigned to the Interruption Index parameter, which is further divided into 3 categories Rural, Urban & Industrial. Marks distribution are as follows:

i. **Rural + Urban = 6 Marks**
   - Rural = 6* [Total No. of Rural Feeders / (Total Nos. of Urban Feeders + Rural Feeders)]
   - Urban = 6* [Total No. of Urban Feeders / (Total Nos. of Urban Feeders + Rural Feeders)]

ii. **Industrial = 1 Mark**

Note: For DISCOMs with No industrial Feeders, weightage for the Rural + Urban will be 7 Marks

Aggregate Distribution Transformer (DT) Failure Rate *(excluding Agricultural DTs)* = Total No. of DTs Failed / Total No. Of DTs

2. Connection and other Services

a. **Percentage of Applications processed through online portal** = 100* (Total Nos. of new connections released (including all categories) via online processing / Total Nos. of new connections released)

b. **Average deviation from SoP in time taken for providing new connection** = Weighted average of total Nos. of new connections released across all the categories * Deviation

   a. *Weighted Average Days for release of new connection* = (Sum product of total Nos. of connections / Average Nos. of days taken for release) / Total Nos. of connections released

   b. *Deviation* = (Weighted Average Days for release of new connection - SoP days) / SoP days

c. **Prosumers (under net or gross metering) / per lakh consumers** = (Total Nos. of prosumers * 1,00,000) / Total number of consumers

3. Metering, Billing and Collection

a. **Average time taken for replacement of defective meters** = (Month wise Average Nos. of days taken for replacement of meters * Month wise Nos. of meters replaced) / Sum of Total Nos. of meters replaced across all the months

b. **Percentage of Bills generated through actual meter readings** = 100* (Total Nos. of Bills generated on actual meter readings / Total Nos. of bills generated)

c. **Percentage of Bills generated through non-manual readings** = 100* (Total Nos. of Bills generated through Non manual meter readings/ Total Nos. of bills generated)

d. **Billing frequency for domestic category consumers (% of consumers with monthly billing)** = 100* (Number of domestic consumers billed monthly/ Total Nos. of domestic consumers)

e. **Percentage of Bills generated for domestic category consumers in a year** = 100* (Total Nos. of bills generated for domestic consumer in a year/Nos. of bills required to be generated)

f. **Nos. of bills required to be generated** = (Nos. of consumers billed monthly*12) + (Nos. of consumers with bi-monthly billing*6) + (Nos. of consumers with quarterly billing*4) + (Nos. of other consumers with different billing frequency * Frequency of billing for 'other' category)

g. **Percentage of Consumers receiving billing updates on mobile** = 100* (Consumers receiving for SMS alert / Total Nos. of consumer)

h. **Percentage of Prepaid consumers** = 100* (Total Nos. of prepaid consumers/ Total Nos. of Consumers)

i. **Percentage of consumers paying digitally** = 100* (Total Nos. of digital and online payments/ Total Nos. of bills generated)

4. Fault Rectification and Grievance Redressal

a. **Percentage of consumers registered in 24x7 customer care call center** = 100* (Nos of Consumers for whom 24x7 consumer care helpline exists / Total Nos of Consumers)

b. **Percentage of Consumers receiving outage related updates on mobile** = 100* (Nos. of consumers whose mobile numbers are registered to receive outage alerts/ Total Nos. of consumers)

c. **Deviation from specified time for complaints resolution through call center** = {Average Time taken for resolving all complaints (within and beyond SoP) - SoP Timelines for Complaint Resolution} / SoP Timelines for Complaint Resolution

ANNEXURE-G

Acronyms

Acronyms	Full Form
ACS	Average Cost of Supply
AI	Artificial Intelligence
AMR	Automated Meter Reading
AMI	Advanced Metering Infrastructure
ARR	Average Revenue Realized
AT&C Losses	Aggregate Technical and Commercial Losses
BU	Billion Unit
CGRF	Consumer Grievance Redressal Forum
ckms	circuit kilometers
CMD	Chairman and Managing Director
CoS	Connections and other Services
CPSU	Central Public Sector Undertaking
CSRD	Consumer Service Rating of DISCOMs
DDUGJY	Deendayal Upadhyaya Gram Jyoti Yojana
DT	Distribution Transformer
ED	Executive Director
EOL	Ease of Living
FRGR	Fault Rectification and Grievance Redressal
FY	Financial Year
G20	Group of 20
GoI	Government of India
GW	Gigawatt
HoS	Hours of Supply
HT	High Tension
IAS	Indian Administrative Service
II	Interruption Index
IPDS	Integrated Power Development Scheme
IRES	India Residential Energy Survey
IT/OT	Information Technology / Operational Technology
KPI	Key Performance Indicator
KV	Kilo Volt
kW	Kilo Watt
LT	Low Tension
MBC	Metering, Billing and Collection
MD	Managing Director
MIS	Management Information System
ML	Machine Language
MoP	Ministry of Power
NAD	National Average Deviation
NBFC	Non-Banking Financial Company

Acronyms	Full Form
NEF	National Electricity Fund
NFMS	National Feeder Monitoring System
NPP	National Power Portal
OR	Operational Reliability
PD	Power Department
PMD	Project Management Division
RAPDRP	Restructured Accelerated Power Development and Reforms Program
RDSS	Revamped Distribution Sector Scheme
RE	Renewable Energy
RFMS	Rural Feeder Management System
ROs	Regional Offices
SAIFI	System Average Interruption Frequency Index
SAIDI	System Average Interruption Duration Index
SAUBHAGYA	Pradhan Mantri Sahaj Bijli Har Ghar Yojana
SCS	Special Category State
SMS	Short Message Service
SoP	Standard of Performance
Sq.km.	Square Kilometer
UDAY	Ujjwal DISCOM Assurance Yojana
UR&SI	Utility Reforms and Special Interventions
USD	United States dollar
UT	Union Territory
w.r.t	With Respect To

- ***Urban DISCOMs:*** *DISCOMs with 100% urban consumers*
- ***General DISCOMs:*** *DISCOMs other than Urban DISCOMs*

Acronyms of Indian DISCOMs

Acronyms	Full Form
A&N PD	Electricity Department, UT of Andaman & Nicobar
AEML	Adani Electricity Mumbai Ltd.
APCPDCL	Andhra Pradesh Central Power Distribution Company Limited
Arunachal PD	Department of Power, Arunachal Pradesh
APDCL	Assam Power Distribution Company Limited
APEPDCL	Andhra Pradesh Eastern Power Distribution Company
APSPDCL	Andhra Pradesh Southern Power Distribution Company Limited
AVVNL	Ajmer Vidyut Vitran Nigam Limited
BESCOM	Bangalore Electricity Supply Company Limited
BEST	Brihmanmumbai Electric Supply Company
BRPL	BSES Rajdhani Power Limited
BYPL	BSES Yamuna Power Limited
CESC	Calcutta Electric Supply Corporation Limited
CESCOM	Chamundeshwari Electricity Supply Corporation Limited
CED	Chandigarh Electricity Department
CSPDCL	Chhattisgarh State Power Distribution Company Ltd.
DGVCL	Dakshin Gujarat Vij Company Limited
DHBVNL	Dakshin Haryana Bijli Vitran Nigam
DNHPDCL	Dadra & Nagar Haveli Power Distribution Corporation Ltd
DVVNL	Dakshinanchal Vidyut Vitran Nigam Limited
Goa PD	Electricity Department, Government of Goa
GESCOM	Gulbarga Electricity Supply Company Limited
HESCOM	Hubli Electricity Supply Company Limited
HPSEBL	Himachal Pradesh State Electricity Board Limited
JBVNL	Jharkhand Bijli Vitran Nigam Limited
JdVVNL	Jodhpur Vidyut Vitran Nigam Limited
JPDCL	Jammu Power Distribution Corporation Ltd
JVVNL	Jaipur Vidyut Vitran Nigam Limited
KESCo	Kerala State Electricity Board Limited
KPDCL	Kashmir Power Distribution Corporation Ltd
KSEBL	Kerala State Electricity Board Limited
LED	Electricity Department, UT of Lakshadweep
Ladakh PDD	Ladakh Power Development Department
MePDCL	Meghalaya Energy Corporation Limited
MESCOM	Mangalore Electricity Supply Company Limited
MGVCL	Madhya Gujarat Vij Company Limited
Mizoram PD	Power & Electricity Department, Government of Mizoram
MPMKVVCL	Madhya Pradesh Madhya Kshetra Vidyut Vitran
MPPaKVVCL	MP Poorv Kshetra Vidyut Vitran Company Limited
MPPoKVVCL	MP Paschim Kshetra Vidyut Vitran Company Limited
MSEDCL	Maharashtra State Electricity Distribution Co. Ltd.

Acronyms	Full Form
MSPDCL	Manipur State Power Distribution Company Ltd
MVVNL	Madhyanchal Vidyut Vitran Nigam Limited
NBPDCL	North Bihar Power Distribution Company Limited
NPCL	Noida Power Company Limited
NPD	Department of Power, Nagaland
PED	Electricity Department, UT of Puducherry
PFC	Power Finance Corporation
PGVCL	Paschim Gujarat Vij Company Limited
PSPCL	Punjab State Power Corporation Limited
PVVNL	Paschimanchal Vidyut Vitran Nigam Limited
PuVVNL	Purvanchal Vidyut Vitran Nigam Ltd.
SBPDCL	South Bihar Power Distribution Company Limited
Sikkim PD	Sikkim Power Development Corporation Limited
TANGEDCO	Tamil Nadu Generation & Distribution Corporation
TPCL	Tata Power Company, Ltd. (India)
TPCODL	Tata Power Central Odisha Distribution Limited
TPDDL	Tata Power Delhi Distribution Limited
TPL	Torrent Power Limited
TPNODL	Tata Power Northern Odisha Distribution Limited
TPSODL	Tata Power Southern Odisha Distribution Limited
TPWODL	Tata Power Western Odisha Distribution Limited
TSECL	Tripura State Electricity Corporation Limited
TSNPDCL	Telangana State Northern Power Distribution Company Ltd
TSSPDCL	Telangana State Southern Power Distribution Company Ltd
UGVCL	Uttar Gujarat Vij Company Limited
UHBVNL	Uttar Haryana Bijli Vitran Nigam
UPCL	Uttarakhand Power Corporation Limited
WBSEDCL	West Bengal State Electricity Distribution Company Limited

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