Ministry of Power
Govt. of India
सत्यमेव जयते

आरईसी REC
असीमित ऊर्जा, अनन्त संभावनाएं
Endless energy. Infinite possibilities.

CONSUMER SERVICE RATING OF DISCOMs (CSRD)

REPORT | FY 2021-22

Ministry of Power
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Endless energy. Infinite possibilities.

CONSUMER SERVICE RATING OF DISCOMs

2021-2022

FY 2021-22

adani Electricity	torrent POWER Ahmedabad	సదా మీసేవలో...	
Assam Power Distribution Company Limited	Eastern Power	SOUTHERN POWER DISTRIBUTION COMPANY OF A.P. LTD	Aliner Vidyut Vitran Nigam Limited
BESCOM	BEST	BSES BSES Rajdhani Power Limited	BSES BSES Yamuna Power Limited
MUNICIPAL CORPORATION CHANDIGARH	C.E.S.C, MYSORE	CESC LIMITED	CSPDCL
DGVCL	DHBVN	DNHPDCL	
Electricity Department, UT of Andaman & Nicobar (EDAN)	ELECTRICITY DEPARTMENT Government of GOA	GESCOM	HESCOM
		JODHPUR VIDYUT VITRAN NIGAM LIMITED	
प्रमास्मि शशि सूर्ययोः	केरको	KPBDL	KSEB
	PowerLak	Ladakh Power Development Department (LPDD)	MeECL

MESCOM	MGVCL	Power & Electricity Department, Govt. of Mizoram (MPED)	MPMKVVCL Bhopal Recruitment
		MAHAVITARAN	Manipur State Power Distribution Company Limited
	NB	NPCL NOIDA POWER COMPANY LIMITED	Department of Power, Nagaland (NPD)
Electricity Department Government of Puducherry (India)	PGVCL	PSPCL	
	SB Illuminating Lives	Sikkim Power Development Corporation Limited (SPD)	torrent POWER Surat
Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO)	torrent POWER Dahej	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
		SOUTHERN POWER	UGVCL
LHBVN	UPCL Uttarakhand Power Corporation Ltd	WBSEDCL	

सत्यमेव जयते

MESSAGE

आर. के. सिंह
R. K. SINGH

विद्युत मंत्री एवं
नवीन और नवीकरणीय ऊर्जा मंत्री
भारत सरकार

MINISTER OF POWER
AND MINISTER OF NEW &
RENEWABLE ENERGY,
GOVT. OF INDIA

Indian power sector is one of the most diverse in the world, being the third-largest producer and consumer of electricity worldwide and with an installed power capacity of 411.65 GW as of January 31, 2022. As energy remains central to achieving India's development goals including bringing electricity to all and developing infrastructure, the power sector has a crucial role to play in facilitating directly and indirectly all sectors to contribute towards this goal. Over the past eight years, the Power Distribution Sector has significantly transformed in terms of various reforms via numerous policies and initiatives by Government of India.

Indian power sector has significantly bridged the peak demand deficit, by bringing it down from 4.5 percent over last 8 years. Electricity consumption has increased by 8% in 2021 to 1282 TWh, with an estimated consumption of 1894.7 TWh in 2022. The Government of India over the last 5 years has spent over Rs. 2 lakh crores across Distribution sector, developing adequate capacity, modernising and strengthening the backbone electricity infrastructure across the country. Any further advancement in the sector is inextricably linked to the fact that electricity consumers are key stakeholders. Hence, ensuring a reliable power supply and providing consumer-centric services are crucial.

The recent policy interventions via RDSS, Powerthon-2022, LIS, and 0.5% additional borrowing are shaping the future of the distribution business to deliver sustainable and reliable power supply. RDSS, with an estimated outlay of 3 lakh crores, aims at bringing in much needed investments in distribution sector which will eventually help the end consumer by improving the quality and reliability of supply. The Electricity Amendment Bill 2022 thrusts upon facilitating consumers in selection of their electricity service providers, empowering them and elevating their satisfaction levels. The release of the first edition of the CSRD-2021 report was impactful in terms of sensitising the DISCOMs on their performances across some of the most crucial service parameters from consumers perspective. It helped them to self-evaluate their performance and also compare it with their peer DISCOMs and national averages. We welcome the second edition of the report released by REC Limited, encompassing the same methodology as was adopted in CSRD-2021.

I am certain that this report will be useful to DISCOMs, policymakers, regulators, investors, and other key stakeholders across power distribution sector. Most importantly this will facilitate DISCOMs with a platform to assess their service levels and work upon them to provide superior service to end consumers.

(R.K. SINGH)

सत्यमेव जयते

संदेश

कृष्ण पाल गुर्जर

KRISHAN PAL GURJAR

केंद्रीय राज्य मंत्री
भारी उद्योग और ऊर्जा मंत्रालय
भारत सरकार, नई दिल्ली

UNION MINISTER OF STATE FOR
HEAVY INDUSTRIES AND POWER
GOVT. OF INDIA, NEW DELHI

पिछले कुछ वर्षों से भारतीय विद्युत क्षेत्र में असाधारण और महत्वपूर्ण विकास हुआ है, जो तीव्र शहरीकरण, औद्योगीकरण और देश के मजबूत आर्थिक विकास से प्रेरित है। विद्युत क्षेत्र के सम्पूर्ण वैल्यू चेन में विद्युत वितरण का व्यवसाय राजस्व का एकमात्र स्रोत है और विद्युत उपभोक्ताओं के लिए संपर्क का एकमात्र बिंदु होने के कारण, विद्युत की गुणवत्ता और विश्वसनीय आपूर्ति सुनिश्चित करना अत्यंत महत्वपूर्ण है। इसके बावजूद, सम्पूर्ण विद्युत क्षेत्र को आत्मनिर्भर और उपभोक्ता केंद्रित बनाने के लिए वितरण क्षेत्र को और मजबूत बनाने की आवश्यकता है।

उपभोक्ताओं को प्रभावी और समयबद्ध तरीके से विभिन्न सेवाएं प्रदान करने के लक्ष्य के साथ भारत सरकार द्वारा विद्युत (उपभोक्ता के अधिकार) नियम 2020 जारी किए गए थे। इस क्षेत्र के विकास को गति देने के लिए विद्युत मंत्रालय द्वारा विभिन्न सुधार किए गए हैं। इनमें से कुछ सुधार हैं: विद्युत के प्रवाह के लिए अनिवार्य लेटर ऑफ क्रेडिट का प्रावधान; विलम्ब से किए गए भुगतान के अधिभार में 18% से 12% तक की कमीय "कानून में परिवर्तन के कारण" लागत की रिकवरी प्रक्रिया का सरलीकरण; शिड्यूलिंग को आसान बनाने के लिए नियम; सामान्य नेटवर्क ऐक्सेस नियमों के माध्यम से ट्रांसमिशन नेटवर्क के लिए कनेक्टिविटी नियमों का सरलीकरण; इत्यादि।

पिछले कुछ वर्षों में, भारत ने फ्लोटिंग सोलर प्रोजेक्ट, स्मार्ट मीटरिंग, ऑटोमेशन सिस्टम और नई प्रौद्योगिकियों जैसे कि ड्रोन और एआई/एमएल के रूप में विद्युत क्षेत्र में नई तकनीकों को लागू करने में अभूतपूर्व सफलता प्राप्त की है। इससे सम्पूर्ण विद्युत क्षेत्र और वितरण कंपनियों के अंतिम उपभोक्ताओं को बहुमूल्य अंतर्दृष्टि मिल रही है, फिर भी, विद्युत वितरण कंपनियों को अभी भी ग्राहकों की संतुष्टि का आकलन करके इसमें और सुधार करने की आवश्यकता है। इसे दिशा में, वितरण कंपनियों द्वारा उपभोक्ताओं को दी जाने वाली सेवाओं के बारे में अंतर्दृष्टि प्रदान करने हेतु 2021 में डिस्कॉम की उपभोक्ता सेवा रेटिंग (सीएसआरडी) नाम से एक वैचारिक फ्रेमवर्क की शुरुआत की गई थी। इसी क्रम में, इसका दूसरा संस्करण, सीएसआरडी–2022, भी निकाला जा रहा है ताकि वितरण कंपनियों का मूल्यांकन किया जा सके और प्रमुख सेवा मानदंडों तथा पिछले वर्ष के बाद से इसमें किए गए बदलावों को समझा जा सके।

मुझे आशा है कि यह रिपोर्ट हमारी विद्युत संस्थाओं को व्यापक अंतर्दृष्टि प्रदान करने में वितरण कंपनियों की मदद करेगी और इन्हें वित्तीय रूप से अधिक टिकाऊ, उपभोक्ता केंद्रित और प्रचालन के क्षेत्र में अधिक कुशल बनने में सहयोग करेगी।

(कृष्ण पाल गुर्जर)

सत्यमेव जयते

MESSAGE

आलोक कुमार, भा.प्र.से.
सचिव
भारत सरकार

ALOK KUMAR, IAS
Secretary
Govt. of India

विद्युत मंत्रालय
श्रम शक्ति भवन
नई दिल्ली–110001

MINISTER OF POWER
SHARAM SHAKTI BHAWAN
NEW DELHI-110001

A financially sound and operationally strong power sector is vital for achieving the Government of India's mandate of enabling ease of doing business and ease of living. The power sector in India has seen significant investments in the last few years across the value chain, which has catalysed the growth of the sector and helped in providing 100 percent electrification. Nevertheless, distribution and consumer satisfaction still remain a bottleneck and a bigger problem than capacity.

Electricity users are the most significant stakeholders in the power industry. A Draft Electricity (Rights of Consumers) Regulations, 2020 was passed allowing the customers having the right to a minimum standard of service for the provision of power. As the power sector seeks to achieve greater self-reliance for itself, consumer satisfaction and reliability of access to last mile delivery is the utmost priority. For this, it is imperative for DISCOMs to identify critical areas, key consumer services and meet minimum standards to strengthen their overall performance.

To achieve this, REC Limited came up with the first-ever consumer-focused report named Consumer Service rating of DISCOMs (CSRD), launched by Hon'ble Power Minister in 2022. The report aims at indulging more towards consumer-centric services to provide a holistic approach for enhancing consumer satisfaction and promote inter-se learning. For the CSRD-2022 exercise, the framework remains the same as last year, with a rigorous approach that involves collecting information at a more granular level. The exercise delves into key parameters such as operational reliability, connection services, Metering / Billing and collection services, Fault Rectification and Grievance redressal.

It gives me immense pride to say that this exercise has helped DISCOMs get a better overview of the sector from consumers' perspectives and benchmarks. For this, I would like to appreciate the efforts made by all the key stakeholders, including officials of the Ministry, state distribution utilities, and REC Limited, in supporting the successful completion of this annual rating exercise.

(ALOK KUMAR)

सत्यमेव जयते

MESSAGE

विवेक कुमार देवांगन, भा.प्र.से.
अध्यक्ष एवं प्रबंध निदेशक,
आर ई सी लिमिटेड

Vivek Kumar Dewangan
IAS

Chairman and Managing Director
REC Limited

आर ई सी लिमिटेड

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CIN : L40101DL1969GOI005095

Since its inception in 1969, REC has emerged as a major financier and accelerator of power sector development in the country in all segments of Generation, Transmission, Distribution and Renewable energy. In 2022, REC has emerged as a 'Maharatna' CPSE, which will enable REC to play an important role in powering not only the power sector but also the infrastructure sector of the country and thereby propelling the overall national development.

During its long journey, REC has been instrumental in creating power infrastructure assets in the country and lighting up the lives of people across the country. Through DDUGJY and SAUBHAGYA, REC facilitated universal village and household electrification in the country through the electrification of 2.86 Cr. households. Despite power being a concurrent subject, there persist shortcomings across some vital performance parameters which continue to impact the overall financial position of the DISCOMs.

The Ministry of Power has made several interventions to improve financial and operational efficiencies of DISCOMs linked to reform measures, including the flagship scheme-Revamped Distribution Sector Scheme (RDSS), Liquidity Infusion Scheme (LIS); Additional Borrowing of 0.5% of GSDP to States linked to power sector reforms. Amidst all, RDSS aims to enhance consumer services by improving the quality, reliability, and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector. Further, the laid down Electricity (Rights of Consumers) Rules,2020 have already given impetus for improving the consumer services.

The DISCOMs performance in the Consumer Service Rating of Discoms report, indicates the feeble level of consumer centricity at the core of the DISCOMs business operations and they shall introspect on the ready-to-use actionable information in this report to make informed decisions. REC is pleased to release the second edition of the CSRD Report 2022. Similar to last year's report, this edition also captures key insights on the consumer service levels of 70 participating DISCOMs, comprising both State and private-owned. We believe the report will facilitate a spirit of healthy competition among DISCOMs by promoting inter-se learning of specific practices being followed.

I take this opportunity to express my appreciation for the efforts of the REC team and acknowledge the guidance and support provided by the Ministry of Power and distribution utilities in this rating exercise.

(VIVEK KUMAR DEWANGAN)

सत्यमेव जयते

MESSAGE

राहुल द्विवेदी, भा.प्र.से.
कार्यकारी निदेशक,
आर ई सी लिमिटेड

Rahul Dwivedi, IAS
Executive Director
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CIN : L40101DL1969GOI005095

I would like to express my sincere gratitude to Shri R. K. Singh, Hon'ble Minister of Power and New & Renewable Energy, for placing trust in REC Limited and providing the opportunity to undertake a comprehensive exercise in 2021 for assessing the DISCOMs performance level across various service parameters. Ministry of Power and REC Limited indeed foresee this to be an annual recurring exercise.

REC Limited is grateful to Shri Alok Kumar, IAS (Secretary Power, Govt. of India), Shri Piyush Singh, IAS (Joint Secretary, Distribution), and other ministry officials for their continued support and guidance. Their key inputs and strategic vision helped us steer through the critical junctures of the CSRD-2022 report formation.

I extend special thanks to Shri Vivek Kumar Dewangan, IAS (Chairman and Managing Director of REC Limited) for his esteemed guidance and mentorship throughout the Consumer Service Rating of DISCOMs (CSRD) exercise. His valuable insights and feedback aided in generating key insights in Power Distribution Sector, which would help DISCOMs improve upon key parameters to provide superior services to the end consumers. REC Limited is certain that CSRD-2022 will further enable DISCOMs to undertake necessary interventions to improve upon the service levels. For the interest of comparability REC Limited has retained the rating methodology as was used in the first edition of the CSRD-2021 report.

Last but not least, the untiring efforts of all personnel engaged in enabling this exercise are gratefully acknowledged.

(RAHUL DWIVEDI)

EXECUTIVE SUMMARY

Consumer Rules 2020:
"It is the right of consumer to have minimum standards of service for supply of electricity from the distribution licensee."

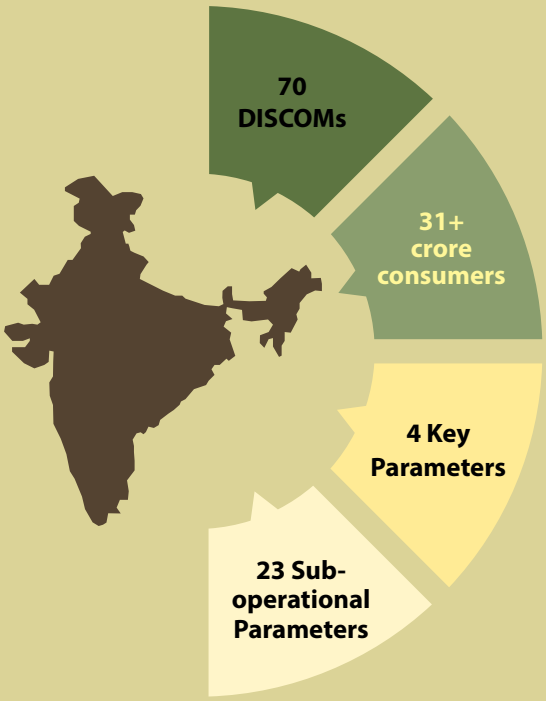
India's power sector has been one of the key beneficiaries of significant reforms over the last eight years. Government of India (GoI), through Ministry of Power (MoP), has made huge investments over the years through multiple schemes like APDRP, RAPDRP, DDUGJY, IPDS, SAUBHAGYA, UDAY, RDSS, etc. by central and state governments across the country to accord electricity access and attain improvement across key areas of state owned DISCOMs. There are 31+ crore consumers connected to electricity grid, mandate of serving whom rested upon the state and privately owned DISCOMs.

The offset of each of the reforms, schemes, interventions by central and state governments, brought about an incremental change across the sectors in terms of increased infrastructure density, consumer base, system complexities and service/ performance parameters. Despite, numerous interventions, some of the key service parameter like power quality/reliability remains an area of concern.

The Electricity (Rights of consumers) rules, 2020 introduced by MoP, is a turning point in the sector and thrusts upon bringing about a paradigm shift in bringing consumers to centre stage. The GoI has also launched the Revamped Distribution Sector Scheme (RDSS) in 2021 with an objective to improve the reliability and quality of power supply, operational efficiencies and financial stability of power distribution sector. The above stated objective thrusts upon the need to work with states for close monitoring of DISCOMs across critical operational parameters. The need for improved consumer service levels driven by enhanced consumer awareness, thrusts upon need to assess the service levels being accorded by DISCOMs. Accordingly, the first Consumer Service Rating of DISCOMs (CSRD) was conceptualized for Financial Year 2020-2021 to undertake rating exercise of DISCOMs based on various key service parameters which have direct or indirect impact on the existing as well as new potential consumers.

Though, numerous rating exercises for DISCOMs are undertaken with varying coverage of operational and financial parameters, this report specifically highlights the performance of DISCOMs across key performance parameters by gauging the strength of service levels and then rating DISCOMs on predefined scale(s).

The CSRD is one of the significant steps taken towards creating a path of accountability for the DISCOMs and awareness amongst consumers on multiple parameters that directly impacts their satisfaction levels. This periodical report aims to put forward a methodology to track the performance of the DISCOMs against identified parameters and inculcate an environment of healthy competition amongst each other.



The CSRD exercise was introduced with a goal of enabling the DISCOMs to introspect their performance across various service parameters, undertake a comparative performance assessment with peer DISCOMs and take corrective measures. This will also enlighten the power users on the levels of service parameters being accorded by their jurisdictional DISCOM. The outcome of this study will be a key decision-making driver in a state-owned utility led nearly monopolistic power sector of India. The study is structured with the following objectives:

- Identify optimum set of key services and performance parameters of DISCOMs.
- Track performance of DISCOMs across the identified aspects over a period of time.
- Develop a spirit of healthy competition amongst DISCOMs to enhance consumer experience.
- Enable the DISCOMs to identify the gap areas and share best practices.

The first edition of the CSRD report was well taken by the DISCOMs and widely acknowledged across the spectrum as a key exercise that gauges the service levels of DISCOMs across some pertinent operational parameters. Accordingly, the second edition of the CSRD report is being published covering the same key parameters, in continuation to the first edition of the report.

The second edition of CSRD covers 70 DISCOMs, out of which there was lack of participation from 12 DISCOMs. In total 58 DISCOMs were evaluated for the rating exercise comprising of 10 Private DISCOMs and 48 State-owned DISCOMs. Each DISCOM was assigned scores, based on which grades were assigned. The DISCOMs are graded and segmented across the three broad categories:

1. General
2. Urban
3. Special Category

CSRD-2022 framework majorly remains on the same lines as last year, with modifications in data collection. Instead of values of DISCOM as a whole, circle-wise data for most of the parameters has been collected from DISCOMs to ensure data authenticity. The exercise methodology consists of 4 broad parameters comprising of 23 grading metrics to capture a holistic view of DISCOMs' performance on varied aspects. On the basis of scores obtained, DISCOMs are assigned following grades- A+, A, B+, B, C+, C and D. All the data points have been vigorously validated for final grading.

Of the 58 DISCOMs being rated:

- No DISCOMs were able to secure the highest grade i.e. A+.
- 4 DISCOMs have secured the lowest least grade i.e., D.
- Maximum Nos of DISCOMs (16) have secured B grade.

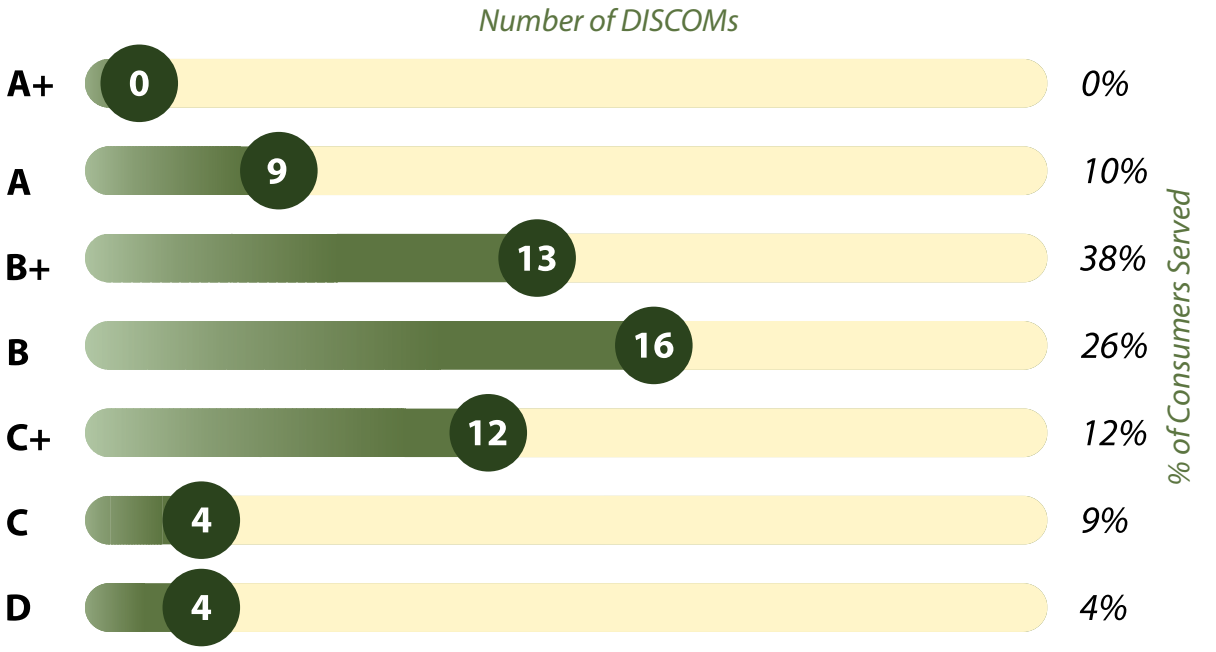
Since this rating exercise to assess the consumer services, it is equally important to identify the quantum of consumers susceptibility to an overall service level from their respective DISCOMs. Accordingly, it is observed that:

- 3.2 Crore (10.3%) consumers across 9 DISCOMs are getting services of A grade.
- 12 Crore (38.1%) consumers across 13 DISCOMs are getting services of B+ grade.
- 8.3 Crore (26.3%) consumers across 16 DISCOMs are getting services of B grade.
- 3.7 Crore (12%) consumers across 12 DISCOMs are getting services of C+ grade.
- 2.9 Crore (9%) consumers across 4 DISCOMs are getting services of C grade.
- 1.3 Crore (4.2%) consumers across 4 DISCOMs are getting services of D grade.

Cumulatively 20 Crore (64%) consumers covered across 29 DISCOMs, are getting services of B+ and B grade.

DISCOM RATINGS

The data/information was finalized for 58 DISCOMs cumulatively serving 31.4 Cr consumers and accordingly they were considered for marking/rating activity. While some DISCOMs have secured leading positions with higher grades, many have been identified with parameters to improve upon. The table below are grades secured by DISCOMs corresponding to each of the 4 key performance parameters.



General DISCOMs

S No	State	DISCOM	Operational Reliability (OR)	Connections and Other Services (CoS)	Metering, Billing and Collections (MBC)	Fault Rectification & Grievance Redressal (FRGR)	Aggregate Grades	CSRD-22 vs 21
1	Telangana	TSSPDCL	A+	B+	B+	A	A	→
2	Andhra Pradesh	APSPDCL	A+	B+	B	A+		→
3	Uttar Pradesh	NPCL	A	A+	A	A		↑
4	Andhra Pradesh	APEPDCL	A+	A	B	A		↑
5	Tamil Nadu	TANGEDCO	A+	A	C	A+	B+	↑
6	Madhya Pradesh	MPMKVVCL	A+	A	C+	A+		↑
7	Telangana	TSNPDCL	A+	C	B	B+		↑
8	Gujarat	UGVCL	A+	A+	D	A+		↑
9	Andhra Pradesh	APCPDCL	A	B+	C+	B+		↓
10	Punjab	PSPCL	A+	C+	C+	B+		↑
11	Kerala	KSEBL	A	A	C	A		→
12	Gujarat	MGVCL	A+	A+	D	A		↑
13	Maharashtra	MSEDCL	A	B+	C+	C+		→
14	Karnataka	BESCOM	B+	A	C+	A+		↑

S No	State	DISCOM	Operational Reliability (OR)	Connections and Other Services (CoS)	Metering, Billing and Collections (MBC)	Fault Rectification & Grievance Redressal (FRGR)	Aggregate Grades	CSRD-22 vs 21
15	Gujarat	DGVCL	A+	D	C	A+		→
16	West Bengal	WBSEDCL	A	A	C	B+		↓
17	Rajasthan	AVVNL	A	D	C+	A+		↓
18	Madhya Pradesh	MPPoKVVCL	B	A+	C+	A+		→
19	Goa	GED	A	A	D	A		↑
20	Chhattisgarh	CSPDCL	A+	A	D	A		↑
21	Haryana	UHBVNL	C+	A	B+	A+	B	↑
22	Rajasthan	JdVVNL	A	D	C	A+		→
23	Rajasthan	JVVNL	B	A+	C+	B+		↓
24	Karnataka	CESCOM	B	A+	C	A+		→
25	Haryana	DHBVNL	B	A	C+	A+		→
26	Madhya Pradesh	MPPsKVVCL	B	A+	C	A+		→
27	Gujarat	PGVCL	B+	A+	D	C+		↑
28	Odisha	TPCODL	A	B+	D	D		→
29	Uttar Pradesh	PsVVNL	C	A	C+	A		↑
30	Odisha	TPWODL	B+	A	D	A		→
31	Karnataka	MESCOM	B	A+	D	A	C+	↑
32	Odisha	TPSODL	B+	D	D	A		↑
33	Odisha	TPNODL	B	B	D	A+		→
34	Karnataka	GESCOM	C+	A	D	B+		→
35	Bihar	NBPDCL	B+	D	D	B		→
36	Uttar Pradesh	PuVVNL	C	A	C	B+		→
37	Karnataka	HESCOM	C	B+	D	B	C	↑
38	Uttar Pradesh	MVVNL	D	C+	C	A+		↑
39	Uttar Pradesh	DVVNL	D	A	C	A+		↑
40	Bihar	SBPDCL	C	D	D	B	D	↓
41	Jharkhand	JBVNL	C	B	D	D		→

Urban DISCOMs

S No	State	DISCOM	Operational Reliability (OR)	Connections and Other Services (CoS)	Metering, Billing and Collections (MBC)	Fault Rectification & Grievance Redressal (FRGR)	Aggregate Grades	CSRD-22 vs 21
1	Delhi	BYPL	A	A+	A	A+		↓
2	Delhi	BRPL	A	A	A	A+		↓
3	Uttar Pradesh	KESCo	A	A	A	B+	A	→
4	Delhi	TPDDL	A	A	B+	A+		→
5	Maharashtra	AEML	A	A	B	A+		↑
6	Maharashtra	TPCL	A	A	C+	A	B+	→
7	Chandigarh	CED	A+	B	D	D	B	↑
8	Maharashtra	BEST	A	D	C	D	C+	→
9	Puducherry	PED	B+	B	D	D		→

Special Category DISCOMs

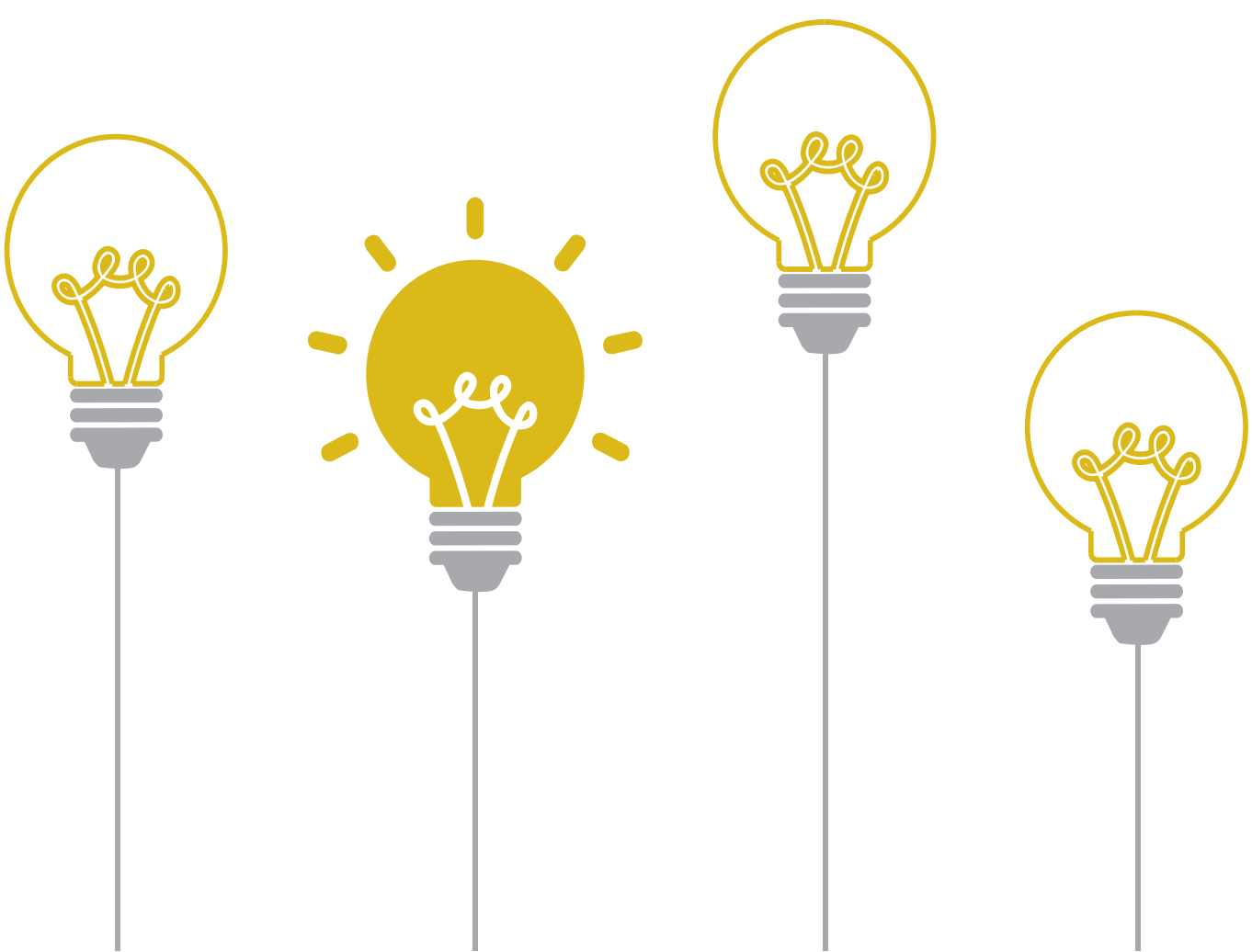
S No	State	DISCOM	Operational Reliability (OR)	Connections and Other Services (CoS)	Metering, Billing and Collections (MBC)	Fault Rectification & Grievance Redressal (FRGR)	Aggregate Grades	CSRD-22 vs 21
1	Manipur	MSPDCL	B+	A+	B+	B+	B+	↑
2	Uttarakhand	UPCL	A	A+	C+	A		→
3	Tripura	TSECL	A	B	D	B+	B	↑
4	Assam	APDCL	B+	D	C+	B		↑
5	Himachal Pradesh	HPSEBL	C+	B+	C	B	C+	↓
6	Ladakh	LPDD	B+	B	D	D		→
7	Jammu & Kashmir	JPDCL	D	B+	D	B+	D	→
8	Jammu & Kashmir	KPDCL	D	B+	D	D		→

Note: Serial No.s across the tables above do not represent the overall ranking among the graded DISCOMs

↑ Grades higher than CSRD - 2021 | → Same grades as CSRD - 2021 | ↓ Grades lower than CSRD - 2021

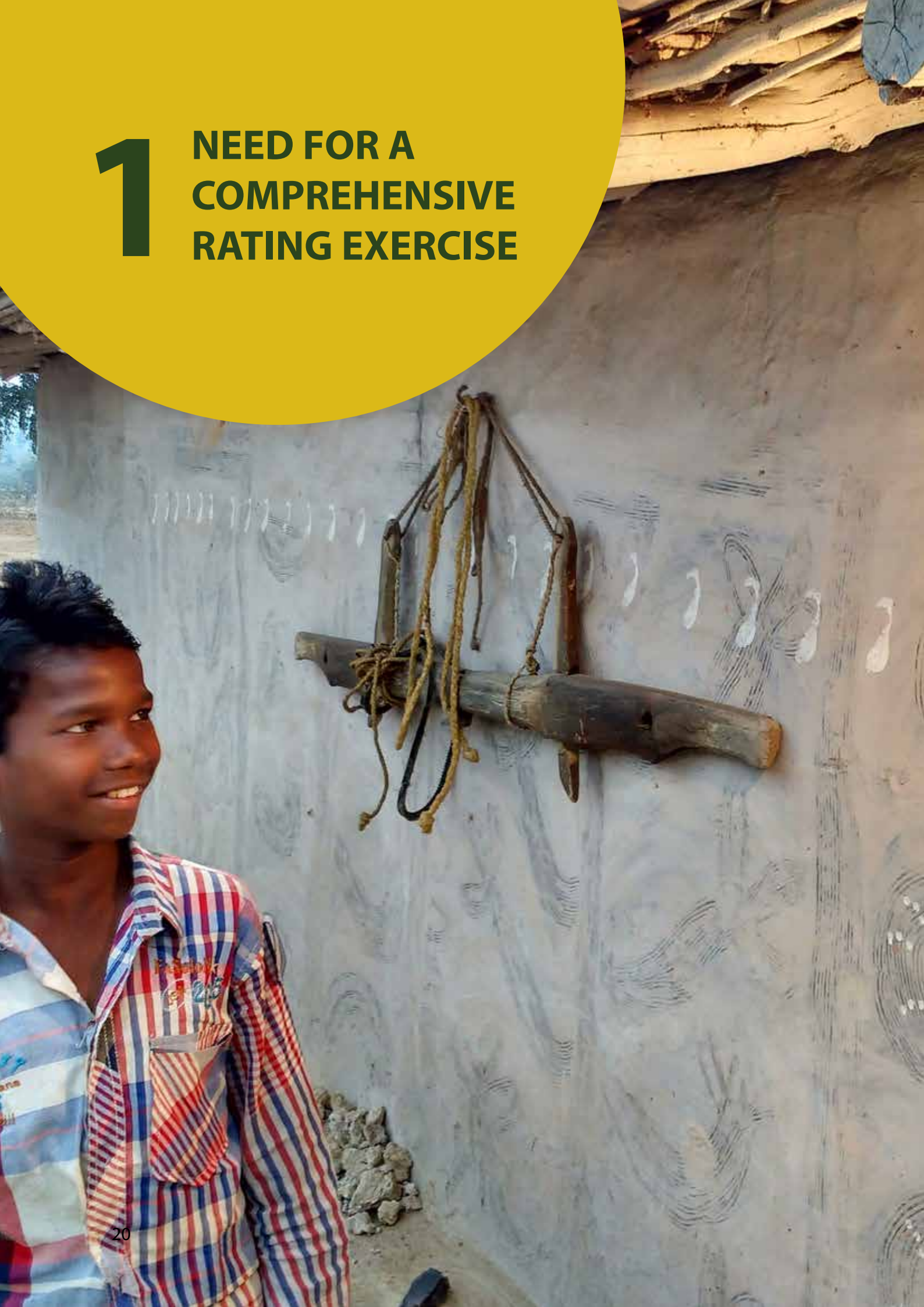
Excluded DISCOMs

S No	State	DISCOM	Reason of Exclusion
1	Andaman and Nicobar Islands	EDAN	Data Insufficiency
2	Lakshadweep	LED	Data Insufficiency
3	Meghalaya	MeECL	Data Insufficiency
4	Mizoram	MPED	Data Insufficiency
5	Nagaland	NPD	Data Insufficiency
6	Sikkim	SPD	Data Insufficiency
7	Arunachal Pradesh	APDA	Data Insufficiency
8	Dadra & Nagar Haveli	DNHPDCL	Data Insufficiency
9	Gujarat	TPL Dahej	Lack of Participation
10	Gujarat	TPL Ahmedabad	Lack of Participation
11	Gujarat	TPL Surat	Lack of Participation
12	Kolkata	CESC	Lack of Participation



CONTENTS

1 NEED FOR A COMPREHENSIVE RATING EXERCISE



Over the years, DISCOMs have been facing some of the perennial issues like theft, inefficient operations, poor financial conditions, inadequate system maintenance etc. GoI has introduced a slew of reforms/ schemes with an intent to plug these issues and bring about a change in the power distribution sector. These have brought about a transformational change, but the larger objective of ensuring superior services to all the electricity users remains unattended.

The mainstreaming of the power supply to the consumers and the peer performance, enforces DISCOMs to introspect the key services they accord to the consumers. Moreover, this becomes vital as the power system progresses with increased system complexities. Some of the key drivers from DISCOM perspective, that give rise to need for carrying out benchmarking/rating exercises are:

1. Increasing Nos of consumers connected to electricity grid
2. Adherence to Electricity Consumer Rules 2020
3. Penal actions/ provisions against non-compliance to performance standards
4. Deteriorating financial positions

The increasing focus on the consumer services, throw a light on need for rating the DISCOMs. Power Finance Corporation (PFC Limited) has been carrying out yearly integrated rating exercises rating DISCOMs on some key operational parameters like AT&C losses, Power Purchase Cost, etc. Also, there are some key independent studies, research done in past to assess the performance of DISCOMs on some select parameters.

Some of these studies have assessed the state of grievance redressal and consumer protection across power sector for various states and power sector utilities. Also, some of the state DISCOMs have conducted study on the effectiveness of consumer grievance redressal mechanism and compliance of standards of performance.

However, the larger aspect of making the DISCOMs realize their performances w.r.t to peers, delving into micro level performance parameters and achieving improved service levels for electricity users remains unaddressed. Accordingly, there is an increasing need to institutionalise a rating/performance assessment exercise considering the micro level consumer service aspects.

MoP had entrusted REC Limited as designated agency in 2021 to undertake a comprehensive study to analyse the performance of DISCOMs across the key operational parameters that would subsequently impact the quality of services extended to consumers. The Aggregate Technical and Commercial (AT&C) losses of DISCOMs fell to around 17 per cent in the FY-2022, compared to about 22 per cent in the FY-2021, indicating a significant reduction in the losses. It becomes further relevant to assess the headway in terms of service levels via some key operational parameter.

The second edition of the report (CSRD-22) is also on the similar lines which involves consolidation of information across all the identified parameters for an evaluation period of FY 2021-22. Thus, helping the DISCMOs to identify the existing gaps and improve upon their performance and service quality across the areas of delivery.

The annual ranking report shall be available to the public, creating pathways for greater accountability in the provision of electricity across states. However, an important aspect to be answered objectively is that what is need of Consumer Service Rating of DISCOM (CSRD) report.

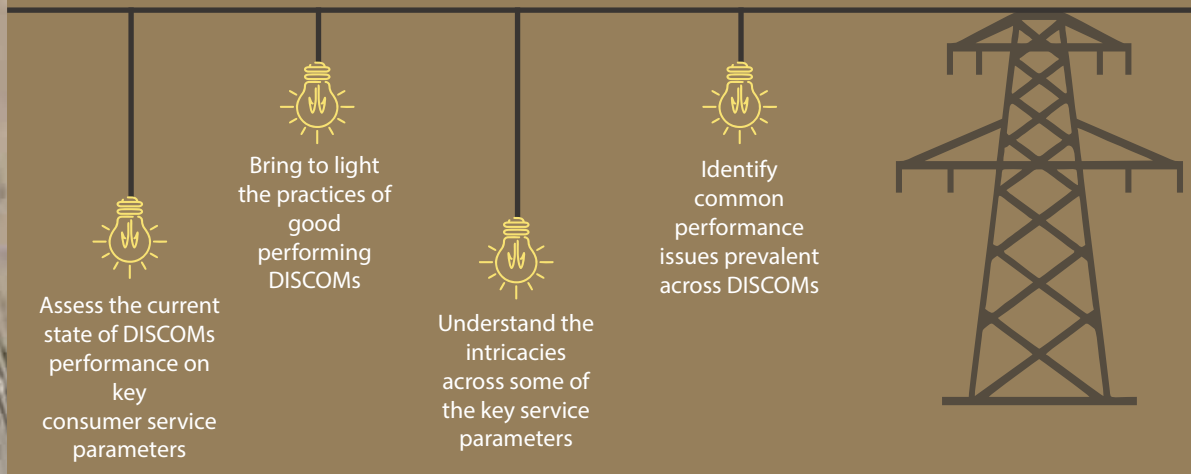


Figure 2 : Key Aspects of CSRD exercise

CSRD at a Glance

Task Force Creation & Industry Experts Involvement

Comprehensive Framework

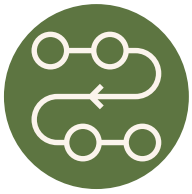
4 Key Parameters

23 Sub Parameters

750+

Data Points per DISCOM

OR | CoS | MBC | FRGR



7 step approach

4 Stages of Verification

19

ROs Involved

70
DISCOMs approached

180
Days exercise

31+ Crore
Consumers

30+ States and Union Territories


33KV
PT

2 Rating of Utilities

This chapter broadly provides an overview of DISCOMs' performance on different service parameters. By implementing predetermined methodologies, an analysis was conducted on the data to evaluate the DISCOMs' performance, resulting in a quantifiable score. These scores were then converted into grades using a predefined grading system, which is used to generate a comprehensive grade table.

2.1 DISCOMS PERFORMANCE – OVERVIEW

In total 70 DISCOMs were approached, out of which there was a lack of participation from 4 DISCOMs and 8 were excluded due to inadequate data. This left a total of 58 DISCOMs that were assessed for the rating exercise. As previously mentioned, the data and information needed were gathered for these 58 DISCOMs, which collectively serve 31.4 crore consumers, and were therefore included in the marking and rating process.

National Average (Score out of 100)
65.06

Participating DISCOMs :
58

DISCOMs above National Average
31

Grade Spread of DISCOMs

A+
0 DISCOMs

NIL

A
9 DISCOMs

Andhra Pradesh : APEPDCL | APSPDCL
Delhi : BRPL | BYPL | TPDDL
Maharashtra : AEML
Telangana : TSSPDCL
Uttar Pradesh : KESCo | NPCL

B+
13 DISCOMs

Andhra Pradesh : APCPDCL
Gujarat : MGVCL | UGVCL
Karnataka : BESCOM
Kerala : KSEBL
Madhya Pradesh : MPMKVVCL
Maharashtra : MSEPDCL | TPCL
Manipur : MSPDCL
Punjab : PSPCL
Tamil Nadu : TANGEDCO
Telangana : TSNPDCL
Uttarakhand : UPCL

B
16 DISCOMs

Assam : APDCL
Chandigarh : CED
Chhattisgarh : CSPDCL
Goa : GED
Gujarat : DGVCL | PGVCL
Haryana : DHBVNL | UHBVNL
Karnataka : CESCOM
Madhya Pradesh : MPPoKVVCL | MPPsKVVCL
Rajasthan : AVVNL | JdVVNL | JVVNL
Tripura : TSECL
West Bengal : WBSEDCL

C+
12 DISCOMs

Bihar : NBPDCL
Himachal Pradesh : HPSEBL
Karnataka : GESCOM | MESCOM
Ladakh : LPDD
Maharashtra : BEST
Odisha : TPCODL | TPNODL | TPSODL | TPWODL
Puducherry : PED
Uttar Pradesh : PsVVNL

C
4 DISCOMs

Karnataka : HESCOM
Uttar Pradesh : DVVNL | MVVNL PuVVNL

D
4 DISCOMs

Bihar : SBPDCL
Jammu & Kashmir : JPDCL | KPDCL
Jharkhand : JBVNL

- TPL (Dahej), TPL (Surat), TPL (Ahmedabad), APDA (Arunachal Pradesh), MeECL (Meghalaya), DNHPDCL (Dadra & Nagar Haveli), MPED (Mizoram), NPD (Nagaland), CESC (West Bengal), LED (Lakshadweep), EDAN (Andaman & Nicobar Islands), SPD (Sikkim) either didn't participate or submit sufficient data to be part of the ratings.
- Out of the 58 DISCOMs, 8 are Special Category DISCOMs from 7 states and union territories. While 9 are Pure-Urban DISCOMs from 6 states and union territories.
- 9 DISCOMs scored A grades – 5 privately owned (BRPL, BYPL, AEML, TPDDL, and NPCL) and 4 state-owned (APEPDCL, APSPDCL, TSSPDCL, and KESCo).
- Maximum concentration of DISCOMs - 41 Nos (70%) across B+, B, and C+ grade .

2.1 DISCOMS PERFORMANCE – OVERVIEW

Evaluating the performance of DISCOMs from the standpoint of ownership, demographics, and geography is crucial as it allows for the identification of key factors that influence their performance.

DISCOM ownership perspective								
Grades	A+	A	B+	B	C+	C	**D**	Total
Private DISCOMs	0	5	1	0	4	0	**0**	10
State Owned DISCOMs	0	4	12	16	8	4	**4**	48
Total	**0**	**9**	**13**	**16**	**12**	**4**	**4**	**58**

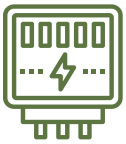
- Majority of state owned DISCOMs (36 of 48) have scored B+, B and C+ grades.

DISCOM Demography Perspective								
Grades	A+	A	B+	B	C+	C	D	Total
100% Urban DISCOMs	0	5	1	1	2	0	0	9
Urban & Rural mix DISCOMs	0	4	12	15	10	4	4	49
Total	**0**	**9**	**13**	**16**	**12**	**4**	**4**	**58**

DISCOM Terrain Status Perspective								
Grades	A+	A	B+	B	C+	C	D	Total
General DISCOMs	0	9	11	14	10	4	2	50
Special category DISCOMs	0	0	2	2	2	0	2	8
Total	**0**	**9**	**13**	**16**	**12**	**4**	**4**	**58**

2.1.2 Sub-parameters coverage across broad parameters

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

Operational Reliability	Connections and Other Services	Metering, Billing & Collections	Fault Rectification and Grievance Redressal
			
Number of Sub parameters covered			
Weightage			
45 Marks	**10 Mark**	**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 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. Prosumers	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 CGRF's per 1 Lakh consumersw
		7. % of prepaid consumers	
		8. No. of tariff categories	
		9. % of consumers paying digitally	

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 and inefficient 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 Operations and Maintenance (O&M).

The key sub-parameters 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-22 corresponding to each sub-parameter has been collected for analysis.

2.2.1 Analysis of sub-parameters

2.2.1 (a) Hours of Supply (HoS) – Urban

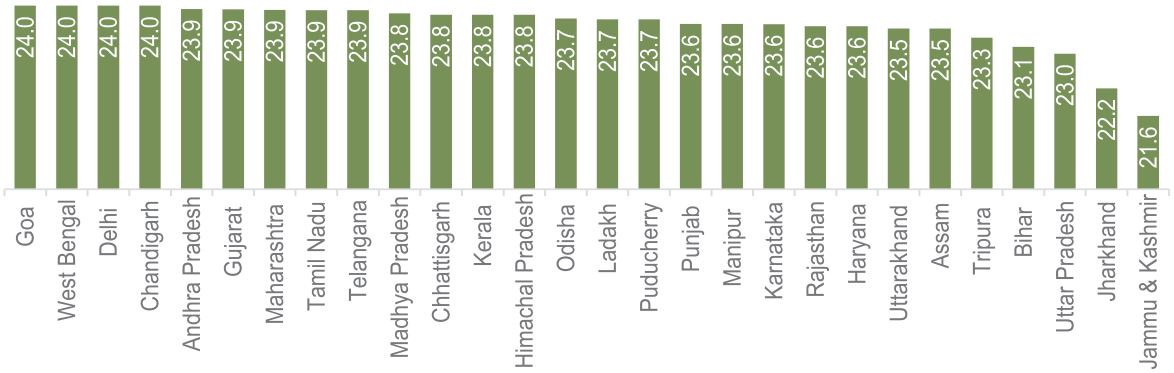


Figure 1: State-wise Hours of Supply (Urban)

- Leading DISCOMs (24 HoS) are APCPDCL, CED, GED, BRPL, BYPL, MGVCL, BEST, TPCODL, TPDDL, AEML, and WBSEDL.
- Eight out of the nine Urban DISCOMs have HoS greater than national average, only KESCO has HoS slightly below national average.
- DISCOMs above national average (23.57 hours)- 41 DISCOMs across 22 states/UTs.

HoS – Urban (DISCOM-wise)

National Maximum:
24 hours

National Average:
23.57 hours

National Minimum:
20.7 hours

2.2.1 (b) Hours of Supply (HoS) – Rural

- Leading DISCOMs (more than 23.5 Hrs HoS) are Gujarat (UGVCL & DGVCL), Madhya Pradesh (MPMKVVCL) and Andhra Pradesh (APSPDCL & APEPDCL).
- DISCOMs below national average HoS – 22 DISCOMs
- DISCOM above national average HoS- 28 DISCOMs.
- Private DISCOMs below National average – Only 2 DISCOM Uttar Pradesh (NPCL) and Odisha (TPNODL).

HoS – Rural (DISCOM-wise)

National Maximum:
23.9 hours

National Average:
20.44 hours

National Minimum:
15.9 hours

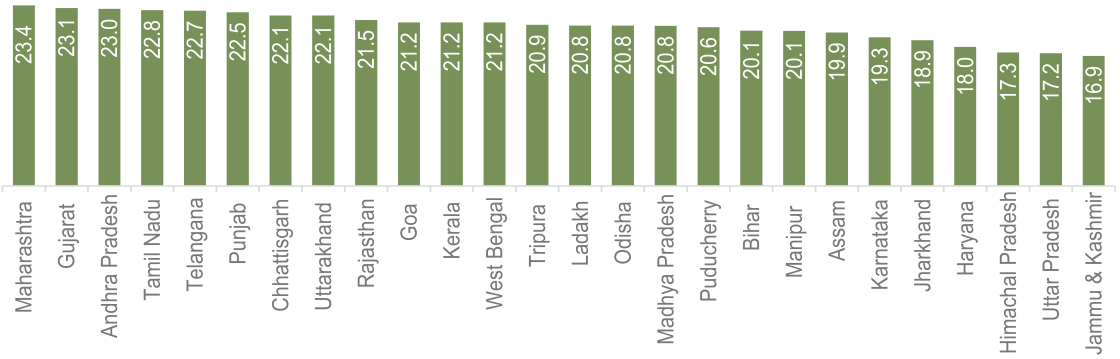


Figure 2: State-wise Hours of Supply (Rural)

2.2.1 (c) Interruption Index (Rural)

- Leading DISCOMs (less than 50 Interruptions) are Gujarat (MGVCL & UGVCL), Tamil Nadu (TANGEDCO) TPCODL (Odisha) and MSEDCL (Maharashtra).
- DISCOMs below national average Interruption Index – 31 DISCOMs.
- DISCOM above national average Interruption Index - 18 DISCOMs.
- There are no Private DISCOMs above National average Interruption Index.

Interruption Index- Rural (DISCOM-wise)

National Maximum:
898

National Average:
308

National Minimum:
1.2

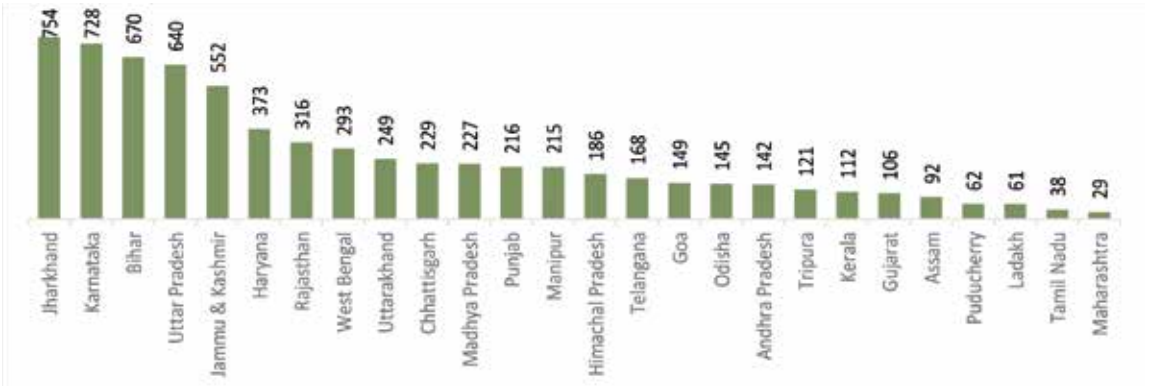


Figure 3: State-wise Interruptions per year in a feeder (Rural)

2.2.1 (d) Interruption Index (Urban)

- Leading DISCOMs (less than 50 Interruptions) are 23 DISCOMs across 12 states.
- DISCOMs below national average Interruption Index – 46 DISCOMs
- DISCOM above national average Interruption Index - 10 DISCOM.
- While 2 DISCOM: APDCL(Assam) and TPNODL (Odisha) didn't submit sufficient data or evidence on this parameter.
- Private DISCOMs above National average Interruption Index- 1 DISCOM: TPWODL (Odisha).

Interruption Index- Urban (DISCOM-wise)

National Maximum: 1113

National Average: 227

National Minimum: 0.2

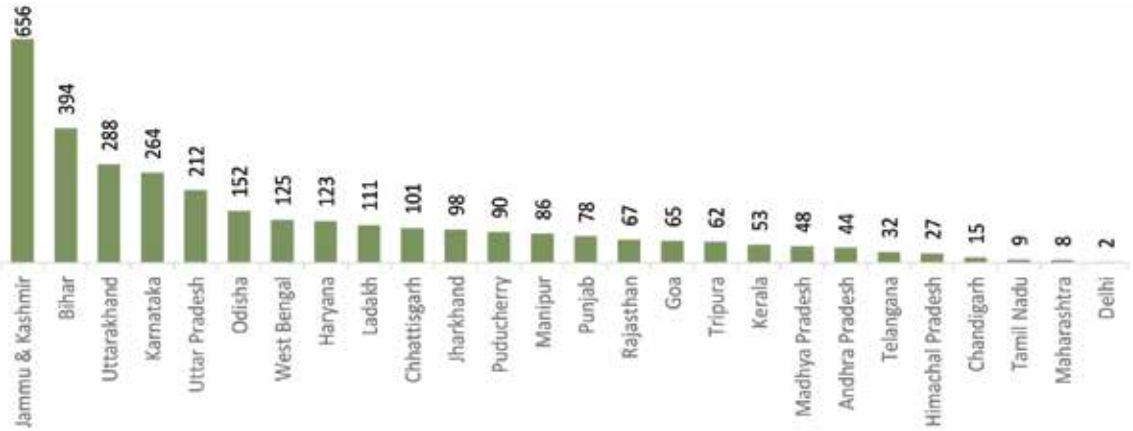


Figure 4: State-wise Interruptions per year in a feeder (Urban)

2.2.1 (c) Distribution Transformer (DT) Failure rate

- Leading DISCOMs in DT failure (less than 1% in FY-21) are BRPL, BYPL, AEML, TPCL, and TPDDL.
- Leaders in DT failure among Special category states; 1.16% - MSPDCL.
- Low DT failure rates among Special category states (less than 5%) – 3 DISCOMs; MSPDCL, HPSEBL and APDCL
- High DT failure rates – JPDCL (27.85%) and KPDCL (28.07%).

DT Failure Rate (DISCOM-wise)

National Maximum: 28.07%

National Average: 7.09%

National Minimum: 0.184%

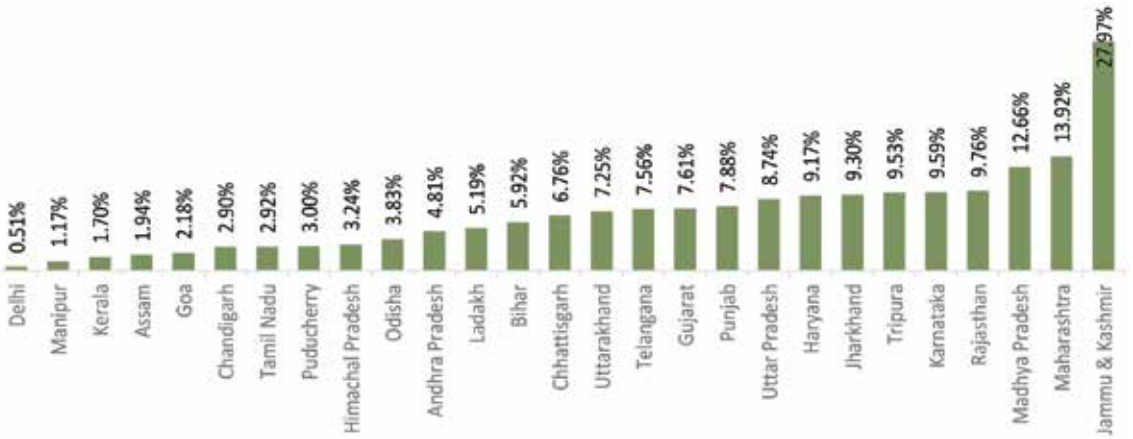


Figure 5: State-wise DT Failure Rate (%)

2.3 Connections and other Services

This parameter measures the time, cost, convenience, and effort of the consumer at which a connection is availed 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 up to 150kW vis-à-vis industry best practices.

2.3.1 Analysis of sub-parameters

2.3.1 (a) 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, issuance of no-dues certificate, provision of payment of claims, feasibility of rooftop solar and connection of rooftop solar after installation (Annexure-F)
- DISCOMs lagging in aligning to industry best practices are GESCOM, SBPDCL, JBVNL, CED, TPNODL, TPDDL and BEST. These DISCOMs align with 4 or less than 4 out of the 7 regulations assessed for the ratings.

2.3.1 (b) Presence of predetermined demand charges (up to 150 kW)

- All the DISCOMs have complied to notification of predetermined demand charges for connections up to 150 kW except 5 DISCOMs: AVVNL, TPNODL, JBVNL, SBPDCL and TPCODL.

2.3.1 (c) Applications processed through online portal

- 100% online application processing - 38 DISCOMs
- DISCOMs adhering to hybrid model (manual and online mode) – 13 DISCOMs.
- Non-Compliance to online application processing – CED, PED TSECL, JPDCL.
- While 3 DISCOMs- GESCOM, PuVVNL and LPDD didn't submit sufficient data or evidence on this parameter.

Applicaton processed through online portal

National Maximum: **100%**

National Average: **82.5%**

National Minimum: **0%**

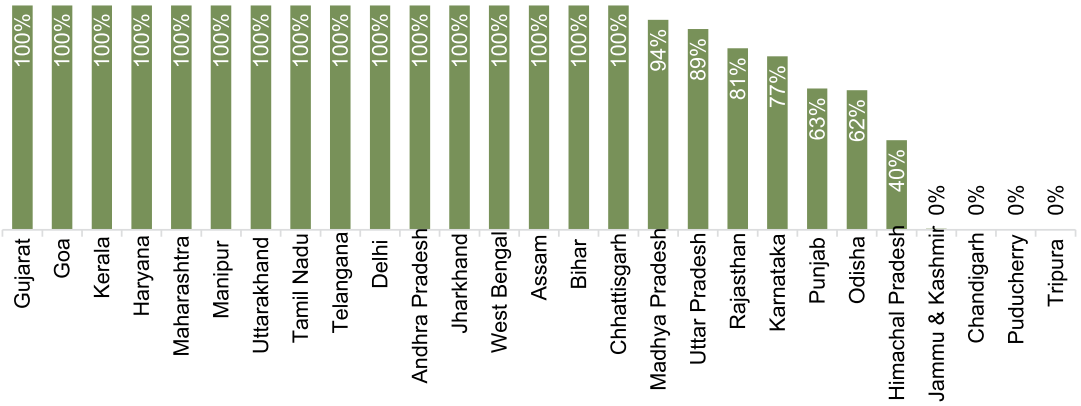


Figure 7: Percentage of Applications processed through online portal (State-wise)

2.3.1 (d) Average deviation from SOP in time taken for providing connection

- 41 DISCOMs are adhering to state SOP timelines for releasing New Connection.
- High deviation w.r.t. SOP timelines are 5 DISCOMs MVVNL, TSSPDCL, MSEDCL, DHBVNL, and DGVCL.

2.3.1 (e) Prosumers (under net metering / gross metering)

States / National Level	Total Prosumers (Nos)
Gujarat	313441
Madhya Pradesh	137753
Maharashtra	56122
Rest of India	214702
Total	**722018**

- Leading DISCOMs with prosumers (>1000 /lakh consumers - 6 DISCOM: PGVCL, MGVCL, DGVCL, UGVCL, MPPoKVVCL and CED).
- DISCOM with maximum prosumers – MGVCL (2577 /lakh consumers), ~9 times the national average (282/ lakh consumers).

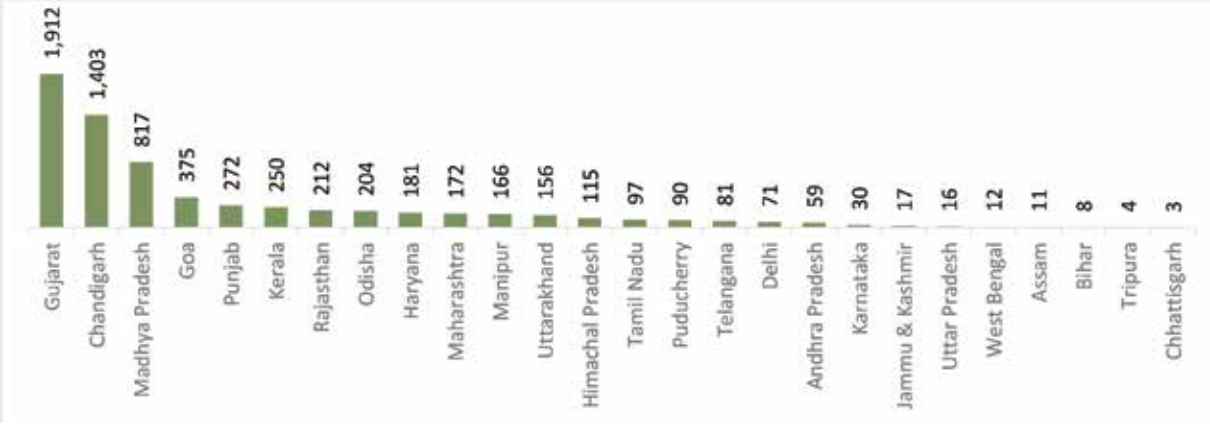


Figure 8: State-wise Prosumers under net metering (per lakh consumers)

2.4 Metering, Billing and Collections (MBC)

This parameter focuses on three critical streams of DISCOM operations – collecting meter data, generating / issue of bills and issuance, and revenue collection process. Herein, DISCOMs are assessed across nine sub-parameters covering some of the crucial aspects such as time taken to replace defective meters, modes of meter reading, billing frequency, quantum of bills generated, consumer engagement, RE and technology integration, and tariff categories.

2.4.1 Analysis of sub-parameters

2.4.1 (a) Average time taken for replacement of defective meters

- Leading DISCOMs– MPMKVVCL replacing within 24 Hrs in urban areas and 3 other DISCOMs namely TPSODL, MPMKVVCL, and NPCL replace within 3 days in rural areas.

2.4.1 (b) Bills generated based on actual meter reading

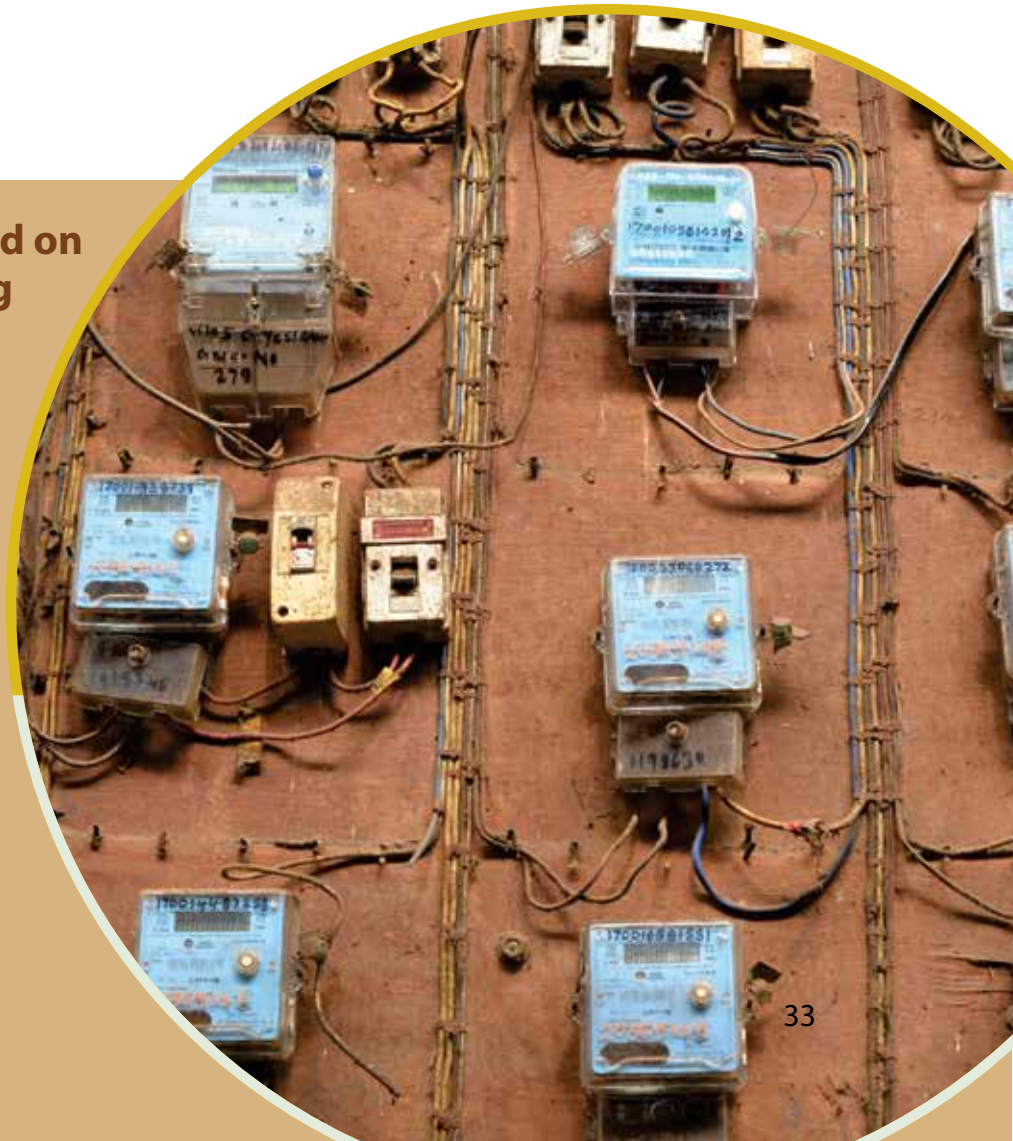
- Leading DISCOMs (100% of total bills generated) – 11 DISCOMs across 9 states/UTs, LPDD, TPDDL, TPCL, DGVCL, APSPDCL, MGVCL, BESCOM, HESCOM, KESCo, HPSEBL and TPCODL.
- DISCOMs exceeding National average – 33 with actual bill generation > 86.03 %
- Special category states having proportion of bills generated on actual meter reading above the national average - 3 of 9 DISCOM: LPDD, HPSEBL, and UPCL.
- Urban DISCOMs with below average % of bills generated on actual reading- 2 DISCOMs: BRPL and PED.

Bills generated based on actual meter reading

National Maximum:
100%

National Average:
86.03%

National Minimum:
29%



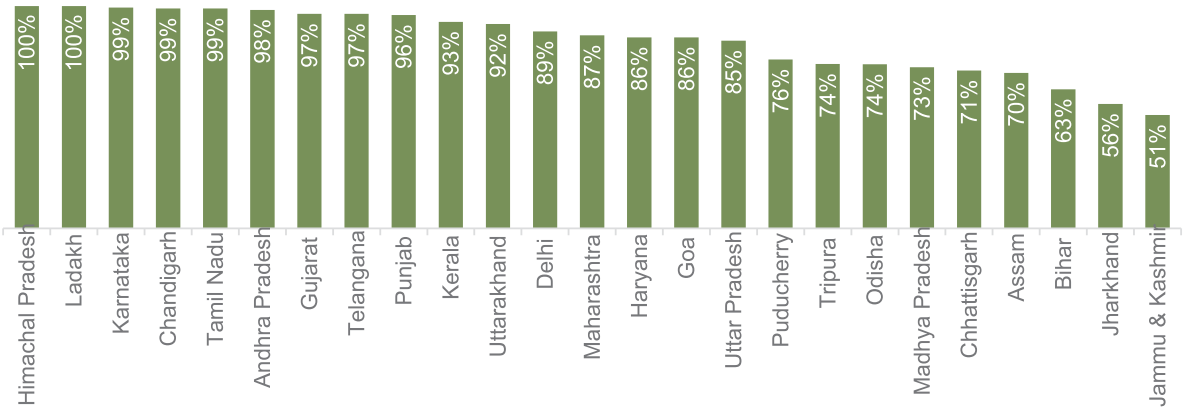


Figure 9: Bills generated on the basis of actual meter reading (State-wise)

2.4.1 (c) Bills generated on the basis of non-manual meter reading

- Leading DISCOMs having proportion of bill generation based on non-manual meter reading of 100% – 4 DISCOM:
  BYPL, BRPL, KESCO and TPDDL
- DISCOMs having 0% non-manual meter reading mode – 19 DISCOMs across 15 States and UTs.
- While 3 DISCOMs- MESCOM, UHBVNL, and GESCOM didn't submit sufficient data or evidence on this parameter.

Bills generated on non-manual meter reading

National Maximum:
100%

National Average:
24.07%

National Minimum:
0%

Figure 10: Percentage of Bills generated on the basis of non-manual meter reading

2.4.1 (d) Billing frequency for domestic category consumers as per regulations

- Billing frequency for domestic category consumers is monthly in 44 DISCOM, bi-monthly in 13 DISCOM, and quarterly in 1 DISCOM.

2.4.1 (e) Bills generated for domestic consumers in a year

- DISCOMs with lower Bills generated for domestic consumers in a year (>80%) – 3 DISCOM: NBPDCL (Bihar), JVVNL (Rajasthan) and JBVNL (Jharkhand).
- While 2 DISCOM (GESCOM and PSPCL) didn't submit sufficient data or evidence on this parameter.

2.4.1 (f) Consumers receiving billing updates on mobile

- Leading DISCOMs facilitating billing alerts to consumers (100%) – 5 DISCOMs across 4 states/UTs: TPDDL, PsVVNL, PuVVNL, MPPoKVVCL, and TANGEDCO.
- DISCOMs facilitating billing alerts to consumers with % more than national average (73.9%) - 36 DISCOMs across 15 states.

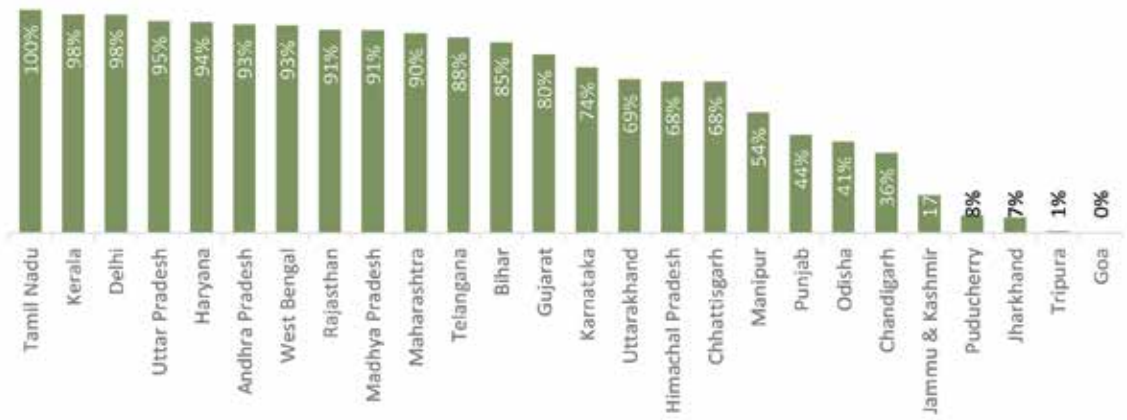


Figure 11: Percentage of Consumers receiving billing updates on mobile

2.4.1. (g) Prepaid consumers

- Leading DISCOMs with high prepaid consumers (>10%) – 3 DISCOMs; MSPDCL (74.69%), TSECL (15.47%) and KESCo (10.45 %).
- DISCOMs with lower prepaid consumers (<5%) – 42 DISCOM across 21 states/UTs
- While 11 DISCOMS didn't submit sufficient data or evidence on this parameter.

Prepaid consumers

National Maximum:
74.7%

National Average:
2.78%

National Minimum:
0%

2.4.1 (h) Number of tariff categories

- DISCOMs with Number of tariff categories less than national average (61.75) – 38 DISCOMs across 22 states/UTs.
- While 2 DISCOM (TPNODL and GESCOM) didn't submit sufficient data or evidence on this parameter.

2.4.1 (j) Number of consumers paying digitally

- Leading DISCOMs (>80% bills paid via online mode) – 4 DISCOMs; KESCo, NPCL, BRPL and BYPL
- DISCOMs with proportion of consumers paying digitally greater than national average (32.85%) – 25 DISCOMs across 16 states/UTs

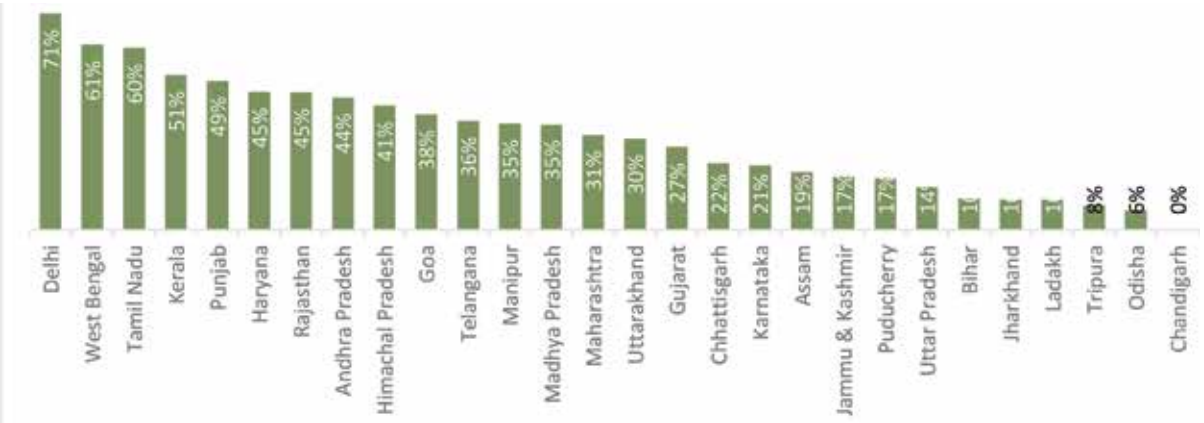


Figure 12: Percentage of consumers paying digitally

2.5 Fault Rectification and Grievance Redressal (FRGR)

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

2.5.1 Analysis of sub-parameters

2.5.1 (a) 24x7 customer care call centre

- All the DISCOMs have established 24X7 Customer call centre for registering/resolution of consumer grievances except 8 DISCOMs, namely BEST, CED, LPDD, PGVCL, TPNODL and UHBVNL.

2.5.1 (b) Average call waiting time (ACWT) at the call centre

- Leading DISCOMs with ACWT < 5 seconds – 5 DISCOMs across 4 states/UTs: TPCL, MPPoKVVCL, MPPsKVVCL, UPCL, and CSPDCL.
- DISCOMs with ACWT >100 seconds - 2 DISCOM: KPDCL and APDCL.
- DISCOMs with ACWT > national average (27.3 seconds) - 15 DISCOMs across 12 states/UTs .

2.5.1(c) Consumers receiving outage related updates on mobile

- Leading DISCOMs with 100% compliance to outage alerts on mobile are 7 DISCOMs, namely MPPoKVVCL, PsVVVNL, TPDDL, CESCOM, TANGEDCO, PuVVNL, and CED.
- DISCOMs with no outage alerts to consumers - 5 DISCOMs across 4 states/UTs: GESCOM, TSECL, JPDCL, JBVNL, and KPDCL.
- While seven DISCOMs- TPNODL, MESCOM, PSPCL, HPSEBL, APDCL, JVVNL, and LPDD didn't submit sufficient data or evidence on this parameter.

2.5.1 (d) Deviation from specified time for complaint resolution

- Out of the 58 DISCOM, 36 DISCOM on average resolve complaints within specified timeline.
- 12 DISCOMs take more than specified time on average to resolve the complaints.

- DISCOMs with higher deviation from the specified time for complaint resolution than the national average (<18.5%) – 3 DISCOMs: APDCL (Assam), HESCOM (Karnataka), and MSEDCL (Maharashtra).
- While 10 DISCOMs didn't submit sufficient data or evidence on this parameter.

2.5.1 (e) Grievance Redressal Mechanism (Two Tier)

- DISCOMs with Two-Tier Grievance Redressal Mechanism (at circle as well as corporate level) – 56 DISCOMs.
- DISCOMs with no presence of Two-Tier Grievance Redressal Mechanism – 2 DISCOMs : LPDD and TPNODL.

2.5.1 (f) Number of CGRFs per 1 Lakh consumers

- Leading DISCOMs with more than 100 established CGRFs per lakh consumers – 2 DISCOMs; UGVCL and MGVCL.
- DISCOMs with no established CGRF – 1 DISCOM: LPDD.
- While 2 DISCOMs- PSPCL, and TPNODL didn't submit sufficient data or evidence on this parameter.

3 Key Findings

This CSRD exercise brings out the varying performance of DISCOMs across various key and sub-parameters. This will enable establishing a common platform for the DISCOMs to assess their performances and also assess peer performance.

3.1 DISCOMs and Consumer spread across the grade scale

Further analyzing the performance aspects of the states/DISCOMs w.r.t the key performance parameters to bring out actionable insights. Summarising the spread of 58 DISCOMs, across the grade scale indicates the varying performance of the DISCOMs at an overall level.

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	0	9	13	16	12	4	4
Consumer Spread	0%	10.3%	38.1%	26.3%	11.9%	9.1%	4.2%

- While no DISCOM has secured the highest grade i.e A+ this year, 9 DISCOMs have secured A grade.
- Maximum Nos of DISCOMs (16) have secured the B grade and 4 DISCOMs have secured the lowest i.e D grade.

3.2 Service to end consumer

It is vital to assess the quantum of consumers spread across these DISCOMs to assess the level of parameter-specific services being accorded to them. Overall, 31.4 crore electricity consumers being served by the 58 DISCOMs are considered for grading.

3.2.1 Operational Reliability (OR)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	12	18	9	7	3	5	4
Consumer Spread	29.0%	30.6%	12.6%	9.3%	3.0%	10.3%	5.1%

- Out of 31.4 crore consumers, 9.11 crore (29%) are served by 12 DISCOMs with "A+" grade across operational reliability parameters and 1.61 crores (5%) are experiencing "D" grade operational reliability services.

- Considering A+/A graded DISCOMs (for ease of interpretation) as the benchmark performances it may be inferred that 59.6% of the overall consumers received superior Operational Reliability services.
- On the contrary, DISCOMs graded in Operational Reliability parameters, cumulatively serving 15.5% of the overall consumers, indicating a significant consumer base receiving significantly inferior Operational Reliability services.

3.2.2 Connections and Other Services (CoS)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	12	20	9	6	2	1	8
Consumer Spread	13.0%	44.2%	19.7%	2.7%	5.5%	1.8%	13.0%

- Out of 31.4 crore consumers, 4.09 crores (13%) are served by 12 DISCOM with "A+" grade and 4.07 crore (13%) are experiencing "D" grade Services under Connections and Other Services parameter.
- Considering A+/A graded DISCOMs (for ease of interpretation) as the benchmark performances it may be inferred that 57.2% of the overall consumers received superior CoS.
- DISCOMs graded C/D under CoS, cumulatively serve 14.7% of the overall consumers, indicating a significant consumer base receiving relatively inferior CoS services.

3.2.3 Metering, Billing, and Collections (MBC)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	0	4	4	4	13	12	21
Consumer Spread	0%	1.7%	4.8%	6.8%	30.3%	35.2%	21.1%

- Under this parameter 0.53 crore consumer (1.7%) spread across 4 DISCOMs have experienced the "A" grade services.
- About 11.05 crore consumers (35%) and 6.61 crore consumer (21%) spread across 12 and 21 DISCOMs with "C" and "D" grade services respectively under MBC.
- A cumulative 56% of consumers are experiencing relatively inferior services under this parameter.

3.2.4 Fault Rectification and Grievance Redressal (FRGR)

Grade Scale	A+	A	B+	B	C+	C	D
DISCOM Count	20	13	11	5	2	0	7
Consumer Spread	35.8%	21.8%	18.1%	10.1%	10.8%	0%	3.4%

- Out of 31.4 crore consumers, 11.24 crore (35.8%) are served by 20 DISCOMs with "A+" grade across the FRGR parameter and 1.05 crore (3.4%) are experiencing "D" grade Services.
- Considering A+/A graded DISCOMs (for ease of interpretation) as the benchmark performances it is apparent that 57.7% of the overall consumers faced superior FRGR services.
- DISCOMs graded C/D under FRGR, cumulatively serving 3.4% of the overall consumers, indicating a significant consumer base experiencing inferior FRGR services. It is generally from these consumers experiencing inferior services, the DISCOMs receive grievances w.r.t the sub-parameters of FRGR.

3.2.5 Performance at an overall level

Assessing the performance in terms of similar grades secured by DISCOMs across the 4 broad 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 Gradings)			
	All 4 Parameters	In 3 Parameters	In 2 Parameters	In 1 Parameters
A+	0	1	9	23
A	0	6	9	19
B+	0	1	3	24
B	0	0	1	20
C+	0	0	2	16
C	0	0	1	16
D	0	1	10	17

- Only 1 DISCOM has secured 3 Nos of A+ grades across the 4 parameters viz UGVCL.
- 9 DISCOMs have secured 2 Nos of A+ grades across the 4 parameters viz TANGEDCO(Tamil Nadu), APSPDCL (Andhra Pradesh), MGVCL (Gujarat), MPMKVVCL, MPPoKVVCL and MPPsKVVCL (Madhya Pradesh), BYPL (Delhi), CESCOM (Karnataka), DGVCL (Gujarat).
- 1 DISCOM has secured 3 Nos of D grade across the 4 parameters viz KPDCL (Jammu & Kashmir).
- 10 DISCOMs have secured 2 Nos of D grade across the 4 parameters viz SBPDCL, NBPDCL (Bihar), TPCODL and TPSODL (Odisha), PED (Puducherry), CED (Chandigarh), JBVNL (Jharkhand), JPDCL (Jammu & Kashmir), BEST (Maharashtra) and LPDD (Ladakh).

Way Forward 4

Since the inception of this important exercise in 2021, the key outcome envisaged was to create a platform for DISCOMs to be able to learn from each other's performance. Similar to last year, while some DISCOMs have secured a higher grade, some have scope for improvement across multiple parameters. Based on the learnings gathered in this edition (2021-22) of the CSRD study, many DISCOMs have improved across various parameters, thereby increasing the inter-se learning. Nevertheless, multiple areas of future interventions are envisaged that can be included in the forthcoming editions.

With the Revamped Distribution Sector Scheme (RDSS) progressing, it is encouraging DISCOMs to undertake various developments aimed at improving organisational and operational efficiencies. This would aid the ongoing efforts of REC Limited towards improving the reliability and quality of power supply, along with ensuring the financial viability of DISCOMs. Additionally, further strengthening the Rural Feeder Monitoring System (RFMS) and relaunching it as the National Feeder Monitoring System (NFMS) would allow more direct visibility for the center into the performance of the states.

The aforementioned measures would enable a reduction of complexities in the existing process of analysis by capturing multiple aspects of DISCOM data and increase the robustness of the data analysis process through DISCOM integration across the stages of the evaluation process. This report would also be useful to utilities, policymakers, regulators, investors, and other key stakeholders in generating critical insights of the industry and aiding in identifying the main areas where the participating utilities can target for generous improvement in the quality of their services by developing a spirit of healthy competition amongst DISCOMs. It will ultimately enhance the consumer experience by nudging the DISCOMs to assess the gaps and promote inter-se learning.

In further upcoming editions, key activities identified envisaged for subsequent rating exercise includes Rationalisation of DISCOM specific data gathering process through a system integrated validation mechanism to make it more full-proof and subsequently result in reduction of time and efforts elapsed across data authentication and validation.

To increase the relevance of this report in the progressing and evolving power distribution sector, it will be REC's constant endeavour to make this report exhaustive and inclusive in terms of coverage of parameters reflecting some of the good practices being constantly practised across DISCOMs.

5 Approach to CSRD

The CSRD is designed and structured with an objective to comprehensively assess the current performance levels of DISCOMs across some key consumer service parameters. It demanded a methodological approach in identification and selection of performance parameters that inevitably impacting electricity consumers, further impacting their satisfaction levels. In general, all the DISCOMs monitor numerous performance parameters, few of which the consumers perceive to be of paramount in nature.

The overall approach to the rating entailed planning, parameter identification, data collection, assessing, validation and confirmation, involving multistakeholder effort in coming up deriving rating as per predefined grade scale.

Key challenges envisaged during DCSR exercise

Planning

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

Verification

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

Identification

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

Validation

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

Collection

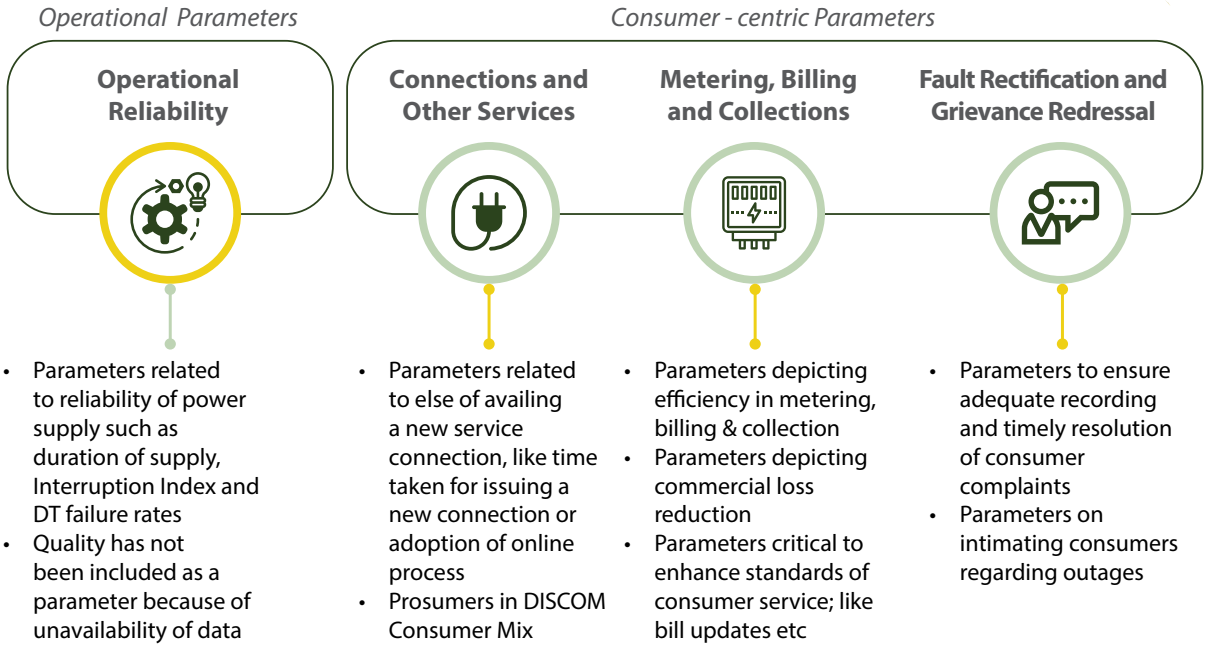
- Ensuring timely data submissions by DISCOMs on the online portal
- Frequent data updates / corrections / amendments by DISCOMs

Confirmation

- Timely feedbacks / confirmations from DISCOMs in data gaps and subsequent data

Figure 17: Approach to CSRD

The overall designing of the approach involved detailing the key tasks to be undertaken by various stakeholders in this exercise. Final scoring methodology were approved and notified by MoP on date 16.09.2021, which was adopted for undertaking the CSRD-2021 exercise. The scoring methodology has been carried over from the CSRD 2020-21 Exercise to ensure a standardised comparison of the ratings of DISCOMs between the two years.



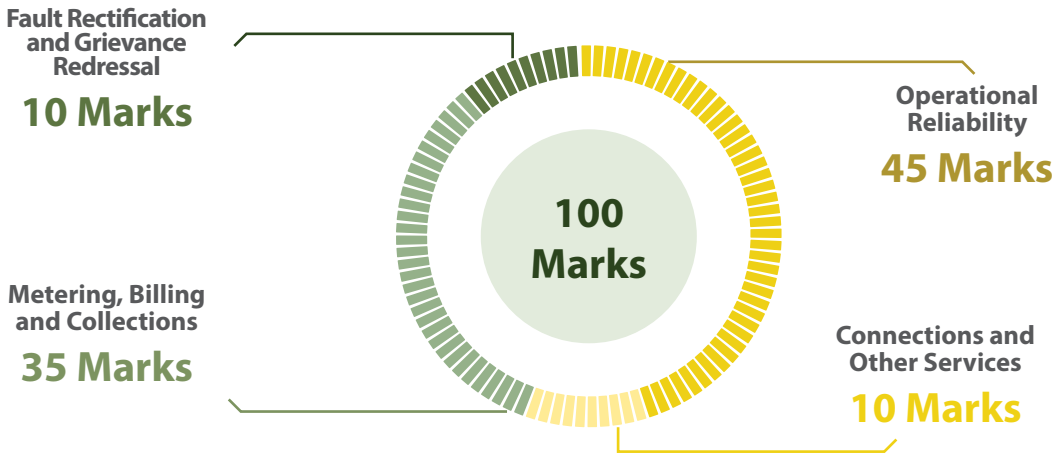
Data Collection Methodology

The data collection templates were finalised post various brainstorming session, DISCOMs' feedbacks and suggestions from other stakeholders. Based on the previous year's exercise, numerous improvements were made to the input format to ensure transparency in the grading exercise. One of such revisions was to add circle-wise data instead of overall DISCOM-level data for most of the parameters. Even though the parameters and sub-parameters remained unchanged, data collection formats for some were revised to ensure a more accurate representation of the DISCOMs' actual reality.

During the data collection stage all the Regional Offices of REC Limited were activated and requested to follow up with the assigned nodal officers of concerned DISCOMs, to ensure CSRD can be conducted in a time bound & efficient manner, moreover numerous 1-1 interactions, video conferences were carried out with DISCOMs officials to ensure objective set out is achieved.

Marking Methodology:

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



Both absolute and relative marking approach were adopted. Majority of sub-parameters are on an absolute scale, enabling comparison across years. However, wherever the benchmarking data is not available, a relative scale has been used.

Data validation:

The information obtained from the DISCOMs were verified at multiple levels on the basis of : (i) random sample checks; (ii) data triangulation & analytics; (iii) evidence documents/ reports submitted by DISCOMs (iv) Field visits.

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.

A team of REC's Regional Officers (ROs) were informed about the data validation guidelines for the validation of data received from DISCOMs for CSRD exercise. A detailed periodic review of the data validation process was also conducted at CMD level to strengthen the overall exercise.

Key validation activities:

- *Validation against evidence :* After receiving data from DISCOMs, REC Limited verified the collected data against the submitted evidence and cross-verified data by visiting DISCOMs' offices.
- *Validation through field visits :* A sample of sub-divisions was chosen for physical visits by REC Limited officials. The MIS data of DISCOMs' was substantiated against the substation data for randomly selected feeders for validating Hours of Supply and Interruption Index.
- *Validation through trail check :* REC Limited collected detailed break-up of the aggregate data (particularly for Hours of Supply and Interruption Index) submitted by DISCOMs on a sample basis and verify its accuracy. For example – for a sample feeders/sub-division the Hours of supply was estimated from the interruptions data noted in ledgers at DISCOMs' substations and was matched with the data submitted by the DISCOMs. Similarly, all other sub--parameter data submissions were traced back to their data sources.
- For reliability and quality of supply related parameters, system-based measurement approach is envisaged. Rural Feeder management systems (RFMS) to also be 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 was arrived at with the help of a T-test approach (Detailed in Annexure F).

Grading methodology:

The 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.

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

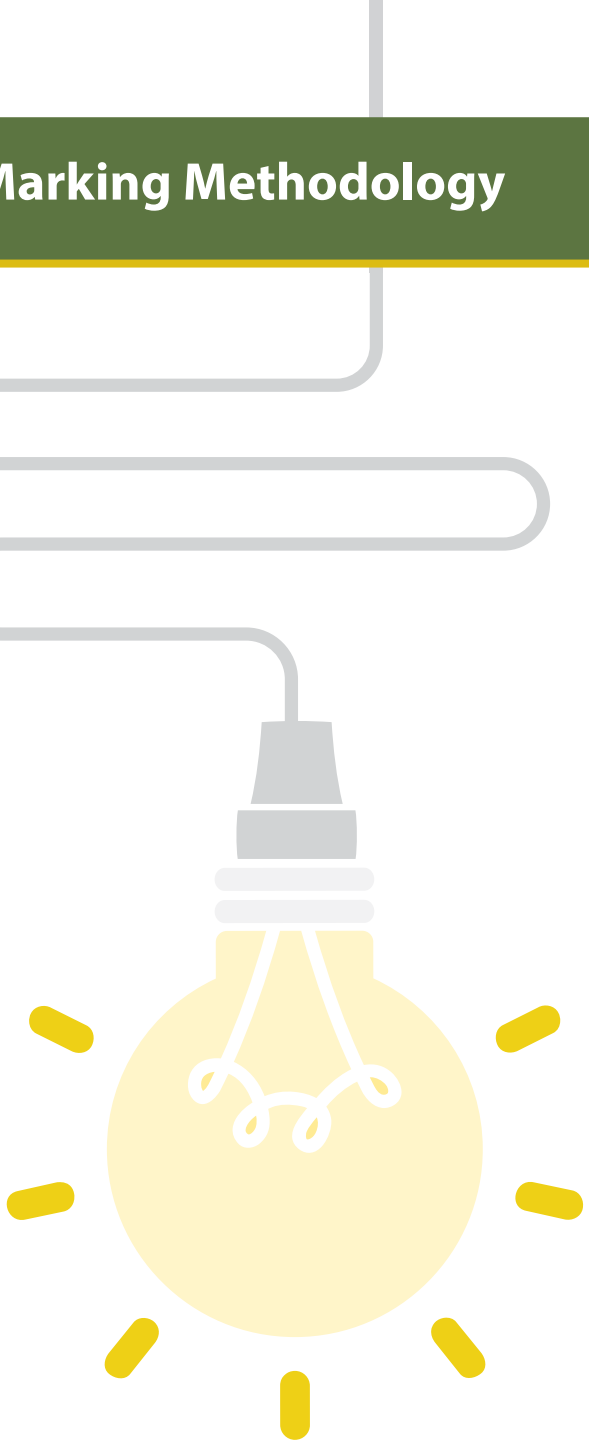
The above grade scale was designed with an objective of attaining a grade distribution, in order to ensure and bring about adequate distinction among the graded DISCOMs. This would also enable the graded DISCOMs to introspect and adapt practices prevalent across the higher graded peer DISCOMs.

Key challenges envisaged during CSRD exercise were:

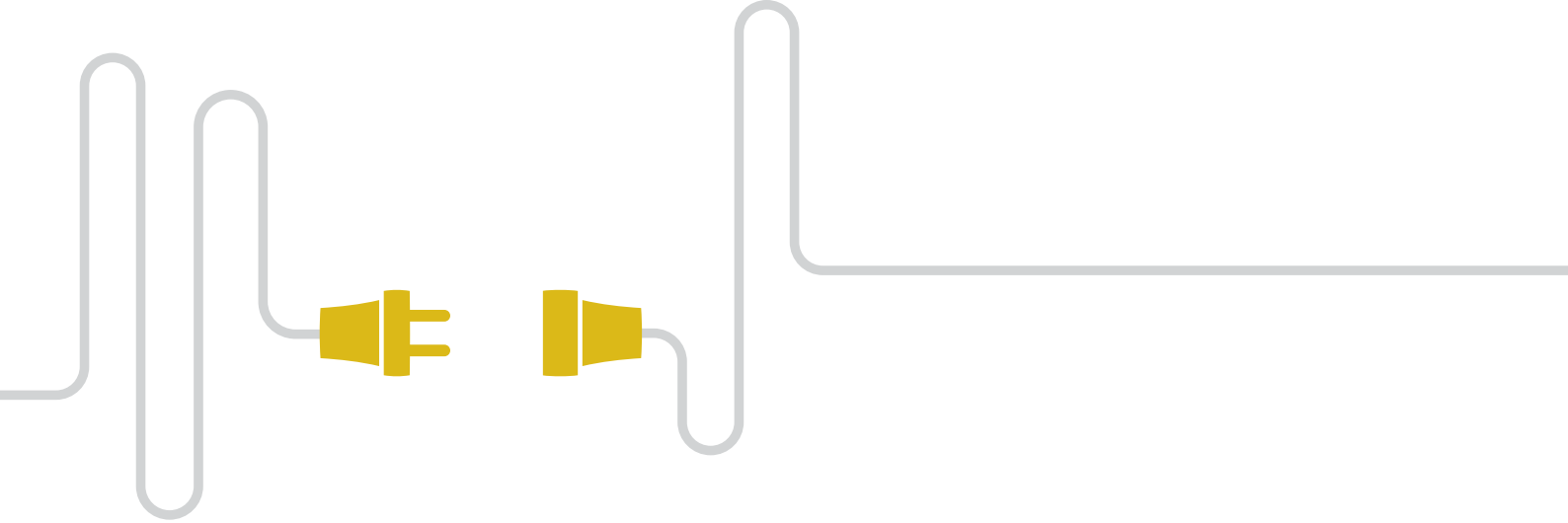
As this was envisaged to be an extensive exercise involving multiple stakeholders, numerous challenges were expected as listed below:

- 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 feedbacks/confirmations from DISCOMs in data gaps and subsequent data.
- Lack of availability of detailed data in the prescribed format 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	7	Absolute
1.3	DT Failure Rate	4	Absolute
		45 Marks	
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 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)
		10 Marks	
3. Metering, Billing and Collection (35 marks)			
3.1	Avg time taken for replacing defective meters (U)	1	Relative (Proportionate)
3.2	Avg time taken for replacing defective meters (R)	1	Relative (Proportionate)
3.3	Bills generated based on actual meter reading	4	Absolute
3.4	Bills generated basis non-manual meter reading	7	Relative (Proportionate)
3.5	Billing freq. for domestic consumers as per reg.	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	Prepaid consumers	8	Relative + Absolute
3.9	Tariff categories (incl. sub-categories and slabs)	2	Relative (Proportionate)
3.10	Number of consumers paying digitally	6	Relative (Proportionate)
		35 Marks	
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
		10 Marks	
Total Marks: 100			



ANNEXURES

ANNEX A | State level aggregate grades and performance outlook

ANNEX B | Performance Across Parameters

(i) Performance across parameters- Operational Reliability

(ii) Performance across parameters- Connections and Other Services

(iii) Performance across parameters- Metering, Billing and Collections

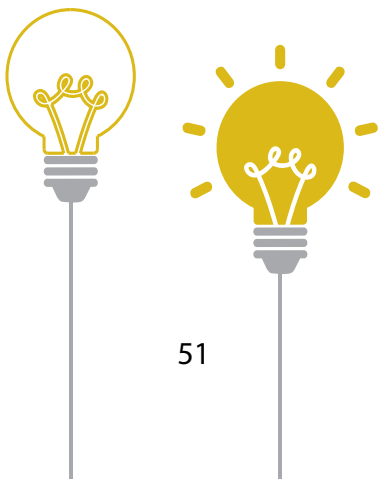
(iv) Performance across parameters- Fault Rectification and Grievance Redressal

ANNEX C | Category specific consumer coverage

ANNEX D | Framework-Description and Measurement of Parameters

ANNEX E | Framework-Marking Methodology

ANNEX F | Working Sheet



Annexure-A

State level aggregate grades and performance outlook

State	Total DISCOMs	DISCOMs spread across grades						
		A+	A	B+	B	C+	C	D
Delhi	**3**		3					
Uttar Pradesh	**6**		2			1	3	
Telangana	**2**		1	1				
Andhra Pradesh	**3**		2	1				
Maharashtra	**4**		1	2		1		
Tamil Nadu	**1**			1				
Manipur	**1**			1				
Madhya Pradesh	**3**			1	2			
Gujarat	**4**			2	2			
Uttarakhand	**1**			1				
Punjab	**1**			1				
Kerala	**1**			1				
Karnataka	**5**			1	1	2	1	
West Bengal	**1**				1			
Rajasthan	**3**				3			
Goa	**1**				1			
Chhattisgarh	**1**				1			
Haryana	**2**				2			
Tripura	**1**				1			
Chandigarh	**1**				1			
Assam	**1**				1			
Odisha	**4**					4		
Puducherry	**1**					1		
Bihar	**2**					1		1
Himachal Pradesh	**1**					1		
Ladakh	**1**					1		
Jammu & Kashmir	**2**							2
Jharkhand	**1**							1
Total	**58**							

Annexure-B

(i) Performance Across Parameters - Operational Reliability

STATE	DISCOM	OPERATIONAL RELIABILITY						
		Hours of Supply (Hours)			Interruption Index (Total No. of Interruptions in a Year/Total No. of Feeders)			DT Failure Rate (%)
		Rural	Urban	Industrial	Rural	Urban	Industrial	
Andhra Pradesh	APCPDCL	21.1	24.0	23.8	72.4	37.9	48.1	6.6%
Andhra Pradesh	APEPDCL	23.6	23.9	23.9	272.8	50.5	79.7	2.3%
Andhra Pradesh	APSPDCL	23.7	23.9	23.9	63.5	42.5	8.2	6.0%
Assam	APDCL	19.9	23.5	23.5	91.7	-	-	1.9%
Bihar	NBPDCL	21.3	23.1	23.2	760.0	418.7	120.8	4.4%
Bihar	SBPDCL	18.1	23.1	23.0	513.3	351.0	452.3	8.6%
Chandigarh	CED	-	24.0	23.2	-	15.1	5.5	2.9%
Chhattisgarh	CSPDCL	22.1	23.8	23.7	229.4	100.9	59.6	6.8%
Delhi	BRPL	-	24.0	-	-	2.4	-	0.3%
Delhi	BYPL	-	24.0	-	-	2.6	-	0.7%
Delhi	TPDDL	-	24.0	-	-	1.5	-	0.6%
Goa	GED	21.2	24.0	23.7	148.5	64.8	114.5	2.2%
Gujarat	DGVCL	23.7	23.9	23.8	133.0	45.0	19.6	6.2%
Gujarat	MGVCL	21.3	24.0	23.9	1.2	1.4	0.8	6.4%
Gujarat	PGVCL	23.2	23.9	23.4	205.0	5286.6	9061.3	10.9%
Gujarat	UGVCL	23.9	23.9	23.9	30.4	20.3	15.8	5.1%
Haryana	DHBVNL	18.6	23.6	23.6	342.1	123.0	-	9.0%
Haryana	UHBVNL	17.4	23.5	23.5	407.7	122.2	8.4	9.3%
Himachal Pradesh	HPSEBL	17.3	23.8	23.6	185.9	26.8	9.7	3.2%
Jammu & Kashmir	JPDCL	16.9	20.7	24.0	547.4	1113.1	255.4	27.9%
Jammu & Kashmir	KPDCL	16.8	22.5	22.6	556.6	196.3	146.2	28.1%
Jharkhand	JBVNL	18.9	22.2	-	753.8	97.9	-	9.3%
Karnataka	BESCOM	18.9	23.8	23.8	812.3	54.6	58.0	7.0%
Karnataka	CESCOM	20.4	23.6	23.4	600.8	263.6	210.0	10.8%
Karnataka	GESCOM	20.3	22.8	23.3	489.6	1009.3	450.3	-
Karnataka	HESCOM	18.5	23.7	23.3	898.0	275.9	256.7	9.2%
Karnataka	MESCOM	19.4	23.6	23.3	512.0	128.5	95.5	10.4%
Kerala	KSEBL	21.2	23.8	23.8	112.3	52.9	34.5	1.7%
Ladakh	LPDD	20.8	23.7	-	61.4	110.6	-	5.2%
Madhya Pradesh	MPMKVVCL	23.7	23.8	23.7	52.3	57.1	23.4	8.5%
Madhya Pradesh	MPPoKVVCL	20.0	23.8	23.7	339.6	66.0	42.3	12.4%
Madhya Pradesh	MPPsKVVCL	19.1	23.9	23.8	252.2	19.9	21.9	16.5%
Maharashtra	AEML	-	24.0	-	-	0.2	-	0.2%

STATE	DISCOM	OPERATIONAL RELIABILITY						
		Hours of Supply (Hours)			Interruption Index (Total No. of Interruptions in a Year/Total No. of Feeders)			DT Failure Rate (%)
		Rural	Urban	Industrial	Rural	Urban	Industrial	
Maharashtra	BEST	-	24.0	-	-	6.7	-	1.0%
Maharashtra	MSEDCL	23.4	23.9	23.8	28.5	9.3	10.7	16.0%
Maharashtra	TPCL	-	23.9	-	-	0.3	-	0.4%
Manipur	MSPDCL	20.1	23.6	23.7	215.1	85.7	53.0	1.2%
Odisha	TPCODL	21.1	24.0	23.3	33.6	11.2	-	4.4%
Odisha	TPNODL	20.1	23.3	-	-	-	-	-
Odisha	TPSODL	20.8	23.6	-	135.0	44.9	63.2	2.7%
Odisha	TPWODL	21.0	23.9	22.7	306.9	460.7	75.3	4.6%
Puducherry	PED	20.6	23.7	-	62.4	89.7	-	3.0%
Punjab	PSPCL	22.5	23.6	23.8	215.7	78.0	18.4	7.9%
Rajasthan	AVVNL	21.9	23.6	23.2	155.8	3.2	4.1	10.3%
Rajasthan	JdVVNL	21.4	23.9	23.7	153.1	1.0	3.1	9.6%
Rajasthan	JVVNL	21.2	23.2	23.0	636.6	196.3	159.2	9.3%
Tamil Nadu	TANGEDCO	22.8	23.9	24.0	37.8	9.0	8.6	2.9%
Telangana	TSNPDCL	22.6	23.9	24.0	178.4	39.9	8.8	8.1%
Telangana	TSSPDCL	22.8	23.9	24.0	161.9	27.1	13.4	7.2%
Tripura	TSECL	20.9	23.3	23.9	120.8	61.7	236.0	9.5%
Uttar Pradesh	DVVNL	16.8	22.5	23.4	630.2	412.4	286.0	13.1%
Uttar Pradesh	KESCo	-	23.4	23.9	-	58.2	111.6	5.7%
Uttar Pradesh	MVVNL	17.9	23.2	22.4	729.6	153.0	118.7	15.7%
Uttar Pradesh	NPCL	15.9	23.9	23.6	119.7	35.4	104.8	1.5%
Uttar Pradesh	PsVVNL	16.4	23.6	23.7	574.8	197.6	194.4	5.1%
Uttar Pradesh	PuVVNL	17.5	22.5	23.6	619.5	165.1	68.7	2.9%
Uttarakhand	UPCL	22.1	23.5	23.5	249.3	287.9	795.5	7.2%
West Bengal	WBSEDCL	21.2	24.0	23.8	292.9	125.4	81.7	7.3%
National Average		**20.4**	**23.6**	**23.6**	**308.2**	**227.1**	**311.4**	**7.1%**

Annexure-B

(ii) Performance Across Parameters - Connections and other services

STATE	DISCOM	CONNECTION AND OTHER SERVICES				
		Alignment of Regulations with industry best practices w.r.t timelines	(A) Presence of predetermined demand charges for up to 150kW	Applications processed through online portal (submission till approval)	Average deviation from SoP in time taken for providing connection	Prosumers per lakh consumers (under net or gross metering)
Andhra Pradesh	APCPDCL	6	Yes	100%	79%	41
Andhra Pradesh	APEPDCL	6	Yes	100%	-42%	43
Andhra Pradesh	APSPDCL	6	Yes	100%	157%	87
Assam	APDCL	7	Yes	100%	-24%	11
Bihar	NBPDCL	6	Yes	100%	100%	4
Bihar	SBPDCL	4	No	100%	51%	16
Chandigarh	CED	4	Yes	0%	-66%	1403
Chhattisgarh	CSPDCL	6	Yes	100%	-	3
Delhi	BRPL	6	Yes	100%	-33%	123
Delhi	BYPL	7	Yes	100%	-82%	48
Delhi	TPDDL	4	Yes	100%	-3%	16
Goa	GED	6	Yes	100%	-21%	375
Gujarat	DGVCL	7	Yes	100%	522%	2241
Gujarat	MGVCL	7	Yes	100%	-43%	2577
Gujarat	PGVCL	7	Yes	100%	-49%	1807
Gujarat	UGVCL	7	Yes	100%	-51%	1193
Haryana	DHBVNL	6	Yes	100%	383%	189
Haryana	UHBVNL	6	Yes	100%	-36%	173
Himachal Pradesh	HPSEBL	5	Yes	40%	-41%	115
Jammu & Kashmir	JPDCL	7	Yes	0%	-68%	0
Jammu & Kashmir	KPDCL	7	Yes	1%	-77%	34
Jharkhand	JBVNL	2	No	100%	-44%	44
Karnataka	BESCOM	6	Yes	100%	-59%	12
Karnataka	CESCOM	7	Yes	100%	-32%	59
Karnataka	GESCOM	-	Yes	-	-	10
Karnataka	HESCOM	7	Yes	4%	-94%	39
Karnataka	MESCOM	7	Yes	100%	-34%	73
Kerala	KSEBL	6	Yes	100%	-70%	250
Ladakh	LPDD	5	Yes	-	-21%	-
Madhya Pradesh	MPMKVVCL	7	Yes	79%	-50%	140

STATE	DISCOM	CONNECTION AND OTHER SERVICES				
		Alignment of Regulations with industry best practices w.r.t timelines	(A) Presence of predetermined demand charges for up to 150kW	Applications processed through online portal (submission till approval)	Average deviation from SoP in time taken for providing connection	Prosumers per lakh consumers (under net or gross metering)
Madhya Pradesh	MPPoKVVCL	7	Yes	100%	-46%	2002
Madhya Pradesh	MPPsKVVCL	7	Yes	99%	-70%	82
Maharashtra	AEML	6	Yes	100%	-28%	43
Maharashtra	BEST	3	Yes	100%	-	34
Maharashtra	MSEDCL	5	Yes	100%	171%	192
Maharashtra	TPCL	6	Yes	100%	-48%	64
Manipur	MSPDCL	7	Yes	100%	-65%	166
Odisha	TPCODL	6	0	53%	-58%	665
Odisha	TPNODL	4	-	27%	-14%	1
Odisha	TPSODL	7	Yes	98%	50%	4
Odisha	TPWODL	7	Yes	69%	-19%	6
Puducherry	PED	5	Yes	0%	-64%	90
Punjab	PSPCL	5	Yes	63%	11%	272
Rajasthan	AVVNL	7	No	100%	-10%	156
Rajasthan	JdVVNL	7	Yes	36%	106%	197
Rajasthan	JVVNL	7	Yes	100%	-49%	285
Tamil Nadu	TANGEDCO	6	Yes	100%	-81%	97
Telangana	TSNPDCL	6	Yes	100%	31%	12
Telangana	TSSPDCL	6	Yes	100%	197%	121
Tripura	TSECL	5	Yes	0%	-56%	4
Uttar Pradesh	DVVNL	7	Yes	92%	9%	3
Uttar Pradesh	KESCo	7	Yes	100%	-21%	83
Uttar Pradesh	MVVNL	5	Yes	78%	206%	16
Uttar Pradesh	NPCL	7	Yes	100%	-66%	195
Uttar Pradesh	PsVVNL	7	Yes	100%	-32%	22
Uttar Pradesh	PuVVNL	7	Yes	86%	-3%	13
Uttarakhand	UPCL	7	Yes	100%	-52%	156
West Bengal	WBSEDCL	5	Yes	100%	-35%	12
National Average		**6**	**-**	**82%**	**3.9%**	**283**

Annexure-B

(iii) Performance Across Parameters - Metering, Billing and Collections

STATE	DISCOM	METERING, BILLING AND COLLECTION			
		Average time (days) taken for replacement of defective meters (Rural)	Average time (days) taken for replacement of defective meters (Urban)	Bills generated based on actual meter reading	Bills generated on the basis of non-manual meter reading
Andhra Pradesh	APCPDCL	37.04	28.91	98%	77%
Andhra Pradesh	APEPDCL	3.95	2.26	97%	80%
Andhra Pradesh	APSPDCL	12.33	11.18	100%	97%
Assam	APDCL	60.13	51.79	70%	79%
Bihar	NBPDCL	-	-	63%	1%
Bihar	SBPDCL	-	-	62%	3%
Chandigarh	CED	-	12.63	99%	2%
Chhattisgarh	CSPDCL	19.97	13.22	71%	0%
Delhi	BRPL	-	2.84	81%	100%
Delhi	BYPL	-	2.17	89%	100%
Delhi	TPDDL	-	2.87	100%	100%
Goa	GED	14.93	8.63	86%	0%
Gujarat	DGVCL	14.31	10.24	100%	0%
Gujarat	MGVCL	-	-	100%	0%
Gujarat	PGVCL	58.19	36.93	92%	0%
Gujarat	UGVCL	26.89	23.27	97%	1%
Haryana	DHBVNL	24.74	-	86%	45%
Haryana	UHBVNL	7.91	8.69	-	-
Himachal Pradesh	HPSEBL	12.01	5.93	100%	1%
Jammu & Kashmir	JPDCL	10	7	73%	0%
Jammu & Kashmir	KPDCL	5.32	5.61	29%	0%
Jharkhand	JBVNL	-	-	56%	0%
Karnataka	BESCOM	6.82	3.13	100%	0%
Karnataka	CESCOM	12.06	3.3	99%	1%
Karnataka	GESCOM	-	-	-	-
Karnataka	HESCOM	82.78	68.59	100%	1%
Karnataka	MESCOM	14.23	13.98	96%	-
Kerala	KSEBL	8.16	8.22	93%	0%
Ladakh	LPDD	4.25	3.08	100%	0%

METERING, BILLING AND COLLECTION					
Billing frequency for domestic category consumers as per regulations	Bills generated for domestic category consumers in a year	Consumers receiving billing updates on mobile	%age of Prepaid consumers	Tariff categories (incl. sub-categories and slabs)	%age of consumers paying digitally
Monthly	100%	97%	-	57	38%
Monthly	100%	93%	0%	57	44%
Monthly	100%	91%	0%	57	47%
Monthly	100%	76%	1%	36	19%
Monthly	77%	84%	2%	61	7%
Monthly	84%	88%	6%	61	16%
Bi-Monthly	94%	36%	0%	34	0%
Monthly	82%	68%	-	81	22%
Monthly	98%	97%	0%	24	87%
Monthly	100%	97%	0%	24	83%
Monthly	93%	100%	0%	37	36%
Monthly	100%	0%	0%	47	38%
Bi-Monthly	100%	89%	0%	52	30%
Bi-Monthly	100%	75%	-	38	26%
Bi-Monthly	99%	80%	0%	70	-
Bi-Monthly	100%	76%	-	63	26%
Bi-Monthly	83%	94%	0%	46	26%
Bi-Monthly	86%	95%	0%	60	67%
Monthly	100%	68%	-	77	41%
Monthly	83%	10%	0%	56	15%
Monthly	98%	24%	0%	55	20%
Monthly	73%	7%	0%	19	10%
Monthly	99%	72%	1%	78	33%
Monthly	98%	70%	1%	77	12%
Monthly	-	-	-	-	11%
Monthly	100%	88%	0%	83	12%
Monthly	100%	62%	-	84	17%
Bi-Monthly	99%	98%	-	37	51%
Monthly	100%	0%	-	53	10%

STATE	DISCOM	METERING, BILLING AND COLLECTION			
		Average time (days) taken for replacement of defective meters (Rural)	Average time (days) taken for replacement of defective meters (Urban)	Bills generated based on actual meter reading	Bills generated on the basis of non-manual meter reading
Madhya Pradesh	MPMKVVCL	2.81	0.99	90%	1%
Madhya Pradesh	MPPoKVVCL	8.64	9.52	76%	0%
Madhya Pradesh	MPPsKVVCL	5.33	3.94	54%	5%
Maharashtra	AEML	-	3.74	99%	85%
Maharashtra	BEST	-	34.42	98%	0%
Maharashtra	MSEDCL	235.41	91.62	85%	4%
Maharashtra	TPCL	-	9.23	100%	6%
Manipur	MSPDCL	12.5	4.02	79%	79%
Odisha	TPCODL	27.33	21.44	100%	1%
Odisha	TPNODL	19.73	19.24	55%	0%
Odisha	TPSODL	2	1.998	64%	0%
Odisha	TPWODL	26.45	9.32	68%	1%
Puducherry	PED	15	15	76%	7%
Punjab	PSPCL	46.31	41.79	96%	0%
Rajasthan	AVVNL	22.46	14.96	88%	3%
Rajasthan	JdVVNL	24.03	17.87	83%	2%
Rajasthan	JVVNL	-	1.13	96%	4%
Tamil Nadu	TANGEDCO	9.92	10.34	99%	0%
Telangana	TSNPDCL	4.1	3.01	94%	74%
Telangana	TSSPDCL	3.63	5.1	98%	85%
Tripura	TSECL	12.29	3.9	74%	0%
Uttar Pradesh	DVVNL	25.05	6.17	81%	12%
Uttar Pradesh	KESCo	-	4.36	100%	100%
Uttar Pradesh	MVVNL	31.62	6.21	87%	10%
Uttar Pradesh	NPCL	2.82	3.22	96%	68%
Uttar Pradesh	PsVVNL	67.47	16.22	93%	26%
Uttar Pradesh	PuVVNL	21.72	11.27	77%	4%
Uttarakhand	UPCL	28.21	25.22	92%	59%
West Bengal	WBSEDCL	68.06	65.67	83%	0%
National Average		26.3	15.3	86%	24%

METERING, BILLING AND COLLECTION					
Billing frequency for domestic category consumers as per regulations	Bills generated for domestic category consumers in a year	Consumers receiving billing updates on mobile	%age of Prepaid consumers	Tariff categories (incl. sub-categories and slabs)	%age of consumers paying digitally
Monthly	100%	94%	2%	40	32%
Monthly	99%	100%	3%	40	41%
Monthly	100%	78%	2%	40	30%
Monthly	100%	91%	0%	40	51%
Monthly	99%	87%	0%	19	45%
Monthly	99%	90%	0%	56	28%
Monthly	100%	71%	0%	22	70%
Monthly	89%	54%	75%	34	35%
Monthly	-	2%	0%	46	8%
Monthly	100%	82%	-	-	-
Monthly	100%	53%	0%	45	5%
Monthly	85%	80%	0%	45	6%
Monthly	100%	8%	0%	39	17%
Bi-Monthly	92%	44%	-	44	49%
Bi-Monthly	100%	88%	1%	65	56%
Bi-Monthly	97%	91%	0%	65	37%
Monthly	54%	94%	0%	61	41%
Bi-Monthly	100%	100%	0%	24	60%
Monthly	100%	77%	0%	130	22%
Monthly	100%	94%	0%	130	44%
Monthly	100%	1%	15%	37	8%
Monthly	87%	85%	0%	112	14%
Monthly	94%	99%	10%	112	82%
Monthly	93%	92%	0%	134	12%
Monthly	99%	98%	10%	96	87%
Monthly	100%	100%	1%	134	16%
Monthly	100%	100%	0%	112	9%
Bi-Monthly	92%	69%	1%	57	30%
Quarterly	99%	93%	0%	155	61%
-	-	73.9%	2.8%	61.8	33%

Annexure-B

(iv) Performance Across Parameters - Metering, Billing and Collections

STATE	DISCOM	Fault Rectification and Grievance Redressal			
		Proportion of consumers registered at 24x7 customer care call center	Facilities	Type of complaints attended	Average call waiting time at the call center (secs)
Andhra Pradesh	APCPDCL	100%	5.00	4.00	24.83
Andhra Pradesh	APEPDCL	93%	8.00	4.00	7.42
Andhra Pradesh	APSPDCL	100%	8.00	4.00	28.92
Assam	APDCL	100%	6.00	4.00	135.83
Bihar	NBPDCL	100%	7.00	4.00	77.05
Bihar	SBPDCL	100%	7.00	4.00	77.06
Chandigarh	CED	0%	2.00	3.00	-
Chhattisgarh	CSPDCL	100%	7.00	4.00	4.92
Delhi	BRPL	100%	8.00	4.00	11.67
Delhi	BYPL	100%	8.00	4.00	13.83
Delhi	TPDDL	100%	8.00	4.00	5.42
Goa	GED	100%	8.00	4.00	-
Gujarat	DGVCL	100%	8.00	4.00	32.92
Gujarat	MGVCL	100%	8.00	4.00	9.38
Gujarat	PGVCL	-	6.00	4.00	0.00
Gujarat	UGVCL	100%	7.00	4.00	31.29
Haryana	DHBVNL	100%	8.00	4.00	9.50
Haryana	UHBVNL	-	8.00	4.00	16.58
Himachal Pradesh	HPSEBL	100%	3.00	4.00	40.00
Jammu & Kashmir	JPDCL	100%	8.00	4.00	25.83
Jammu & Kashmir	KPDCL	100%	8.00	4.00	125.00
Jharkhand	JBVNL	7%	7.00	4.00	43.58
Karnataka	BESCOM	100%	8.00	4.00	9.00
Karnataka	CESCOM	100%	7.00	4.00	5.92
Karnataka	GESCOM	100%	7.00	4.00	14.08
Karnataka	HESCOM	98%	3.00	4.00	5.08
Karnataka	MESCOM	100%	1.00	4.00	20.00
Kerala	KSEBL	100%	6.00	4.00	49.75
Ladakh	LPDD	-	0.00	0.00	-
Madhya Pradesh	MPMKVVCL	100%	6.00	4.00	13.75

Fault Rectification and Grievance Redressal				
% 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
97%	20%	0%	Yes	1.00
93%	0%	0%	Yes	1.00
86%	0%	0%	Yes	1.00
-	0%	52%	-	28.00
84%	12%	8%	Yes	9.00
64%	6%	4%	Yes	11.00
100%	-	-	Yes	2.00
68%	0%	0%	Yes	3.00
97%	-	0%	Yes	1.00
97%	-	0%	Yes	1.00
100%	-	0%	Yes	1.00
77%	0%	0%	Yes	1.00
90%	0%	0%	Yes	48.00
72%	0%	0%	Yes	127.00
80%	-	-	Yes	62.00
76%	0%	0%	Yes	171.00
99%	0%	0%	Yes	14.00
95%	0%	0%	Yes	13.00
-	-	-	Yes	13.00
0%	0%	0%	Yes	14.00
0%	-	-	Yes	10.00
0%	-	-	Yes	5.00
84%	0%	0%	Yes	8.00
100%	0%	0%	Yes	4.00
0%	0%	0%	Yes	8.00
88%	0%	146%	Yes	7.00
-	0%	0%	Yes	4.00
98%	0%	0%	Yes	3.00
-	-	-	No	-
94%	0%	0%	Yes	19.00

STATE	DISCOM	Fault Rectification and Grievance Redressal			
		Proportion of consumers registered at 24x7 customer care call center	Facilities	Type of complaints attended	Average call waiting time at the call center (secs)
Madhya Pradesh	MPPoKVVCL	100%	8.00	4.00	1.75
Madhya Pradesh	MPPsKVVCL	100%	8.00	4.00	2.75
Maharashtra	AEML	100%	8.00	4.00	7.92
Maharashtra	BEST	-	0.00	4.00	-
Maharashtra	MSEDCL	100%	8.00	4.00	-
Maharashtra	TPCL	100%	8.00	4.00	0.03
Manipur	MSPDCL	11%	5.00	4.00	33.75
Odisha	TPCODL	98%	7.00	4.00	-
Odisha	TPNODL	-	8.00	4.00	9.71
Odisha	TPSODL	100%	5.00	4.00	17.83
Odisha	TPWODL	99%	8.00	4.00	22.33
Puducherry	PED	99%	0.00	4.00	-
Punjab	PSPCL	100%	6.00	4.00	24.92
Rajasthan	AVVNL	100%	8.00	4.00	5.08
Rajasthan	JdVVNL	100%	8.00	4.00	16.40
Rajasthan	JVVNL	94%	8.00	4.00	-
Tamil Nadu	TANGEDCO	100%	6.00	4.00	16.50
Telangana	TSNPDCL	100%	6.00	4.00	38.00
Telangana	TSSPDCL	100%	7.00	4.00	11.45
Tripura	TSECL	100%	8.00	4.00	20.17
Uttar Pradesh	DVVNL	100%	8.00	4.00	16.08
Uttar Pradesh	KESCo	100%	8.00	4.00	95.67
Uttar Pradesh	MVVNL	100%	8.00	4.00	9.92
Uttar Pradesh	NPCL	98%	8.00	4.00	7.00
Uttar Pradesh	PsVVNL	100%	8.00	0.00	5.09
Uttar Pradesh	PuVVNL	100%	6.00	3.00	41.17
Uttarakhand	UPCL	100%	7.00	4.00	4.58
West Bengal	WBSEDCL	93%	7.00	4.00	91.42
National Average		94%	7	4	27.3

Fault Rectification and Grievance Redressal				
% 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
100%	0%	0%	Yes	22.00
78%	0%	0%	Yes	18.00
91%	-	0%	Yes	1.00
87%	-	-	Yes	1.00
90%	1264%	204%	Yes	11.00
71%	-	0%	Yes	1.00
51%	0%	0%	Yes	18.00
77%	-	-	Yes	5.00
-	0%	0%	Yes	-
53%	0%	0%	Yes	2.00
72%	0%	0%	Yes	3.00
30%	-	-	Yes	1.00
-	0%	18%	Yes	-
87%	0%	0%	Yes	17.00
91%	0%	0%	Yes	16.00
-	-	-	Yes	17.00
100%	0%	0%	Yes	44.00
80%	4%	6%	Yes	2.00
94%	0%	2%	Yes	2.00
0%	0%	0%	Yes	10.00
85%	0%	0%	yes	-
99%	-	3%	Yes	1.00
92%	0%	0%	Yes	5.00
98%	0%	0%	Yes	3.00
100%	0%	0%	Yes	36.00
100%	1%	18%	Yes	1.00
69%	0%	0%	Yes	9.00
93%	0%	12%	Yes	22.00
77%	-	-	-	16

Annexure-C

Category specific consumer coverage

STATE	DISCOM	Total Consumers	Category specific consumer coverage						
			Urban	Rural	Domestic	Non-Domestic / Commercial	Industrial	Agricultural	Others
Andhra Pradesh	APCPDCL	4830168	44%	56%	80.6%	8.8%	0.4%	8.7%	1.5%
Andhra Pradesh	APEPDCL	6619209	38%	62%	84.3%	9.0%	0.3%	4.0%	2.4%
Andhra Pradesh	APSPDCL	6719096	45%	55%	73.4%	7.6%	0.6%	15.8%	2.5%
Assam	APDCL	6463539	14%	86%	93.0%	4.9%	0.3%	0.6%	1.2%
Bihar	NBPDCL	11092760	16%	84%	92.1%	6.0%	0.6%	1.1%	0.2%
Bihar	SBPDCL	6352835	29%	71%	86.8%	7.7%	1.0%	4.1%	0.4%
Chandigarh	CED	257215	100%	0%	86.7%	11.1%	1.0%	0.1%	1.1%
Chhattisgarh	CSPDCL	5966920	30%	70%	82.1%	6.4%	0.6%	10.1%	0.7%
Delhi	BRPL	2803876	100%	0%	87.0%	12.3%	0.3%	0.2%	0.3%
Delhi	BYPL	1799543	100%	0%	77.5%	21.7%	0.4%	0.0%	0.3%
Delhi	TPDDL	1856408	100%	0%	84.8%	12.9%	1.6%	0.3%	0.4%
Goa	GED	673388	32%	68%	80.4%	15.9%	1.0%	1.9%	0.9%
Gujarat	DGVCL	3473231	48%	52%	78.6%	11.8%	2.7%	5.9%	1.0%
Gujarat	MGVCL	3378775	41%	59%	82.0%	10.4%	0.1%	5.8%	1.8%
Gujarat	PGVCL	5660663	43%	57%	67.0%	10.7%	2.2%	19.0%	1.0%
Gujarat	UGVCL	3876687	24%	76%	76.7%	9.2%	1.8%	10.5%	1.9%
Haryana	DHBVNL	3884059	40%	60%	79.8%	9.7%	1.5%	8.5%	0.5%
Haryana	UHBVNL	3492656	34%	66%	78.5%	9.6%	1.4%	10.0%	0.5%
Himachal Pradesh	HPSEBL	2601365	20%	80%	83.3%	11.7%	1.3%	1.5%	2.2%
Jammu & Kashmir	JPDCL	1073582	35%	65%	85.8%	10.1%	1.0%	2.1%	1.0%
Jammu & Kashmir	KPDCL	1069809	36%	64%	84.2%	14.1%	1.1%	0.1%	0.5%
Jharkhand	JBVNL	4817306	28%	72%	92.6%	5.6%	0.4%	1.4%	0.0%
Karnataka	BESCOM	10824128	62%	38%	78.1%	9.7%	1.6%	8.5%	2.2%
Karnataka	CESCOM	3501773	36%	64%	73.9%	7.9%	1.4%	12.7%	4.0%
Karnataka	GESCOM	3404667	34%	66%	74.1%	9.0%	2.1%	12.2%	2.6%
Karnataka	HESCOM	5200073	29%	71%	67.1%	7.6%	2.1%	18.7%	4.6%
Karnataka	MESCOM	2534548	33%	67%	71.5%	9.2%	1.8%	14.5%	3.0%
Kerala	KSEBL	13279017	20%	80%	76.6%	18.1%	1.1%	3.8%	0.4%
Ladakh	LPDD	58990	29%	71%	85.1%	13.0%	0.7%	0.0%	1.2%
Madhya Pradesh	MPMKVVCL	4845755	38%	62%	73.9%	6.8%	0.8%	18.1%	0.4%
Madhya Pradesh	MPPoKVVCL	6308502	28%	72%	75.2%	6.4%	0.8%	17.3%	0.4%
Madhya Pradesh	MPPsKVVCL	5708847	34%	66%	67.9%	7.6%	0.8%	23.1%	0.6%
Maharashtra	AEML	2522298	100%	0%	81.6%	17.2%	0.9%	0.0%	0.4%
Maharashtra	BEST	1045541	100%	0%	73.3%	25.8%	0.9%	0.0%	0.0%
Maharashtra	MSEDCL	28275415	39%	61%	74.7%	7.1%	1.3%	15.6%	1.3%
Maharashtra	TPCL	739481	100%	0%	94.1%	5.2%	0.5%	0.0%	0.1%
Manipur	MSPDCL	504514	37%	63%	94.0%	5.6%	0.2%	0.0%	0.2%

STATE	DISCOM	Total Consumers	Category specific consumer coverage						
			Urban	Rural	Domestic	Non-Domestic / Commercial	Industrial	Agricultural	Others
Odisha	TPCODL	2830797	19%	81%	91.5%	6.4%	0.4%	0.9%	0.8%
Odisha	TPNODL	2048608	14%	86%	92.8%	4.5%	0.3%	1.3%	1.1%
Odisha	TPSODL	2359367	23%	77%	93.9%	3.8%	0.2%	1.1%	1.0%
Odisha	TPWODL	2115460	18%	82%	91.2%	4.2%	0.3%	3.3%	0.9%
Puducherry	PED	440797	59%	41%	82.6%	12.8%	1.1%	1.6%	1.9%
Punjab	PSPCL	9134173	28%	72%	72.0%	11.2%	1.6%	15.2%	0.1%
Rajasthan	AVVNL	5506600	25%	75%	80.1%	7.3%	1.6%	10.2%	0.7%
Rajasthan	JdVVNL	4480594	29%	71%	81.5%	7.5%	1.5%	9.3%	0.3%
Rajasthan	JVVNL	5048355	41%	59%	77.8%	8.9%	1.8%	11.3%	0.2%
Tamil Nadu	TANGEDCO	32035987	47%	53%	72.0%	11.2%	2.3%	7.0%	7.6%
Telangana	TSNPDCL	5500463	46%	54%	68.4%	7.6%	0.4%	21.7%	1.9%
Telangana	TSSPDCL	9340974	57%	43%	74.6%	10.3%	0.5%	13.1%	1.5%
Tripura	TSECL	942966	51%	49%	89.3%	7.7%	0.7%	0.8%	1.5%
Uttar Pradesh	DVVNL	5731928	21%	79%	88.6%	4.5%	0.8%	5.2%	0.9%
Uttar Pradesh	KESCo	673004	100%	0%	83.5%	12.6%	2.3%	0.0%	1.6%
Uttar Pradesh	MVVNL	8251128	25%	75%	91.2%	5.4%	0.3%	2.8%	0.3%
Uttar Pradesh	NPCL	112230	80%	20%	90.1%	3.8%	3.8%	1.0%	1.3%
Uttar Pradesh	PsVVNL	6824338	41%	59%	84.4%	7.1%	1.0%	6.9%	0.6%
Uttar Pradesh	PuVVNL	9272367	16%	84%	90.0%	5.4%	0.3%	3.7%	0.7%
Uttarakhand	UPCL	2484980	31%	69%	87.2%	9.7%	0.6%	1.5%	1.0%
West Bengal	WBSEDCL	21136120	19%	81%	88.2%	9.3%	0.6%	1.6%	0.3%

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) • 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 minutes to be neglected	During initial year(s), data to be submitted by Discoms along with supporting documents. REC or REC appointed agency to validate the data basis FMS and/ or evidence documents shared by DISCOMs. In subsequent years, FMS data and consumer survey (till FMS data is not compete) to be considered
Interruption Index (7 Marks)	• Interruption Index formula given at National Power Portal shall be used • Feeders at 11kV voltage level will be included • Average will be calculated for the total number of feeders, leading to No. of interruptions per feeder for the year • Scheduled as well as unscheduled outages • Interruptions of less than 5 minutes to be neglected	During initial year(s), data to be submitted by Discoms along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms In subsequent years, FMS data system generated reports & regulatory filings to be considered
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 voltage levels to be considered for assessment	During initial year(s), data to be submitted by discom along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by Discoms

Parameter	Description & Measurement Method	Data Source
Connection and Other Services (10 Marks)		
Alignment of regulations with industry best practices w.r.t timelines for : (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 *(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: Less than seven days in metro cities, fifteen days in other municipal areas and thirty days in rural areas - Testing of meters: Less than thirty days, of receipt of the complaint from the consumer - Replacement of meters: Less than twenty-four hours in urban areas and seventy-two hours in rural areas - Issuance of no dues certificates: Less than seven 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 - Assessing feasibility of rooftop solar installation: Less than twenty days - Connection of rooftop solar after installation: Less than thirty days from the date of submission of installation certificate	Copy of regulations notified by the regulatory commission
Predetermined demand charges for up to 150kW *(Negative 1 Marks for non-alignment)*	• Whether regulations provide for having predetermined demand charges for up to 150kW consumers	Copy of regulations notified by the regulatory commission
Applications processed through online portal *(2 Marks)*	• Number of applications for issuing a 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, except for few processes in the same office.	Data to be submitted by discom along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms

Parameter	Description & Measurement Method	Data Source
Average deviation from SoP in time taken for providing connection *(7 Marks)*	• Each class 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 regulations, 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 or REC appointed agency to validate the data basis evidence documents shared by Discoms In subsequent years, validation process to include inputs from consumer survey
Prosumers *(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 or REC appointed agency 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 or REC appointed agency to validate the data basis evidence documents shared by discoms In subsequent years, validation process to include inputs from consumer survey
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 or REC appointed agency to validate the data basis evidence documents shared by discoms
Bills generated through non-manual meter reading *(7 Marks)*	• Bills generated through non-manual meter reading process (i.e. smart meters, AMR meters, portbased/ Bluetooth/IR handheld meter reading devices, etc.) vis-à-vis total bills generated shall be calculated • On the basis of this, Discoms shall be categorized into deciles	Data to be submitted by discom along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms

Parameter	Description & Measurement Method	Data Source
Billing frequency for domestic category consumers as per regulations *(Negative1 mark for non-monthly billing)*	• Monthly billing frequency for domestic category consumers	Data to be submitted by discom along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms
Number of bills generated for domestic category consumers *(3 Marks)*	• All bills generated for all consumer under domestic category in a year	During initial year(s), data to be submitted by Discoms along with supporting documents. REC/PFC or REC appointed agency to validate the data basis evidence documents shared by discoms In subsequent years, validation process to include inputs from consumer survey
Consumers receiving billing updates on mobile *(3 Marks)*	• Percentage of consumers receiving bills on mobile • Would be measured as (Total bill related SMS received) / (No of bills received)	During initial year(s), data to be submitted by Discoms along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms In subsequent years, validation process to include inputs from consumer survey
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 • On the basis of this, Discoms shall be categorized into quartiles	Data to be submitted by discom along with supporting documents. REC or REC appointed agency 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 or REC appointed agency to validate the data basis evidence documents shared by discoms
Number of consumers paying digitally *(6 Marks)*	Percentage of consumers making payments through digital channels (net-banking, credit/ debit cards, UPI, payment wallets, etc.) vis-à-vis total number of consumers • Prepaid consumers making payments digitally to be included in calculation of the percentage	Data to be submitted by discom along with supporting documents. REC or REC appointed agency to validate the data basis Validate the data basis evidence documents shared by discoms evidence documents shared by discoms

Parameter	Description & Measurement Method	Data Source
Fault Rectification and Grievance Redressal (10 Marks)		
24x7 customer care call centre with common code '1912' *(2 Marks)*	• Coverage will be calculated as a % of consumers covered by the Toll Free 24x7 Call Centre, 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 o 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 or REC appointed agency 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 centre 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 or REC appointed agency to validate the data basis evidence documents shared by discoms In subsequent years, validation process to include inputs from consumer survey

Parameter	Description & Measurement Method	Data Source
Outage alerts through registered mobile *(2 Marks)*	• Discom shall be categorized into the following categories on the basis of outage alerts being provided by the Discom to its consumers: • Complete: If all consumers are generally being providing alerts both scheduled and unscheduled outages • Substantial: If majority of the consumers are generally being providing alerts for both scheduled and unscheduled outages • Moderate: If a majority of the consumers are generally being provided alerts for scheduled outages • Low: If some of the consumers are generally being provided outage alerts, scheduled, unscheduled or both • Negligible: If none or few consumers are being provided outage alerts, scheduled, unscheduled or both.	During initial year(s), data to be submitted by Discoms along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms In subsequent years, validation process to include inputs from consumer survey
Deviation from specified time for complaints resolution through call centre *(4 Marks)*	• Each class of complaint for which a different timeline for resolution has been specified by the state regulator shall be considered as a category • 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, weighted by the number of complaints resolved for each category	Data to be submitted by discom along with supporting documents. REC or REC appointed agency 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 or not? • Whether adequate number of Consumer Grievance Redressal Forums (CGRF) have been established. Calculated as number of CGRFs per 100,000 consumers • In initial year(s), only orders issued up to 31.3.2021 will be seen as evidence. However, in later years, actual operation of the mechanism will be seen.	Data to be submitted by discom along with supporting documents. REC or REC appointed agency to validate the data basis evidence documents shared by discoms

Annexure-E

Framework-Marking Methodology

Parameter	Unit	Marks	Scoring
Operational Reliability (45 Marks)			
Hours of Supply	Hours/day	34	Rural (Total marks for Rural = A) • Over 22 hrs (Full Marks) • Under 16 hrs (No Marks) • 16- 22 hrs (Proportionate Marks) Urban (Total marks for Urban = B) • 24 hrs (Full Marks) • Under 17 hrs (No Marks) • 17- 23 hrs (Proportionate Marks) Industrial (4 marks) • 24 hrs (Full Marks) • Under 23 hrs (No Marks) • 23 - 24 hrs (Proportionate Marks) (A + B) to constitute 30 marks where ratio of A and B is determined basis proportion of consumers (not on energy basis)
Interruption Index	Interruptions per Feeder	7	Rural (Total marks for Rural = X) • <60 (Full Marks) • >720 (No Marks) • 60 - 720 (Proportionate Marks) Urban (Total marks for Rural = Y) • <20 (Full Marks) • >420 (No Marks) • 20 - 420 (Proportionate Marks) Industrial (1 mark) • <10 (Full Marks) • >280 (No Marks) • 10 - 280 (Proportionate Marks) (X + Y) to constitute 6 marks where ratio of X and Y is determined basis proportion of feeders
DT Failure Rate	%	4	• Failure at <= 4% (Full Marks) • Failure at >14% (No Marks) • Failure 4% - 14% (Proportionate Marks)

Parameter	Unit	Marks	Scoring
Connection and Other Services (10 Marks)			
Alignment of regulations with industry best practices w.r.t timelines for (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)	Aligned with industry best practices (No Marks) • Non-alignment of any of the aspects (- 2/7 Mark each)
Presence of predetermined demand charges for up to 150kW	Yes/No	0 (-1)	• Yes (No Marks) • No (-1 Mark)
Applications processed through online portal (submission till approval)	%	2	• Highest % (Full marks) • Lowest % (No Marks) x Remaining (Proportionate Marks)
Average deviation from SoP in time taken for providing connection	%	7	• Within prescribed SOP timelines (Full Marks) • >20% Deviation from SOP (No marks) • 0 - 20% Deviation (Proportionate Marks)
Prosumers (under net or gross metering)	per lac	1	• Highest % (Full marks) • Lowest % (No Marks) • Remaining (Proportionate Marks)
Metering, Billing and Collection (35 marks)			
Average time taken for replacement of defective meters (Urban)	Days	1	• Least No. of days (Full marks) • Highest No. of days (No Marks) • Remaining (Proportionate Marks)
Average time taken for replacement of defective meters (Rural)	Days	1	• Least No. of days (Full marks) • Highest No. of days (No Marks) • Remaining (Proportionate Marks)
Bills generated based on actual meter reading	%	4	• Over 95% (Full Marks) • Under 65% (No Marks) • 65% - 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 Billing is monthly for: • All domestic consumers (No Marks) • Part domestic consumers (Proportionate Negative Marks)

Parameter	Unit	Marks	Scoring
Bills generated for domestic category consumers in a year	Number	3	All bills generated for all consumers (Full Marks) • Otherwise (Marks proportionate to average number of bills per consumer)
Consumers receiving billing updates on mobile	%	3	If Billing alerts are received for • All Bills (Full Marks) • Some Bills (Proportionate Marks)
Prepaid consumers	%	8	For 50% Marks: •If no. of prepaid consumers >=1, Full Marks (4 marks) For other 50% Marks, Relative Marking (out of 4 marks) •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)
Fault Rectification and Grievance Redressal (10 marks)			
24x7 customer care call centre with common code '1912'	Yes/No	2	• Coverage (33.33% marks of total): Proportionate for the %age covered • 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) • 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 centre	Seconds	1	• Under 30 seconds (Full Marks) • >120 seconds or no call centre (No Marks) • Remaining (Proportionate Marks)

Parameter	Unit	Marks	Scoring
Consumers receiving outage related updates on mobile	%	2	• 100% (Full Marks) • 75-100% (75% Marks) • 50 - 75% (50% Marks) • 25 - 50% (25% Marks) • <25% (No Marks)
Deviation from specified time for complaints resolution through call centre	%	4	• 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	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

Operational Reliability:

(i) Hours of Supply & Interruption Index:

Calculation Methodology for HOS (Hours of Supply) & Interruption Index			
	Availability of RFMS/NPP Data Set for HOS/Interruption Index	p* Value	Final Value
Scenario I	For all Months	p>0.05	CSRD
		p<0.05	Weighted Average (RFMS-60% & CSRD-40%)
Scenario II	Few Months (Value for Missing Month = CSRD - Deviation*)		Weighted Average (RFMS-60% & CSRD-40%)
Scenario III	No Month		HOS (Rural/Urban) = Avg CSRD (1- NAD**)

1. **p value = Value derived from T Test. If p<0.05 (5% Significance level), then two data sets are statistically significant, otherwise statistically insignificant.*
2. *Avg RFMS = Average RFMS figures for all the months for which RFMS data is available*
3. *Avg NPP = Average NPP figures for all the months for which NPP data is available*
   ***NAD = National Average Deviation (HOS/Interruption Index)-*
4. *HOS - Rural = 7% & Urban = 1.24%*
5. *Interruption Index - Rural = 7% & Urban = (-)1.24%*
6. *RFMS - Rural Feeder Monitoring System*
7. *NPP - National Power Portal*

In the CSRD exercise, we compare the annual average (calculated from the monthly figures) Hours of supply and Interruption Index from the input data sheet sent by the Discom and the RFMS data. If the difference between the two datasets is not statistically significant at 5% significance level (p value>0.05), then data from the Discom in the input data sheet shall be considered.

If the difference in the annual average hours of supply is statistically significant (p value<0.05), then, the weighted average of RFMS and Input data sheet shall be considered for Interruption Index and Hours of supply (HoS).

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-

1. Rural + Urban = 30 Marks
   Rural = 30*(Total No. of Rural consumers/ Total No. of Consumers)
   Urban = 30*(Total No. of Urban consumers/ Total No. of Consumers)
2. Industrial = 4 Marks

(ii) Aggregate DT Failure Rate = Weighted Average of (Total No. of DTs Failed/ Total No. Of DTs)
**Weighted Average is based on category wise distribution of DTs*

Connection & Other Services:

(i) **Percentage of Applications processed through online portal=** (Total No. of New Connections Released (including all categories) via Online processing/ Total No. of New Connections released) * 100

(ii) **Average deviation from SoP in time taken for providing connection Deviation=** (Average time Taken for release of connection- Average time Taken as per SOP)/ Average time Taken as per SOP
Weighted average days taken for new connection= Weighted average of the total no. of new connections released across all the categories*Deviation

(iii) **Prosumers (under net or gross metering)/per lac=** (Total number of prosumers*100000)/ Total number of consumers

Metering, Billing and Collection:

(i) **Average time taken for replacement of defective meters=** (Month wise Average no. of days taken for replacement of meters*Month wise no. of meters replaced)/ Sum of Total no. of meters replaced across all the months

(ii) **Percentage of Bills generated through actual meter readings=** (Total No. of Bills generated on actual meter readings/ Total no. of bills generated) *100

(iii) **Percentage of Bills generated through non-manual readings=** (Total No. of Bills generated through Non manual meter readings/ Total no. of bills generated) *100
Billing frequency for domestic category consumers (% of consumers with monthly billing) = (Number of domestic consumers billed monthly/ Total no. of domestic consumers) *100

(iv) **Percentage of Bills generated for domestic category consumers in a year=** (Total no. of bills generated for domestic consumer in a year/No. of bills required to be generated) *100
No. of bills required to be generated= (No. of consumers billed monthly*12) + (No. of consumers with bi-monthly billing*6) + (No. of consumers with quarterly billing*4) + (No. of other consumers with different billing frequency * Frequency of billing for other category)

(v) **Percentage of Consumers receiving billing updates on mobile=** (Consumers registered for SMS alert/ Total no. of consumer) * 100

(vi) **Percentage of Prepaid consumers=** (Total no. of prepaid consumers/ Total No. of Consumers) * 100

(vii) **Percentage of consumers paying digitally=** (Total no. of online transactions/ Total number of bills generated) * 100

Fault Rectification and Grievance Redressal:

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

(ii) **Percentage of Consumers receiving outage related updates on mobile=** (No. of consumers whose mobile numbers are registered to receive outage alerts/ Total number of consumers) * 100

Annexure-G

Acronyms

ACS	Average Cost of Supply
AMR	Automated Meter Reading
ARR	Average Revenue Realized
AT&C Losses	Aggregate Technical and Commercial Losses
CEEW	Council on Energy, Environment and Water
CGRF	Consumer Grievance Redressal Forums
CMD	Chairman and Managing Director
CoS	Connections and Other Services
CUTS	Consumer Unity & Trust Society
CSRD	Consumer Service Rating of DISCOMs
DDUGJY	Deendayal Upadhyaya Gram Jyoti Yojana
DISCOM	Distribution Companies
DT	Distribution Transformer
ERP	Enterprise Resource Planning
FRGR	Fault Rectification and Grievance Redressal
FRTU	Feeder Remote Terminal Unit
GOI	Government of India
HoS	Hours of Supply
IFMR	Institute for Financial Management and Research
II	Interruption Index
IPDS	Integrated Power Development Scheme
IRES	India Residential Energy Survey
ERC	Electricity (Rights of Consumer) 2020
J-PAL	Abdul Latif Jameel Poverty Action Lab
KPMG	Klynveld Peat Marwick Goerdeler
KV	Kilo Volt
kW	Kilo Watt
MBC	Meter, Billing and Collection
MIS	Management Information System
ML	Main Land
MOP	Ministry of Power
NFMS	National Feeder Monitoring System
NITI Aayog	National Institution for Transforming India Aayog
NPP	National Power Portal
O&M	Operations and Maintenance
OR	Operational Reliability

PIA	Project Implementing Agency
PwC	Pricewaterhouse Coopers Private Limited
QR code	Quick Response Code
QRT	Quick Response Team
RAPDRP	Restructured Accelerated Power Development and Reforms Programme
RDSS	Revamped Distribution Sector Scheme
RE	Renewable Energy
RFMS	Rural Feeder Management System
RMU	Ring Main Unit
ROs	Regional Offices
SAP	Systems Applications and Products in data processing
Saubhagya	Pradhan Mantri Sahaj Bijli Har Ghar Yojana
SC	Special Category
SOP	Standard Operating Procedures
TAT	Turn Around Time
UDAY	Ujjwal DISCOM Assurance Yojana
UTs	Union Territories
w.r.t	With Respect To

Acronyms of DISCOMs

AEML	Adani Electricity Mumbai Ltd.
APCPDCL	Andhra Pradesh Central Power Distribution Company Limited
APDA	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
CED	Central Electricity Supply Company Limited
CESC	Calcutta Electric Supply Corporation Limited
CESCOM	Chamundeshwari Electricity Supply Corporation Limited
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	Dhakshinachal Vidyut Vitran Nigam Limited
EDAN	Electricity Department, UT of Andaman & Nicobar
GED	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	Kanpur Electricity Supply Company Ltd
KPDCL	Kashmir Power Distribution Corporation Ltd
KSEBL	Kerala State Electricity Board Limited
LED	Electricity Department, UT of Lakshadweep
LPDD	Ladakh Power Development Department
MeECL	Meghalaya Energy Corporation Limited
MESCOM	Mangalore Electricity Supply Company Limited
MGVCL	Madhya Gujarat Vij Company Limited

MPED	Power & Electricity Department, Government of Mizoram
MPMKVVCL	Madhya Pradesh Madhya Kshetra Vidyut Vitran
MPPoKVVCL	MP Poorv Kshetra Vidyut Vitran Company Limited
MPPsKVVCL	MP Paschim Kshetra Vidyut Vitran Company Limited
MSEDCL	Maharashtra State Electricity Distribution Co. Ltd.
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
PGVCL	Paschim Gujarat Vij Company Limited
PSPCL	Punjab State Power Corporation Limited
PsVVNL	Paschimanchal Vidyut Vitran Nigam Limited
PuVVNL	Purvanchal Vidyut Vitran Nigam Ltd.
SBPDCL	South Bihar Power Distribution Company Limited
SPD	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

Acronym of Indian States

AN	Andaman & Nicobar
AP	Andhra Pradesh
AR	Arunachal Pradesh
AS	Assam
BR	Bihar
CH	Chandigarh
CG	Chhattisgarh
DNH	Dadra & Nagar Haveli
DD	Daman & Diu
DL	Delhi
GA	Goa
GJ	Gujarat
HR	Haryana
HP	Himachal Pradesh
JK	Jammu & Kashmir
JH	Jharkhand
KA	Karnataka
KL	Kerala
LA	Ladakh
LD	Lakshadweep
MP	Madhya Pradesh
MH	Maharashtra
MN	Manipur
ML	Meghalaya
MZ	Mizoram
NL	Nagaland
OD	Odisha
PY	Puducherry
PB	Punjab
RJ	Rajasthan
SK	Sikkim
TN	Tamil Nadu
TS	Telangana
TR	Tripura
UP	Uttar Pradesh
UK	Uttarakhand
WB	West Bengal

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