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National Smart Grid Mission
Ministry of Power
Government of India

Smart Power for Advancing Reliability and Connectivity (SPARC) Technical Assistance Program

ENHANCING CUSTOMER CENTRICITY IN THE ELECTRICITY DISTRIBUTION SECTOR

November 2020
This report is made possible by the support of the American people through the United States Agency for International Development (USAID). The contents do not necessarily reflect the views of USAID or the United States Government.

ACKNOWLEDGEMENTS

This report was prepared under USAID's Smart Power for Advancing Reliability and Connectivity (SPARC) Program. The implementing partner of the USAID SPARC Program is KPMG Advisory Services Pvt. Ltd. (KASPL).

The USAID SPARC Program would like to thank the Ministry of Power (MOP) for its vision. The Program would also like to thank Sanjay Malhotra, former Additional Secretary and Vishal Kapoor, Director – Distribution, MOP for their leadership and inputs.

The report substantially benefited from inputs provided by officials of the National Smart Grid Mission (NSGM), particularly Arun Kumar Mishra, Director, NSGM Project Management Unit, and Kumud Wadhwa, Senior General Manager, along with senior officials from Telangana Southern Power Distribution Company Limited, Kanpur Electricity Supply Company Limited and BSES Rajdhani Power Limited.

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Foreword

The United States and India's collaboration in the field of energy has always been among the strongest pillars of our bilateral partnership. The United States, through the U.S. Agency for International Development (USAID), works closely with the Ministry of Power, Government of India, and together, we have implemented some very successful programs such as the Distribution Reform, Upgrade and Management (DRUM) program in 2004 and the more recent Partnership to Advance Clean Energy-Deployment Technical Assistance (PACE-D TA) program, which ended in 2018. These programs are just two examples of our strong history of working together and how well our engineers and analysts collaborate to help progress India on its journey to a low-carbon, high-powered growth.

USAID's "Smart Power for Advancing Reliability and Connectivity (SPARC)" program, launched in 2018 in collaboration with the Ministry of Power, is yet another joint initiative that aims to advance India's power sector reforms by supporting the transformation of operational and financial performance of Indian power distribution companies (DISCOMs).

One of key focus under this bilateral program is supporting the Ministry of Power and related agencies on driving fundamental changes, including introducing market-friendly policies and regulations; building institutional and human capacities; and sharing knowledge and best practices for improving and modernizing the Indian distribution companies in India.

As a part of this program, we have developed this report "Enhancing Customer Centricity in the Electricity Distribution Sector" in partnership with the National Smart Grid Mission under the Ministry of Power. This report identifies strategies and implementation enablers for customer experience transformation in India's electricity distribution sector, and provides a comprehensive analysis of the existing processes, customers' expectations across each of the customer utility touchpoints and also suggests appropriate nudge techniques to enhance the uptake of suggested digital interventions.

Thank you to all stakeholders who contributed to this report. I am confident that this report will help DISCOMs in better engaging their customers.

USAID is proud of its partnership with the Ministry of Power and looks forward to continuing its path-breaking collaborative work to build a more secure, smart, intelligent and customer-centric electricity network in India.

Karen Klimowski

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Foreword

Transforming demographics, shift in economic power, and advancements in technology are reshaping the expectations of customers across sectors and orgnisations and corporations especially in transaction oriented business are redesgninig how they operate to move towards more customer-centric business operations. The power sector, hithetro a monomploistic and supplier dominated domain, is inching towards transactive energy scenerio thanks to Technology, ever competitive Solar and projected Storage options. Thus Power Sector is fundamnetally going to change and coupled with increased expectations of customers, the power distribution companies (DISCOMs) need to reinvent and achieve customer service excellence.

The Government of India (GOI), in the last few years, has been leading the transformative effort and made significant strides in increasing access to electricity. It has taken various reform measures including initiatives for enhancing customer convenience for availing new electricity connection, distribution of LED lamps under the UJALA program, launch of Pan-India complaint number 1912 integrated mobile application (Urja Mitra) and promotion of digital payments, among other initiatives.

A key requirement for DISCOMs and associated stakeholders today is to initiate systematic and structured interventions that not only deliver better value to the customer but also enhance the overall experience of dealing with public DISCOMs.

I am pleased to note that the USAID Smart Power for Advancing Reliability and Connectivity (SPARC) Program, in partnership with the National Smart Grid Mission (NSGM), Ministry of Power has compiled report “Enhancing Customer Centricity in the Electricity Distribution Sector”. The report provides an indepth analysis of customer-utility touchpoints and leading practices followed by DISCOMs in India and globally and sets the context for proposed interventions for enhancing customer-centricity in the electricity distribution sector. The report also draws upon learnings from leading practices followed by service providers in other sectors including banking, telecommunication, online retail, aviation, entertainment, and travel industry.

I take this opportunity to commend the entire USAID SPARC team for developing a comprehensive report providing guidance to DISCOMs and other stakeholders on how to enhance customer centricity and look forward to USAID partenering with DISCOMs in field to apply and test ways in which the proposed interventions can be achieved vis-s-vis exisitng system, processes and resources within DISCOMs.

Arun Kumar Mishra
Director, National Smart Grid Mission PMU
Ministry of Power
Government of India

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LIST OF ACRONYMS

AC	Air Conditioner
AePS	Aadhaar enabled Payment System
AJAY	Atal Jyoti Yojana
AMI	Advanced Metering Infrastructure
AMR	Automatic Meter Reading
APTEL	Appellate Tribunal for Electricity
ARRA	American Recovery and Reinvestment Act
BESCOM	Bengaluru Electricity Supply Company Limited
BESS	Battery Energy Storage System
BG	British Gas
BGE	Baltimore Gas and Electric
BHIM	Bharat Interface for Money
BRPL	BSES Rajdhani Power Limited
BSES	Bombay Suburban Electric Supply
BU	Billion Unit
BYPL	BSES Yamuna Power Limited
CAPEX	Capital Expenditure
CEA	Central Electricity Authority
CEEW	Council on Energy, Environment and Water
CERC	Central Electricity Regulatory Commission
CESC	Calcutta Electric Supply Corporation
CGRF	Consumer Grievances Redressal Forum
CII	Confederation of Indian Industry
CIS	Customer Information System
COVID - 19	Corona Virus Disease 2019
CSR	Corporate Social Responsibility
CTI	Computer Telephony Integration
DBT	Direct Benefit Transfer
DER	Distributed Energy Resources
DERC	Delhi Electricity Regulatory Commission
DEWA	Dubai Electricity & Water Authority
DHBVN	Dakshin Haryana Bijli Vitran Nigam

DISCOM	Electricity Distribution Company
DR	Demand Response
DT	Distribution Transformer
DTE	Detroit Edison
DTH	Direct-to-Home
DVD	Digital Video Disc
EE	Energy Efficiency
EESL	Energy Efficiency Services Limited
EHT	Extra High Tension
EM&V	Evaluation, Measurement & Verification
EMI	Equated Monthly Instalment
EV	Electric Vehicle
FAQ	Frequently Asked Question
FEDCO	Feedback Energy Distribution Company Ltd.
FIs	Financial Institutions
FOR	Forum of Regulators
FP&L	Florida Power & Light
FSA	Financial Service Authority
GB	Great Britain
GOI	Government of India
GST	Goods & Service Tax
GW	Gigawatt
HAREDA	Haryana Renewable Energy Development Agency
HDFC	Housing Development Finance Corporation
HER	Home Energy Report
HERC	Haryana Electricity Regulatory Commission
HT	High Tension
I&M	Indiana Michigan Power
IBM	International Business Machines
ICICI	Industrial Credit and Investment Corporation of India
IEA	International Energy Agency
IEGC	Indian Electricity Grid Code Regulations
IMPS	Immediate Payment Service
INR	Indian National Rupees
IOS	iPhone Operating System
IPPB	India Post Payments Bank
IVRS	Interactive Voice Response System
JVVNL	Jaipur Vidyut Vitran Nigam Limited
KERC	Karnataka Electricity Regulatory Commission

kW	Kilowatt
KYC	Know Your Customer
LED	Light Emitting Diode
LT	Low Tension
MP	Madhya Pradesh
MAIFI	Momentary Average Interruption Frequency Index
MANIREDA	Manipur Renewable Energy Development Agency
MERC	Maharashtra Electricity Regulatory Commission
MNRE	Ministry of New and Renewable Energy
MOP	Ministry of Power
MP&W	Muscatine Power & Water
MPUVNL	Madhya Pradesh Urja Vikas Nigam Limited
MRI	Meter Reading Instrument
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MSPDCL	Manipur State Power Distribution Company Limited
MW	Megawatt
NEFT	National Electronic Funds Transfer
NGO	Non-Governmental Organization
NOC	No Objection Certificate
NV Energy	Nevada Energy
O&M	Operation & Maintenance
OFGEM	The Office of Gas and Electricity Markets
OG&E	Oklahoma Gas & Electric
OMS	Outage Management System
PCS	Public Charging Stations
PG&E	Pacific Gas & Electric
PM KUSUM	Pradhan Mantri Kisan Urja Suraksha evem Utthan Mahabhiyan
PNB	Punjab National Bank
POS	Point of Sale
PPA	Power Purchase Agreement
PV	Photovoltaic
PVVNL	Paschimanchal Vidyut Vitran Nigam Limited
QR	Quick Response
Rinfra	Reliance Infrastructure Limited
RTGS	Real Time Gross Settlement
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SBI	State Bank of India
SCE	Southern California Edison

SEFALI	Society's Empowerment for Assuring Livelihood
SERC	State Electricity Regulatory Commission
SIM	Subscriber Identity Module
SKY	Suryashakti Kisan Yojana
SMC	Surat Municipal Corporation
SMS	Short Message Service
SOP	Standards of Performance
SPARC	Smart Power for Advancing Reliability and Connectivity
SRISTI	Sustainable Rooftop Implementation for Solar Transfiguration of India
SRT	Solar Roof Top
SSE	Scottish and Southern Energy
T&D	Transmission & Distribution
TEPCO	Tokyo Electric Power Company
ToD	Time-of-Day
TPDDL	Tata Power Delhi Distribution Limited
UAE	United Arab Emirates
UHBVN	Uttar Haryana Bijli Vitran Nigam
UP	Uttar Pradesh
UPERC	Uttar Pradesh Electricity Regulatory Commission
UPI	Unified Payment Interface
US DoE	United States Department of Energy
USAID	United States Agency for International Development
USD	United States Dollar
UT	Union Territory
V2G	Vehicle-to-Grid

EXECUTIVE SUMMARY

Background

Customer centricity is increasingly becoming an intrinsic part of business strategy. Customers today are better informed and have higher expectations from their service providers. This is mainly driven by changing demographics, an economic shift, and technological advancements that are reshaping the market dynamics. Customers have become more demanding due to the seamless experience provided by various service providers such as an omnichannel interface, 24/7 customer care services, personalized services, etc. Several sectors that were previously served by monopolies have transitioned to competitive markets (e.g. telephone services, airlines, banks, broadband and cable television services, etc.). Customers of these sectors have the freedom to make choices. This trend is putting pressure on other sectors such as electricity to enhance customer experience as well. Electric utilities need to respond to the changing market trends and move towards more customer-centric business operations.

International brands such as Amazon, Google, Toyota, Netflix, etc., known for their exceptional customer services, can provide great lessons to electric utilities as they strive to make customer interactions personal, seamless and frictionless. For example, Amazon helps its customers to make purchase decisions by allowing them to post and read reviews on their website. Google provides personalized feeds and updates (news, search results, videos, etc.) to its users. Toyota's "customer first and quality first" principles are designed to "pull" customer's feedback through various personalized "touch-points" to drive innovation and ensure quality. Netflix[1] logs and analyzes every customer interaction to predict viewing preferences and deliver personalized recommendations. Similarly, electric utilities need to revisit the business processes and provide enhanced value-added as well as customer-centric services such as data analytics, energy management solution, home automation, flexible payment options, multimedia interaction platforms (including chatbots, interaction through social media, mobile applications, etc.), among others.

The COVID-19 pandemic has brought to the fore the need for enhanced customer centricity for electric utilities across the globe. Proactive initiatives of utilities to ensure business continuity have led to adoption of new and innovative ways to engage and help customers in these difficult times. Many utilities are offering free services, providing customized financing solutions for payment of bills, and are setting up dedicated facilities to address customer concerns. Harnessing cutting-edge technology and digital platforms can unleash a completely different customer experience for electricity customers and redefine the supplier-customer relationship.

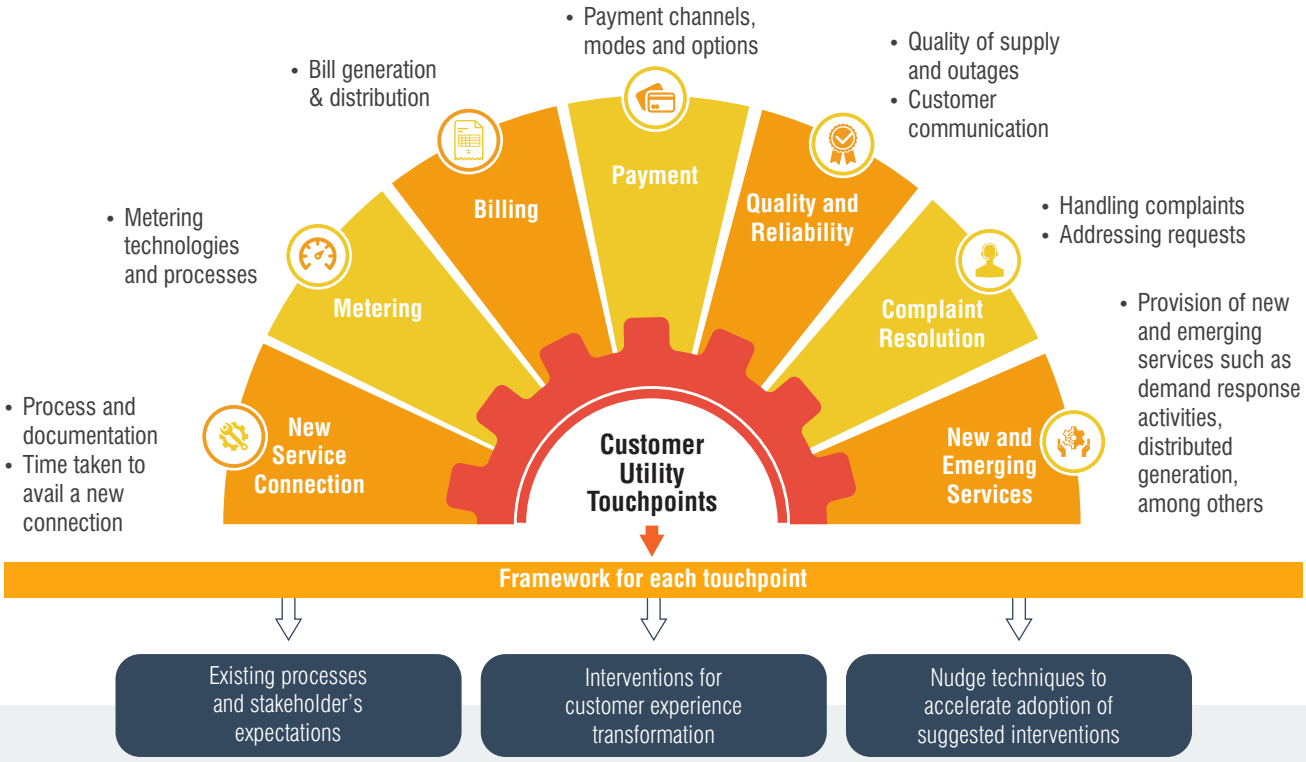
In this context, the U.S.-India bilateral program, Smart Power for Advancing Reliability and Connectivity (SPARC)[2], conducted a study on "Enhancing Customer Centricity in the Electricity Distribution Sector". The study was carried out to identify relevant strategies and implementation enablers for enhancing customer experience. This report provides an in-depth analysis of existing consumer-utility touchpoints and suggests interventions for enhancing customer-centricity in the electricity distribution sector.

[1] https://www.forbes.com/sites/anthonysmith/2017/12/12/how-to-create-a-customer-obsessed-company-like-netflix/#222622d76d22, last accessed on 11th January 2020

[2] The United States Agency for International Development launched the SPARC Program in partnership with the Ministry of Power, Government of India in 2018. SPARC is a three-year (September 2018-September 2021) initiative that focuses on the transformation of operational and financial performance of electricity distribution utilities. The implementing partner of the SPARC program is KPMG Advisory Services Pvt. Ltd.

Approach

Figure 1: Framework for Study on Customer Centricity



Summary of key findings

As a part of this study, the USAID SPARC Program team identified a set of interventions for customer experience transformation across all major utility-customer touchpoints—from availing new service connection to metering, billing, payment, quality, grievance redressal and emerging services. These interventions were identified based on detailed analysis of existing processes, customers' expectation and discussions carried out with the various utilities. A brief overview of proposed interventions is shown in Table 1.

Table 1: Overview of proposed interventions for customer experience transformation

Stakeholder's Expectations	Evidence	Leading Practices	Suggested Interventions
1. New Service Connection			
• Responsive parameters in the application form • Fast track procedure • Best-in-class services	• Application form requires inputs on 50-70 parameters, and it takes 30-45 minutes to complete. • In some cases, customer needs to provide technical information like estimated load and nearest pole number which is difficult to identify. • In FY2018-19, average time taken for availing an electricity connection in India was 53 days—the same in Singapore and United Arab Emirates (UAE) was 23 and seven days respectively.[3] • Utility officials visit customer's premises for site inspection.	• In the U.S. and UK, application forms require inputs on 20-30 parameters, and it takes 15-20 minutes to complete. • Under the "Tatkal" scheme, citizens can obtain passports in one to three days. • A new telecom connection can be activated in one to two hours. • Kotak Mahindra Bank provides instant/door-step account opening services. • Specialized training on customer management is provided by Orlando Airport authority to its staff.	✓ Simplify the application form—seek minimum information from customers and provide default values, wherever possible. ✓ Provide door-step assistance to apply for a new connection. ✓ Reduce the number of steps for issuing a new connection – revisit Standards of Performance (SOP) regulations. ✓ Train the utility staff on customer management and behavior.
2. Metering			
• Consumption monitoring • Customer choice • Building trust • No disconnection – in case of unresolved complaints	• Most of the existing meters do not capture hourly consumption data. • Customers do not have any choice of pre-paid or post-paid connection. • Physical meter reading is prone to human errors. • Utilities with smart meters—Bihar and Uttar Pradesh (U.P)—were able to achieve 95% billing efficiency during the lockdown period. • In most cases, regardless of the dispute resolution status, customers have to pay the entire bill, or the amount based on average consumption of past three-six months to avoid disconnection.	• Customers can monitor hourly data usage for mobile phones. • In telecom sector, users have the option of pre-paid or post-paid connections. • Tata Power Delhi Distribution Limited (TPDDL) introduced a self-meter reading services extended by Delhi Electricity Regulatory Commission (DERC) during the lockdown period. • U.S. laws restrict the financial service providers to close customer account (in case of pending disputes).	✓ Initiate large-scale deployment of Advanced Metering Infrastructure (AMI) to enable remote meter reading and consumption monitoring. ✓ Provide self-meter reading option to customers (for customers who do not have smart meters). ✓ Provide customers with an option to avail pre-paid or post-paid connections (once AMI programs are planned). ✓ Develop a mechanism to avoid disconnection in case of pending meter accuracy related complaints. The disputed amount should be payable only after resolution of complaints.
3. Billing			
• Flexible billing cycle • Timeliness and accuracy	• Billing cycle for customers is decided by respective state regulators.	• In the banking sector, customers can select payment due date for their credit cards.	✓ Provide customers with an option to select/change their billing period.

[3] FY 2018-19 estimates: World Bank ease of getting electricity index - https://www.doingbusiness.org/en/data/exploretopics/getting-electricity, last accessed on 9th March 2020

Stakeholder's Expectations	Evidence	Leading Practices	Suggested Interventions
	• Various studies have shown that many customers do not receive electricity bills regularly. As per a study conducted in rural areas, about 22% of rural customers reported that they do not receive regular bills[4]. • A study conducted by the Council on Energy, Environment and Water Environment (CEEW) revealed that about 23% of rural customers mentioned that their billing frequency was more than three months. • A World Bank study revealed that issues related to bill inaccuracy contributed to the 2nd highest number of grievances. • The Forum of Regulators (FOR) has issued a model bill format but many Electricity Distribution Companies (DISCOMs) are yet to adopt.	• Regular billing has become a norm in many other sectors i.e. telecom, banking, Direct to Home (DTH) services, etc. • Long Island Power Authority (a U.S.-based electric utility) provides financial incentives to its customers to enroll for digital bills. • SSE (a UK-based electric utility) provides information on a range of topics (like energy saving tips, benchmark consumption levels, etc.) in electricity bills.	✓ Nudge customers to opt for digital bills: (i) make it as default option; (ii) send periodic reminders; and (iii) share information on how many customers have opted for digital bills. ✓ Re-design bill formats and include information on energy saving tips, benchmark consumption, Quick Response (QR) code for payment, etc. ✓ Implement a Know-Your-Customer (KYC) campaign to provide seamless customer services and enable Direct Benefit Transfer (DBT).
4. Payment			
• Enhanced collection efficiency • Financing options for bill payment • Convenience of payment	• At all India level, bill collection efficiency was 97% in FY-19. It was further impacted during the COVID-19 led lockdown period (April 2020) – reaching to 20%-40%. • Few DISCOMs (TPDDL, BSES Yamuna Power Limited (BYPL), etc.) provide financing option for payment of electricity bills. • In some rural areas, customers have to travel long distances for payment of bills. • DISCOMs in some states levy processing charges for digital payment. These may be as high as 0.8% of transaction value.	• TPDDL in collaboration with HDFC Bank offers a utility credit card exclusively for bill payment. • Bajaj Finance Ltd. has launched #BijliOnEMI initiative wherein customers buying air-conditioners (ACs) on Equated Monthly Installment (EMI) can avail an instant credit in their 'wallet' which can be used to pay electricity bills on EMI. • Utilities in the UK and U.S. provide incentives to customers for enrolling for direct debit (autopay) programs. • Many banks in India provide door-step payment/collection services through Aadhaar Enabled Payment System (AePS). They have delivered ~INR 412 crore (USD 54.5. million) in rural areas during the lockdown period (April 2020).	✓ Collaborate with banks and Financial Institutions (FIs) to provide financing options for payment of bills. ✓ Enable multiple payment avenues including digital payment channels (such as e-wallets, payment banks, net banking, etc.), 24/7 collection centers, door-step collection, etc. for consumer categories. ✓ Nudge customers to opt for digital payment: highlight the benefits, provide financial incentives and enable social comparison by sharing information on how many customers pay bills through digital modes of payment. ✓ Establish targeted assistance programs to help underprivileged: collaborate with large corporates (leveraging Corporate Social Responsibility (CSR) funds) and Non-

[4] https://www.psrindia.com/Upload/Resource/Brochures/Document/Enhancing%20Effectiveness%20of%20Rural%20Electrification%20Programmes20190113132751732.pdf, last accessed on 21st February 2020

Stakeholder's Expectations	Evidence	Leading Practices	Suggested Interventions
		• Many utilities in the UK (British Gas, npower, etc.) have set up charitable trusts offering grants to customers who are unable to pay.	Governmental Organizations (NGOs).
5. Quality and Reliability			
• Reliable power supply • Timely and relevant information about outages	• The average monthly duration of outages in urban areas was 0-43 hours during Feb 19 to March 20 (in different states).[5] • Lack of one-to-one communication related to outages often leads to inconvenience and loss of productivity. • SOP regulations across states includes quality and reliability parameters, however these are not adequately measured and monitored.	• DTE Energy, (electric utility in the U.S.), provides weather advisory and real time updates during outages to its customers. • PG&E (electric utility in the U.S.) equips its field crew with emergency equipment such as water bottles, flashlights, etc. to help customers with no power. • The Indian Airline industry offers compensation (USD 160-300) in case of flight delays/cancellation.	✓ Avoid planned outages during working and non-working days for industrial/commercial and domestic customers respectively. ✓ Adopt a proactive approach and one-to-one communication strategy to inform customers about outages. ✓ Inform customers about the compensation they are eligible for, due to delay in restoration of supply. ✓ Reassess SOP regulations and parameters coupling them with clear description of method of measurement (basis the physical infrastructure at the utility) and strict compliance.
6. Complaint Resolution			
• Convenient process to register complaints • Prompt resolution	• Many DISCOMs do not have an official account on social media (i.e. WhatsApp, twitter, Facebook, etc.). • Complaint resolution process involves multiple steps: call center executives are not empowered enough.	• TPDDL and BSES accept complaints through WhatsApp. • E-commerce players such as Amazon have set new benchmarks for complaint resolution by introducing "no question asked return" policy. • Customer service team of Bonobos (a leading garment company in the U.S.)—known as *'Ninja'*—is empowered to take any decision (including returns, compensation, etc.) to ensure customer satisfaction.	✓ Start with a basic centralized customer care call center equipped with modern facilities such as Interactive Voice Response (IVRS), Computer Telephony Integration (CTI), and automatic call distributor implemented for optimum routing of consumer calls. ✓ Provide multiple options for complaint registration—through website, chat-bot, social media, mobile application, etc. ✓ Reduce the number of steps involved in complaint resolution process. ✓ Send regular updates to customers about the complaint. ✓ Nudge customers (through regular messages) to register complaints through digital channels like mobile application or website.

[5] https://npp.gov.in/dashBoard/rd-map-dashboard, last accessed on 31st May 2020

Stakeholder's Expectations	Evidence	Leading Practices	Suggested Interventions
7. Demand Response (DR)			
• Increase tariff choices • Revenue neutrality • Convenience of participation	• Offering multiple tariff plans has helped energy suppliers (such as British Gas and SSE) in the UK to retain customers. • Electric utilities in the U.S. provided USD 1.1 billion[6] as incentives for implementing DR programs in 2018. This led to peak demand reduction of 12-13 gigawatt (GW) and annual energy saving of 1.4 billion units (BU).[7] • During a pilot project implemented by BYPL, customers were able to save INR 100 - 400 (USD 1.3 - 5.3) per DR event. • Most of the pilot DR projects implemented in India have been revenue-neutral by design.	• FP&L (electric utility in the U.S.), provides financial incentives to residential customers to participate in auto DR programs. • Financial incentives of INR 1.00 - 2.25 (USD 0.01 - 0.02) per unit of energy saving were provided to customers during the pilot DR programs implemented in India. • BYPL created a WhatsApp group to inform customers about DR events.	✓ Provide pricing options to customers. ✓ Nudge customers to alter their consumption behavior to enhance system efficiency.
8. Distributed Energy Resources (DER)			
• Financing - capital expenditure • Convenient enrollment processes • Enhanced awareness	• All DER projects are capital intensive. The cost of setting-up a 5-kW solar Photovoltaic (PV) rooftop plant varies from INR 1.2-1.6 lakhs (USD 1,590 - 2,120) in India. • Lead time for obtaining approval for net-metering varies from one to three months in some states such as Madhya Pradesh (M.P.), Odisha, Maharashtra, etc.[8] • Many studies have identified low awareness as a key barrier for large-scale deployment of solar rooftop projects.	• Few DISCOMs (like BYPL and TPDDL) and banks (State Bank of India (SBI), Punjab National Bank (PNB), etc.) are providing financing solutions to customers for installation of solar rooftop projects. • E.ON, (a German electric utility) has provided an online tool wherein customers can locate their house, access specific information like capital cost, generation potential, suppliers, etc.	✓ Enhance awareness and nudge customers to install DER projects: spread information related to environment and cost benefits. ✓ Collaborate with banks and FIs to provide financing options for setting-up DER projects. ✓ Simplify the processes of application and approvals for net-metering. ✓ Provide one stop solution for all the services related to DER including assessment, procurement, approvals, installation, etc.
9. Other New and Emerging Services			
• Enhanced non-tariff income to leverage existing network and share part benefits with customers	• Many State Electricity Regulatory Commissions (SERCs) have provided incentives to DISCOMs to explore innovative ways of increasing their non-tariff revenues. For instance, DERC allows DISCOMs to keep 40% of the revenue earned from other businesses if regulated assets are used.	• Several utilities (Dodo, Amaysim, Origin, Commander and Sumo Power) in Australia offer electricity and gas services along with internet and phone plans. • Sacramento Municipal Utility District (an electric utility in the U.S.), has created an e-commerce marketplace of energy-efficient products.	✓ Explore cross-sector partnerships to leverage expertise and network of existing market players. DISCOMS can provide additional services to customers such as establishing marketplace for selling energy efficient appliances, setting-up Electric Vehicle (EV) charging infrastructure, providing home automation systems, etc.

[6] https://www.eia.gov/electricity/annual/html/epa_10_09.html, last accessed on 5th June 2020
[7] https://www.eia.gov/electricity/annual/html/epa_10_08.html, last accessed on 5th May 2020
[8] Study on Decentral energy and DISCOMs - Can They Co-exist? Conducted by CII and BCG

Stakeholder's Expectations	Evidence	Leading Practices	Suggested Interventions
		• Some utilities in India like TPDDL, BRPL, Tata Power, BYPL, etc. are providing energy efficient appliances like ACs, fans, etc. to customers at negotiated prices.	

CHAPTER 1

BACKGROUND OF THE STUDY

Customer centricity is increasingly becoming an intrinsic part of business strategy. Customers today are better informed and have higher expectations from their service providers. This is mainly driven by changing demographics, an economic shift, and technological advancements that are reshaping the market dynamics. Customers have become more demanding due to the seamless experience provided by various service providers such as an omnichannel interface, 24/7 customer care services, personalized services, etc. Several sectors that were previously served by monopolies have transitioned to competitive markets (e.g. telephone services, airlines, banks, broadband and cable television services, etc.). Customers of these sectors have the freedom to make choices. This trend is putting pressure on other sectors such as electricity to enhance customer experience as well. Electric utilities need to respond to the changing market trends and move towards more customer-centric business operations.

Lessons from International Brands

International brands such as Amazon, Google, Toyota, Netflix, etc., known for their exceptional customer services, can provide great lessons to electric utilities as they strive to make customer interactions personal, seamless and frictionless. For example, Amazon helps its customers to make purchase decisions by allowing them to post and read reviews on their website. Google provides personalized feeds and updates (news, search results, videos, etc.) to its users. Toyota's "customer first and quality first" principles are designed to "pull" customer's feedback through various personalized "touch-points" to drive innovation and ensure quality. Netflix[9] logs and analyzes every customer interaction to predict viewing preferences and deliver personalized recommendations. IBM introduced a hybrid method for product development that engaged customers to use the software or service from start to finish during the development phase and demonstrated the state of the proposed solution.[10]

Similarly, electric utilities need to revisit the business processes and provide more value-added as well as customer-centric services such as data analytics, energy management solution, home automation, flexible payment options, multimedia interaction platforms (including chatbots, interaction through social media, mobile applications, etc.), among others.

India's energy policy landscape has evolved from the model of electricity being served by monopolies to a newer version in which large customers (with 1 MW and above sanctioned load) can purchase electricity from open markets (under the open access regulations). Various state governments have notified net metering policy which allows customers to generate power locally (through solar rooftop) and even sell the excess power to the DISCOMs. In addition, DISCOMs are now adapting new strategies to provide seamless customer experience. The Government of India (GOI) is considering introducing retail competition in the power sector which will lead to innovative mechanisms for consumer engagement. This includes the provision of 24/7 customer care centers (Maharashtra, Delhi), installation of smart meters (U.P., Haryana, and Bihar), promotion of digital payments (nearly all the states), among others. While these interventions can help in improving customer service, there is a huge scope to significantly enhance overall customer satisfaction through implementation of structured interventions across key utility-customer touchpoints and accelerate their uptake through appropriate nudges.

The India Economic Survey 2019 specifies the adoption of the right tools such as nudges, mandates, etc. for influencing customer behavior. Such influences or nudges can not only deliver better value to the customer but also enhance their overall experience of dealing with utilities. Application of such nudge techniques is common in various sectors across the world. Many countries (including the U.S., UK, Australia, Japan, etc.) have set up dedicated units to use behavioral insights for effective decision making.

[9] https://www.forbes.com/sites/anthonysmith/2017/12/12/how-to-create-a-customer-obsessed-company-like-netflix/#222622d76d22, last accessed on 11th February 2020

[10] https://hbr.org/2015/06/how-ibm-intuit-and-rich-products-became-more-customer-centric, last accessed on 5th December 2019

The COVID-19 pandemic has brought to the fore the need for enhanced customer centricity for electric utilities across the globe. Proactive initiatives of utilities to ensure business continuity have led to adoption of new and innovative ways to engage and help customers in these difficult times. Many utilities are offering free services, providing customized financing solutions for payment of bills, and are setting up dedicated facilities to address customer concerns. Harnessing cutting-edge technology and digital platforms can unleash a completely different customer experience for electricity customers and redefine the supplier-customer relationship.

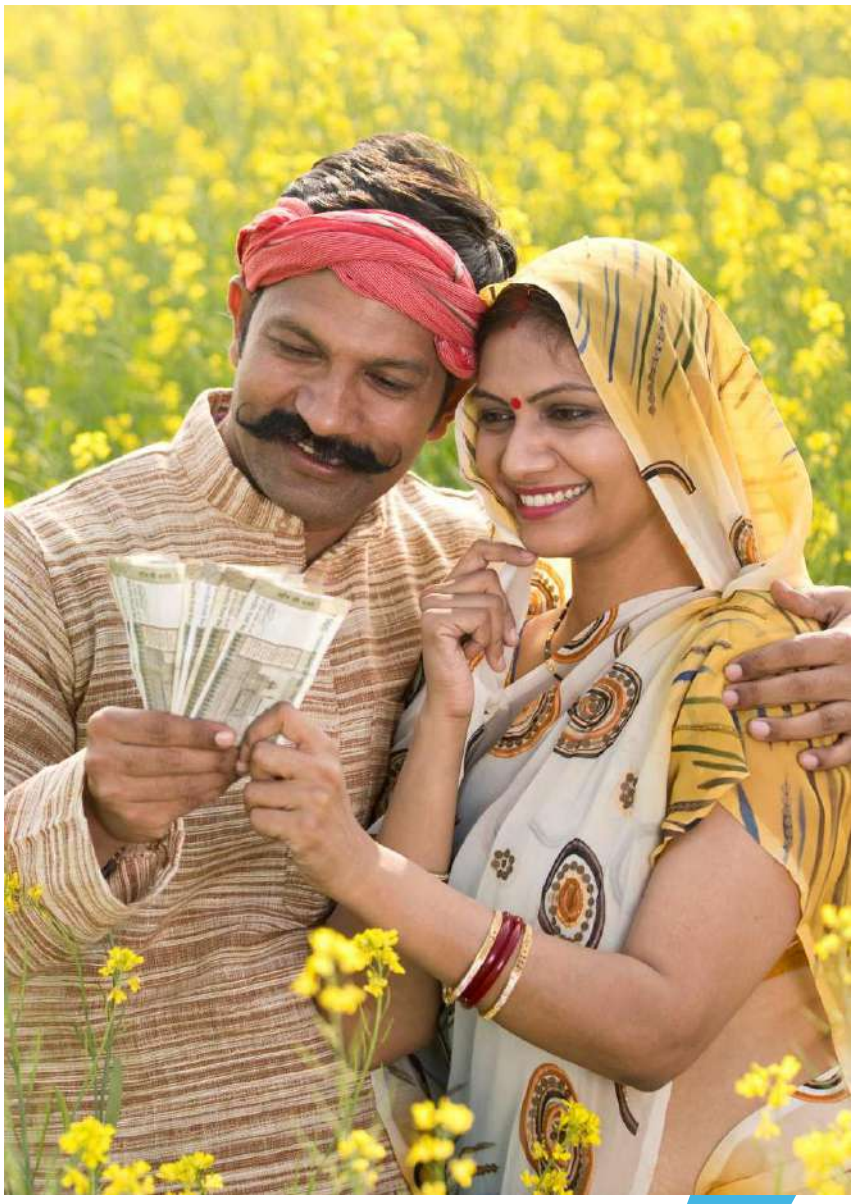
In this context, the U.S.-India bilateral SPARC Program undertook a study to identify the strategies and implementation enablers for customer experience transformation in India's electricity distribution sector. The key objectives of this study were to:

- Identify key customer-utility touchpoints and analyze existing processes followed by the DISCOMs,
- Identify interventions required for enhanced customer experience across each touchpoint, and
- Suggest appropriate nudge techniques for accelerated adoption of identified interventions.

The key findings of the study along with suggested interventions have been captured in this report.

Implementation of identified interventions will lead to higher participation from customers in utility-led initiatives and significant improvement in satisfaction levels of customers. This will facilitate in forging a trusting utility-customer relationship and streamline implementation of future programs in the power sector.

CHAPTER 2



CUSTOMER EXPERIENCE

FRAMEWORK