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**DISTRIBUTION
UTILITY MEET
DUM 2020**



GOVERNMENT OF INDIA
MINISTRY OF POWER

DISTRIBUTION UTILITY MEET (DUM) 2020

SESSION ON 250 MILLION SMART METERS

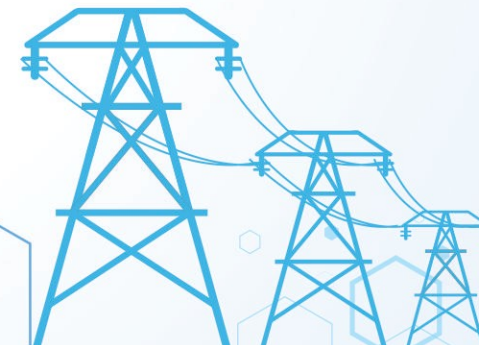
28 November 2020

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PARC

Smart Power for
Advancing Reliability
and Connectivity



AMI Market Landscape



Target

GOI Target:
250 million smart pre-paid meters in 3 yrs

Investment:
USD 20 billion



Benefits

Deployments in NDMC, UP, Bihar, etc. realized benefits

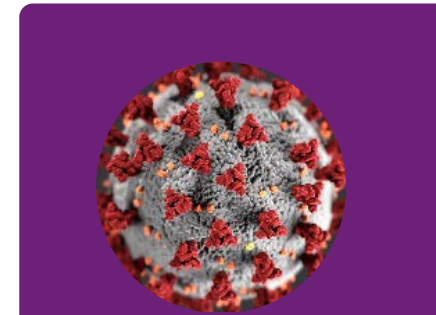
Avg. rev increase vs. cost per consumer per meter in UP– 200 vs. 85; and NDMC 500 vs. 85 respectively



Model

DBFOOT/Totex & CAPEX models feasible

Standard bid documents for appointment of AMI Service Providers released by NSGM



Resilience

COVID-19 pandemic amplified the imp. of smart metering

Smart meter-enabled DISCOMs maintained 90% billing eff. during lockdown – avg. rev/consumer ↑ 15-20%



Potential

Bangladesh – tender for 100k smart meters already awarded by DPDC – another 750 k to be deployed soon (net target 1.4 Mn)

Bhutan – plans to accelerate smart meter – integration with DRE

Consultative Approach at Center of National Rollout Strategy

USAID SPARC Program supported the MOP, GOI organize a “Consultative Workshop on National Rollout of Smart Prepaid Metering” in Nov. 2019

7 Thematic Areas

Utility Exp, Challenges & Learning

Delivery & Business Model

Financing & Implementation

System Integration & Cyber Security

Regulatory Environment

Metering, Comms. & Interoperability

Data Management, Privacy & Analytics

130+ participants & 30+ presentations

Utilities (State + Pvt)

UP, Bihar, MP, CESC, TPDDL, Adani, etc.

Central Agencies

CEA, NSGM, EESL, PFC, REC, NTPC, etc.

Industry Associations

IEEMA, COAI, CII, DSCI

Meter Manufacturers

Secure, Landys, Genus, Siemens, etc.

System Integrators

L&T, WIPRO, GE, EDF

Comm, MDM ,Analytics

Kalkitech, JIO, Trilliant, CyanConnote

Think Tanks & Acad.

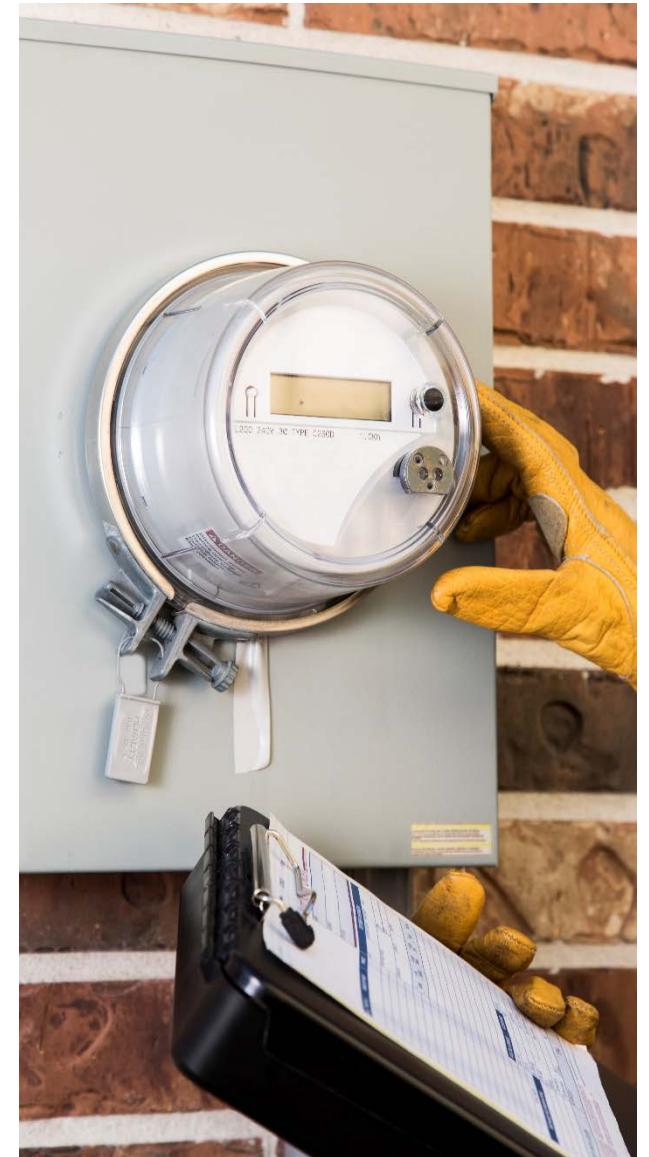
Brookings, Prayas, IIT Kanpur, CER, ISGF

Bi/Multi-Lateral Org

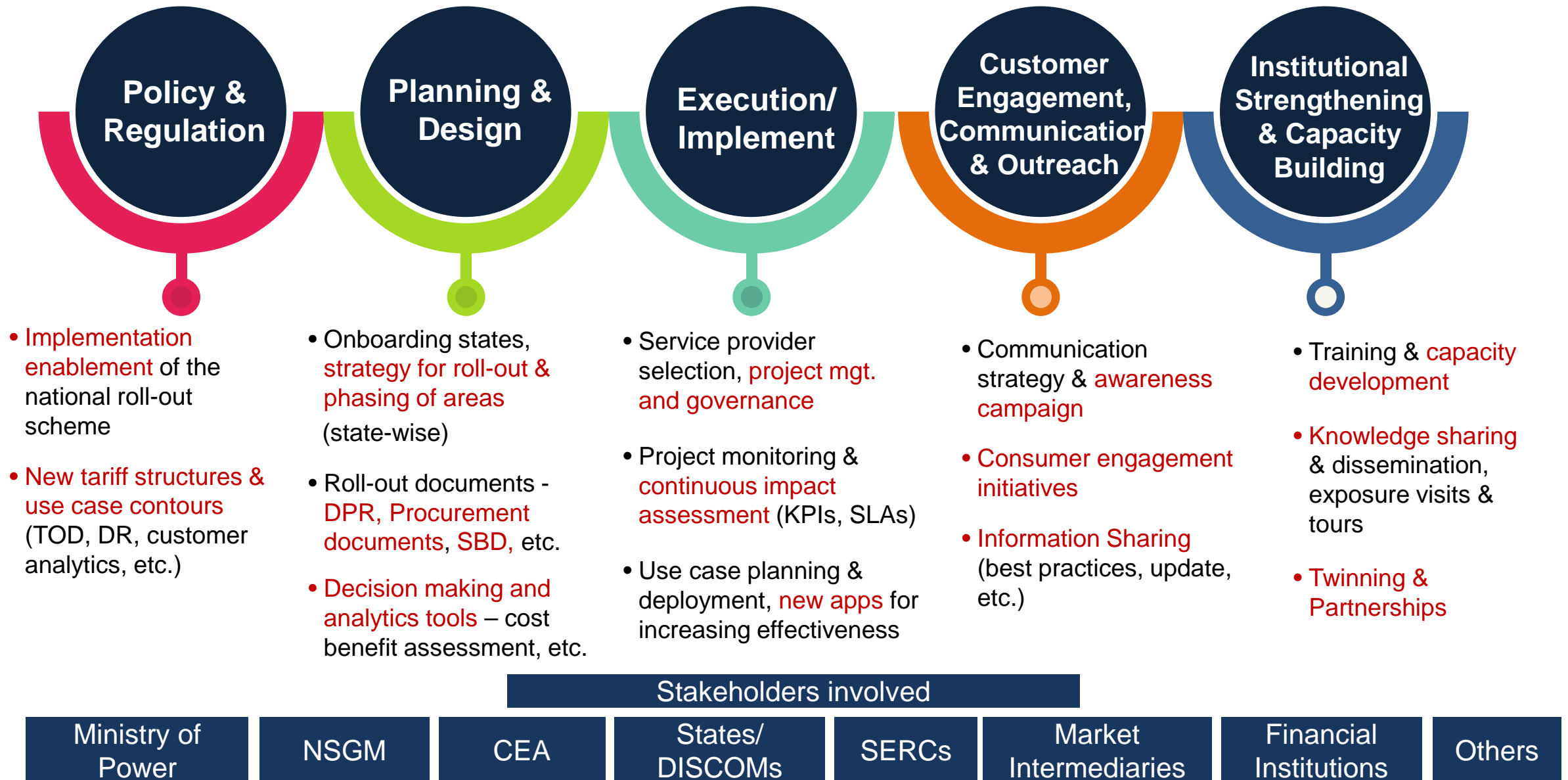
USAID, World Bank, ADB

Key Considerations for National Rollout

1. **End to end AMI service provider** preferred over separate procurement of meters, and communication or SI - enables optimizing time and minimizing coordination.
2. **Industry has the capacity** to supply however volume visibility is needed.
3. **Cost benefit and business case** should be developed upfront and should form basis of area selection. During COVID time utilities that had smart metering were able to maintain their billing efficiency, and consequently the collections.
4. **Service based or TOTEX mode** preferred due to limitation of utilities to fund capex.
5. Vendor should be **free to choose any communication technologies**, however, should commit to the Service Level Agreements.
6. **Cloud-based MDM systems preferred** as they are quick to deploy, modular, and can be upgraded remotely.
7. **Leveraging the data is critical** so develop use cases that support this.
8. **Customer engagement is critical** right from the beginning of the project.



Implementation Enablement Requires a Range of Actions



USAID - A Key Partner in GOI's Smart Grid Journey

PACE-D TA PROGRAM: A 6 yrs U.S.-India bilateral program (2012-2018) to accelerate clean energy deployment (with Smart Grid as a key component)

Key Smart Grid Activities



Model Smart Grid Regulations



2 GOI Smart Grid pilot projects - Ajmer & Tripura



Cost-Benefit Analysis of 2 GOI Smart Grid pilot projects



Capacity Building – 3-day SG Course, SG Film, international study trips, dissemination workshops, opinion papers



NSGM Implementation Framework



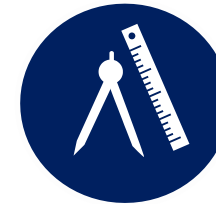
Insights from pilot projects for scaling-up Smart Grid in India

SPARC PROGRAM: A 3 yrs. U.S.-India bilateral initiative ((2018-2021) to support modernization of electricity distribution sector

Key Activities



SBD for smart prepaid meter rollout in DBFOOT model



Investment analysis tool for Smart Grid projects



EV charging infra, new rev. model for DISCOMs



Private participation models in distribution



SGKC – COE in Smart Grid technologies



250+ people trained in Smart Grid & other emerging areas

Thank You

Panel Discussion

1. **Rajesh Gowda**, MD, BESCOM
2. **Sylvain Jouanneau**, Director, EDF
3. **A P Singh**, Head-IT, UPPCL
4. **Deepti Dutt**, Amazon Web Services
5. **Anurag Johri**, Senior Principal Utilities, Accenture in India
6. **Dwijadas Basak**, Chief Commercial, Tata Power Delhi Distribution Ltd
7. **Bikash Dewan**, Managing Director, Dhaka Power Distribution Company
8. **Nerendra D'Silva**, Head of Engineering, Lanka Electricity Company
9. **Anant Venkateswaran**, Director of ISGF Master Classes

Thank You

About the Program:

The Smart Power for Advancing Reliability and Connectivity (SPARC) is a three year bi-lateral program of the USAID with the Ministry of Power, Government of India. The objective of the program is to modernize electricity distribution utilities to improve their operational and financial performance. The implementing partner of the SPARC program is KPMG Advisory Services Pvt. Ltd.

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