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India Smart Grid Forum

DISTRIBUTION UTILITY MEET
DUM 2024

# Session 5 : SPECIAL PLENARY SESSION – SUSTANABILITY OF DISCOMS

***Presented By***

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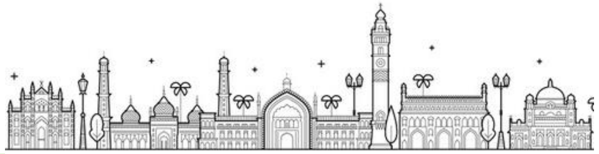

# Key Regulatory Challenges

- Key Regulatory Challenge are :

  - *Disruptive Technologies: Falling costs of distributed energy resources (DER), development of new DER technologies and increasing digitalisation*
  - *Government Policy Directions: Incentivize selected technologies and promote de-carbonisation, Green Energy Open Access, Formula for Green Electricity Tariff, Resource Adequacy*
  - *Systemic Issues: Tariff Setting Process*
  - *Stake-holders' Behaviour (Consumers' Choice): DER technologies along with digitalisation gives consumers a choice whether to stay with DISCOMs or migrate to non-DISCOM sources*

# Disruptive Technologies

- As the cost curve for disruptive DER technologies improves, it gives consumers the options for procuring green electricity – source from the grid, self generate or source from third party
- In addition, to promote the growth of these technologies in the near-term as a part of de-carbonisation drive, policymakers are encouraging disruptive competing energy sources through various subsidy programs, tax incentives, renewable purchase obligations and net metering, so that the pricing structure allows customers to engage in the use of new technologies
- Due to variable nature of DER, consumers may remain on the grid, but only till such time as a fully viable and economic distributed non-variable resource is available - battery storage technology or micro turbines could allow customers to be grid independent
- Providing interconnection and back-up supply for variable resources or the lost load and consequent lost revenues add to utility cost burden

# Government Policy Directions

Green Open Access and Green Electricity Tariff aim to increase renewable energy purchases, but creates challenges for DISCOMs:

- *Proposed formula does not reflect the cost of supply (CSEP Working Paper-83 October 2024), which may result in financial losses or migration of high-paying consumers like C&I consumers*
- *The load profiles may not coincide with the corresponding RE generation profile, so a uniform green tariff across consumers may not be efficient*
- *Making available 24x7 green energy may need charging a premium or consumers should be incentivised to increase usage during periods of cheaper green supply by instrument like time-of-day pricing*
- *With increasing green energy, there is a need for greater flexibility in the power system with upgraded and smart grid infrastructure*

# Tariff Setting Process

- Tariff not being revised regularly and cost reflective
- The process of tariff setting is in two parts - ex-ante and ex-post and there are inevitable differentials between ex-ante and ex-post
- While ex-ante would have virtually no losses with expected revenues matching the costs, the ex-post differentials are supposed to be reconciled through a True-Up process for compensating DISCOMs for legitimate gaps
- Studies by CSEP "Breaking Down the Gap in DisCom Finances" dated May 2023 and "Getting India's Electricity Prices Right" dated June 2023 have attempted to identify the factors for such differentials and how much of such differentials is apportionable to different stakeholders – DISCOMs, Regulators and State Governments – and how much is not apportionable

# Findings of the CSEP Study

- On the cost side, about 56% increase comes from increase in power purchase costs and about 32% from other costs, mainly financial and operational costs
- On the revenue side, about 30% shortfall comes from DISCOMs' failure to collect dues from consumers and about 15% from non-payment of subsidies by State Governments
- Thus, substantial portion of the differentials are either due to factors beyond the control of DISCOMs, or not attributable to any specific factors, implying effectively thereby that to start with, the tariff was low and not sufficient to cover the costs
- Such differentials should have been reconciled through True-Up process, but it was found that True-Ups captured only a part of the ex-ante to ex-post differentials and gap still remained

# Tariff Setting - Questions to Consider

**Questions to Consider :**

*Are DISCOMs not asking the right tariff, including in True-Up?*

*or*

*- Are DISCOMS being denied the right tariff by the regulators?*

*or*

*- Are there systemic issues which lead to such outcomes?*

*(e.g delay in True-Up process resulting in pipeline problem and carrying costs for DISCOMs)*

**Whatever may be the answer to these questions, it does come out that there is a case for setting the tariff right**

# Consumers’ Choice

- Consumers now have the technology option, legal eligibility, supporting policy and regulatory framework and economic incentive to reduce their dependence on DISCOMs and migrate to source power from non-DISCOM sources
- Such migration is likely to make DISCOMs unsustainable, if the current operational structure of DISCOMs continues
- Therefore, DISCOMs have to evolve to play different roles with different pricing structures
- DISCOMs may no longer be the principal power supplier and their role may transition from being the grid’s main user to managing the network for safe and reliable supply as NETCOMs

# Transitioning to NETCOMs

- For transitioning from DISCOMs to NETCOMs

  *- DISCOMs need to invest in advanced modelling techniques, develop skills in power trading, refine energy accounting practices and smartly use RE and storage solutions to meet contemporary challenges*

  *- DISCOMs need to focus on building excellence in network planning and operation*

- Transitioning from DISCOMs to NETCOMs would throw several policy and regulatory challenges

# Conclusion

- There are diverse set of regulatory challenges that DISCOMs are facing or going to face, which would impact the sustainability DISCOMs
- These call for appropriate responses

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# THANK YOU

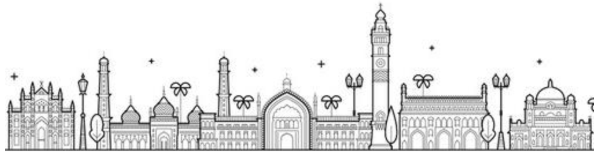
*For discussions/suggestions/queries email:* ***dum@indiasmartgrid.org***

*www.dumindia.in*

*Links/References (If any)*







# BACKUP SLIDES