An Insight into Discoms’ Business and Investment Decisions

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Revenue Gap is a reality

<table>
<thead>
<tr>
<th>Month</th>
<th>Revenue Gap (Rs./kWh)</th>
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</thead>
<tbody>
<tr>
<td>May 2017</td>
<td>0.45</td>
</tr>
<tr>
<td>May 2018</td>
<td>0.29</td>
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<tr>
<td>Oct 2018</td>
<td>0.55</td>
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</tbody>
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Revenue Gap = ACS - ARR

Increasing Total System Losses

Source: NIPFP, UDAY Power Debt in Retrospect and Prospects: Analyzing the Efficiency Parameters, Nov 2018

Source: CEA, Executive Summary Reports
"Real" Gap is even higher

722,880 million

332,350 million

- Avg. Cost of Supply = 6.52 Rs./kWh
- Avg. Billing Rate = 6.35 Rs./kWh
- Backlog Recovery (say 5 YR) ~ +0.70 Rs./kWh

Source: MERC Tariff Order Sept 2018
Costs have gone up too….

- Intra-state Transmission and LDC Charges: 7 - 11%
- Depreciation: 3 - 7%
- Interest: 4%
- Return on Equity: 3%
- Provision for Bad Debts: 1%
- O&M Expenses: 70 - 80%
- Power Purchase Costs: 70 - 80%

All India APPC (Rs./kWh)
- FY15: 3.40
- FY16: 3.40
- FY17: 3.48
- FY18: 3.53
- FY19: 3.60

- High volume states comprising ~40% of total sales have APPC higher than 3.60 (Maharashtra, Uttar Pradesh, Tamil Nadu, Gujarat)
- Not in-sync with falling RE prices and seasonal-diurnal PX prices
....while capacity remains under-utilized

Source: CEA Load Generation Balance Reports

Source: CEA, MoP
Learnings, anyone?

“......regarding **stranded capacity charge liability**, the Petitioner informed that there is a problem of under-utilization of existing thermal capacity”

“......burden of fixed charges was projected to be around **47,970 million during FY20** with a rising trend and peaking to **107,500 million in FY23**.”

“This translates into **avoidable burden of 0.44 Rs./kWh** which is passed on to the consumers.”

*Source: UPERC, Order on LT Procurement Plan of UP Discoms for FY20 – FY30*
Overbuilding is OLD
Flexibility is the NEW mantra!

Source: POSOCO
Different Strategies for Different Time-periods

Source: LBNL, Charting California’s Demand Response Future, 2016
Pre-requisites and Busting the Myths

- Dynamic Pricing – at wholesale and retail level
  - Consumers understand time-based-value

- Incentivize controlled loads – for avoided costs
  - Supply-side options miss accounting for societal costs

- Net value realization – no loss to utility
  - Prioritize actions to target lowest hanging fruit
Summary

- **Flexibility** helps meet reliability needs at lower cost while adding significant amounts of renewables.
- Technology changes, new capabilities and forms of grid interactivity are valuable **opportunities** for the electric sector.
- This is an excellent opportunity for regulators to provide **policy guidance** to help realize the many benefits of a more flexible grid.
“We sit and we wait for a miracle. No, a miracle is an opportunity and a miracle requires hard work. [For utilities] it will be in the area of new services.”

Michael Liebreich, founder Bloomberg New Energy Finance
BNEF Future of Energy Summit, 2016
About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

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