Gujarat Power System Transformation Workshop

Presentation of Gujarat Power Sector Modelling using the RATE Tool

Akhilesh Magal | Head Advisory GERMI

7th October 2020

RATE Model: Features and Possibilities

- Excel-based financial 'What-if' model *developed by Prayas energy Group and GERMI with support from GERC, GUVNL*
- Disaggregated inputs and Outputs for Genco, transco and discoms
- Structured to assess impacts of changes in various parameters and policy decisions
- Useful for medium term sense making (~5 year time horizon)
- Annual treatment of most cost and performance heads

What RATE can help with:	What RATE is not designed for:
☑ 'What-if?' scenario impacts	☒ Dispatch modeling
☑ Understanding cumulative impacts	☒ Accurate ARR estimation
☑ Identification of key issues	☒ Monthly, quarterly seasonal analysis
☑ Evaluate innovative ideas, regulatory decisions	☒ Transmission pricing
☑ Sense making for different stakeholders	☒ Load profile estimation

Key insights (Baseline) | FY23 | GUVNL

Assumptions



4,050 MW
Of Solar PP



7,287 MW
Of Wind PP



18,039 MU
18% Sales Migration

Results



2,674 Cr (5.08%)
Revenue Gap



6,885 MW
Backed down



4.38 ₹/kWh
APPC



6.40 ₹/kWh
ABR



6.69 ₹/kWh
ACOS

Key insights (Aggressive RE) | FY23 | GUVNL

Assumptions

10,081 MW
Of Solar PP

10,349 MW
Of Wind PP

18,028 MU
18% Sales Migration

Results

3,241 Cr (6.16%)
Revenue Gap

8,058 MW
Backed down

4.38 ₹/kWh
APPC

6.40 ₹/kWh
ABR

6.71 ₹/kWh
ACOS

Key insights (Aggressive RE + Sales Migration) | FY23 | GUVNL

Assumptions

10,081 MW
Of Solar PP

10,349 MW
Of Wind PP

25,022 MU
25% Sales Migration

Results

10,047 Cr (20.79%)
Revenue Gap

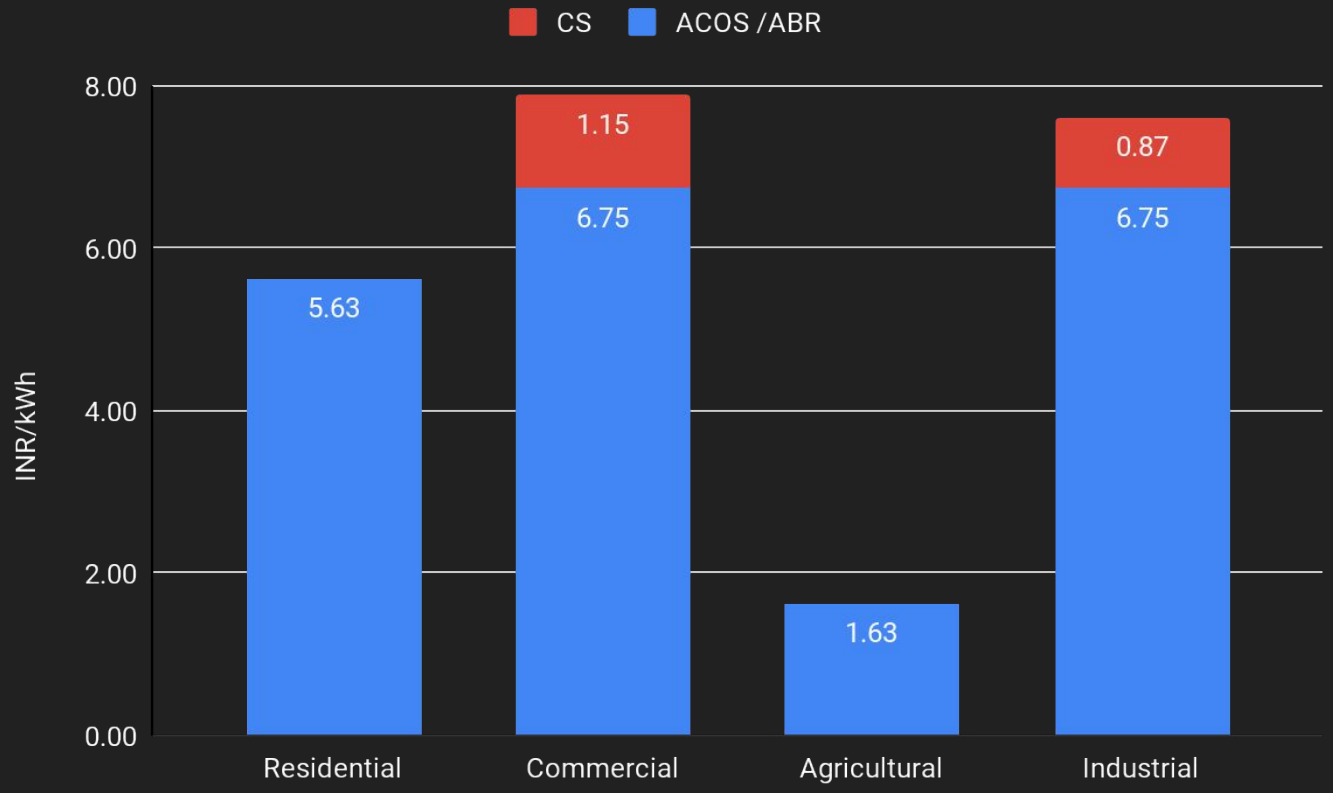
9,017 MW
Backed down

4.38 ₹/kWh
APPC

6.40 ₹/kWh
ABR

7.07 ₹/kWh
ACOS

What should tariff designs look like to remain revenue neutral? (FY 23 | Baseline | MGVCL)



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