MSEDCL Final True up for FY 2014-15, Provisional True up for FY 2015-16 and MYT Tariff Petition for the Period from FY 2016-17 to 2019-20 (Case No 48 of 2016)

Case 48 of 2016

Presentation

by

Prayas (Energy Group), Pune

18 July 2016

Aurangabad Public Hearing

आरोग्य, ऊर्जा, शिक्षण आणि पालकत्व
या विषयांतील विशेष प्रयत्न

Summary of Issues raised in Case 121 of 2014

- Sales migration and its implications due to open access and rooftop solar
  - Backing down of contracted capacity
  - Loss of cross-subsidising consumers

- Current model is unsustainable as
  - Ceiling on subsidy support
  - Increasing tariffs will encourage sales migration
  - Creation of regulatory asset will only avert tariff shock

- Need to explore possibility of
  - sale of surplus power to reduce revenue requirement
  - Innovations in tariff design

- Commission to undertake planning process which includes
  - Demand estimation based on scientific methods which accounts for energy efficiency, unmetered consumption, price elasticity etc.
  - Scenario building exercise for assessing impact on sales migration
  - Explore measures to reduce costs on capital expenditure, operations and maintenance
  - Institutionalise process for third part monitoring of supply quality and capital expenditure

Present proposal

Particulars	Amount	Unit
Revenue requirement estimated for FY 15-16	59,144	Rs Cr
Claimed revenue gap till FY 20	56,372	Rs Cr
Average cost of Supply in FY 15-16	6.15	Rs/unit
Projected average cost of supply in FY 20	7.66	Rs/unit

- Backing down of 6000 MW- 8000 MW every year
- Proposal to levy additional surcharge on open access which will effectively double CSS
- Fixed cost increase across all categories
- In spite of the trend, no increase in Open Access beyond FY 16, no migration on account of net-metering and rooftop solar
- For next 2 years, tariff increase proposed for HT industrial and commercial is 5.50% to 6.50%
  - 46 % consumers have energy charge > latest RTPV discovered rates

Shortcomings in the petition

- Power procurement related issues
  - Cost increase not accounted for
    - Levy of clean environment cess (Rs. 400/MT)
    - Increase in CIL notified coal price
    - Accounting for compliance to MoEF norms as per Environment (Protection) Amendment Rules, 2015.
  - No plans for sale of surplus power

- Distribution related issues
  - Estimation of O&M costs not as per MYT regulations
  - Capex based on unapproved grants
  - Supply and service quality concerns

- Incorrect and impractical agriculture sales estimate leading to artificial loss reduction

Assessment of impact of shortcomings using *RATE Model – developed by Prayas*

- **RATE** (**R**evenue **A**nd **T**ariff analysis for **E**lectric utilities) Model
  - Financial and performance analysis model *developed by Prayas*
  - Excel based transparent model
  - Provision for disaggregated inputs for various components of utility operations
  - Structured to assess impacts of changes in various parameters
    - Allows for comparison of 'What if' scenarios
    - Scenarios can be based on varying parameters such as capex, Opex, RE procurement, sales migration etc.

- Possibilities with RATE Model
  - Provide early warning signals for areas which need attention
  - Assess potential net impact of interventions or regulatory decisions
  - Consensus building among stakeholders

Impact on account of increase in generation costs as per RATE

Generation related costs	FY17	FY18	FY19	FY20
Clean environment cess (Rs. Cr)	1401	1353	1405	1472
Coal Price (Rs. Cr)	701	675	704	748

- Compliance with MoEF norms could result in a possible increase in costs by 20-50 paise per unit

Impact on account of increase in sales migration as per RATE

- Even with additional surcharge, MSEDCL will lose revenue

Sales migration revenue loss (Rs. Cr)	FY17	FY18	FY19	FY20
Loss of revenue due to open access *with* proposed additional surcharge	-650	-1317	-1505	-1847
Loss of revenue due to open access *without* proposed additional surcharge	-2002	-2569	-3188	-3847
Loss of revenue due to captive sales	-273	-630	-1302	-1950

Backing down and surplus

Particulars	FY 17	FY 18	FY 19	FY 20
Capacity projected to be backed down in MW	4869	7387	5944	5150
Potential generation in MU	34153	51815	41694	36124
Potential revenue from sale of 50% surplus @ Rs. 3.5/unit	5977	9068	7296	6322

- Not clear why many of the MSPGCL units are “backed down”
- No plan to sale the surplus power
- If surplus power is sold at Rs. 3.50 / unit potential reduction in revenue requirement can be very significant

Capex based on grants

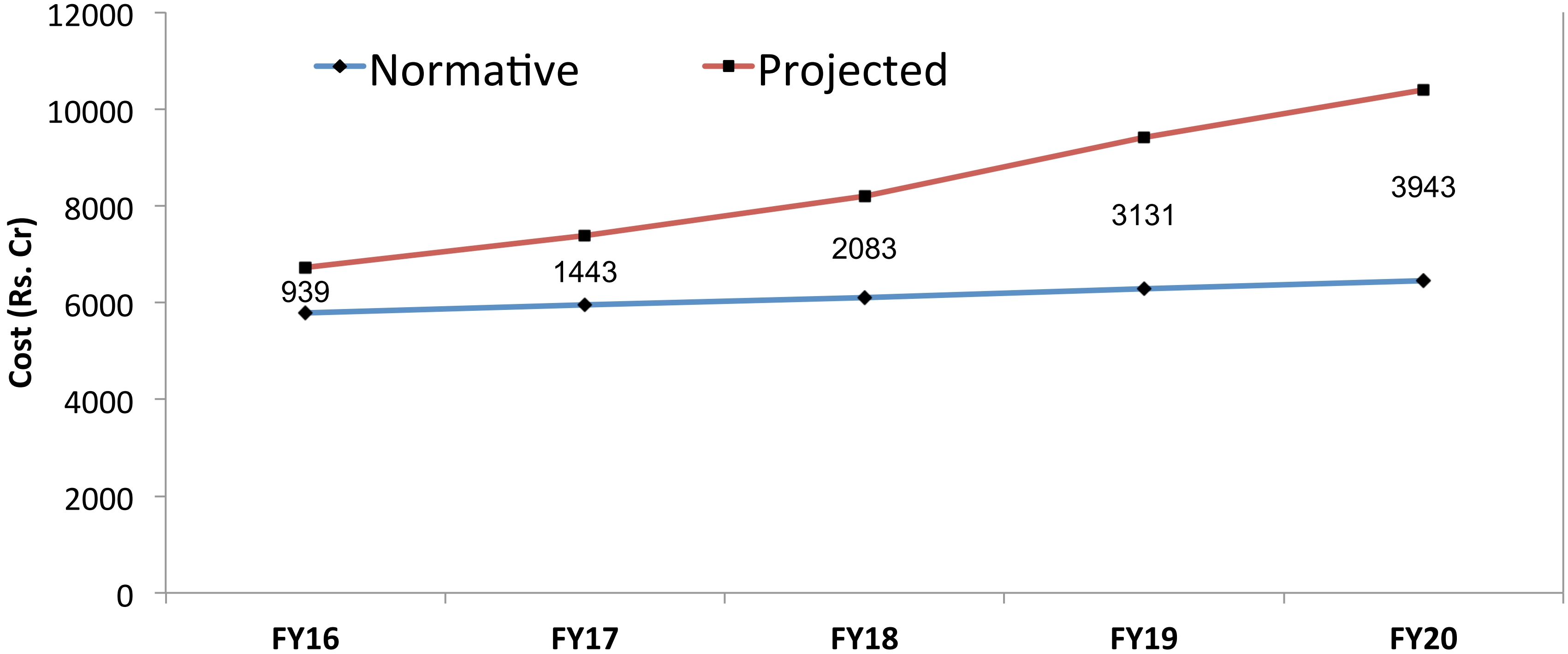
- 40-60% of capital expenditure is to be financed via grants

- Not clear if all grants considered have been approved
  - Was not approved up till TVS

- Two possibilities if the grants are not approved
  - Capex may not be undertaken leading to supply and service quality issues
  - Revenue requirement from tariffs will increase

Capital Expenditure	FY17	FY18	FY19	FY20
Provision for grants	3796	4501	4345	4304
Increase in revenue needed from tariffs if grants do not materialise	220	721	1272	1804

Inflated O&M costs



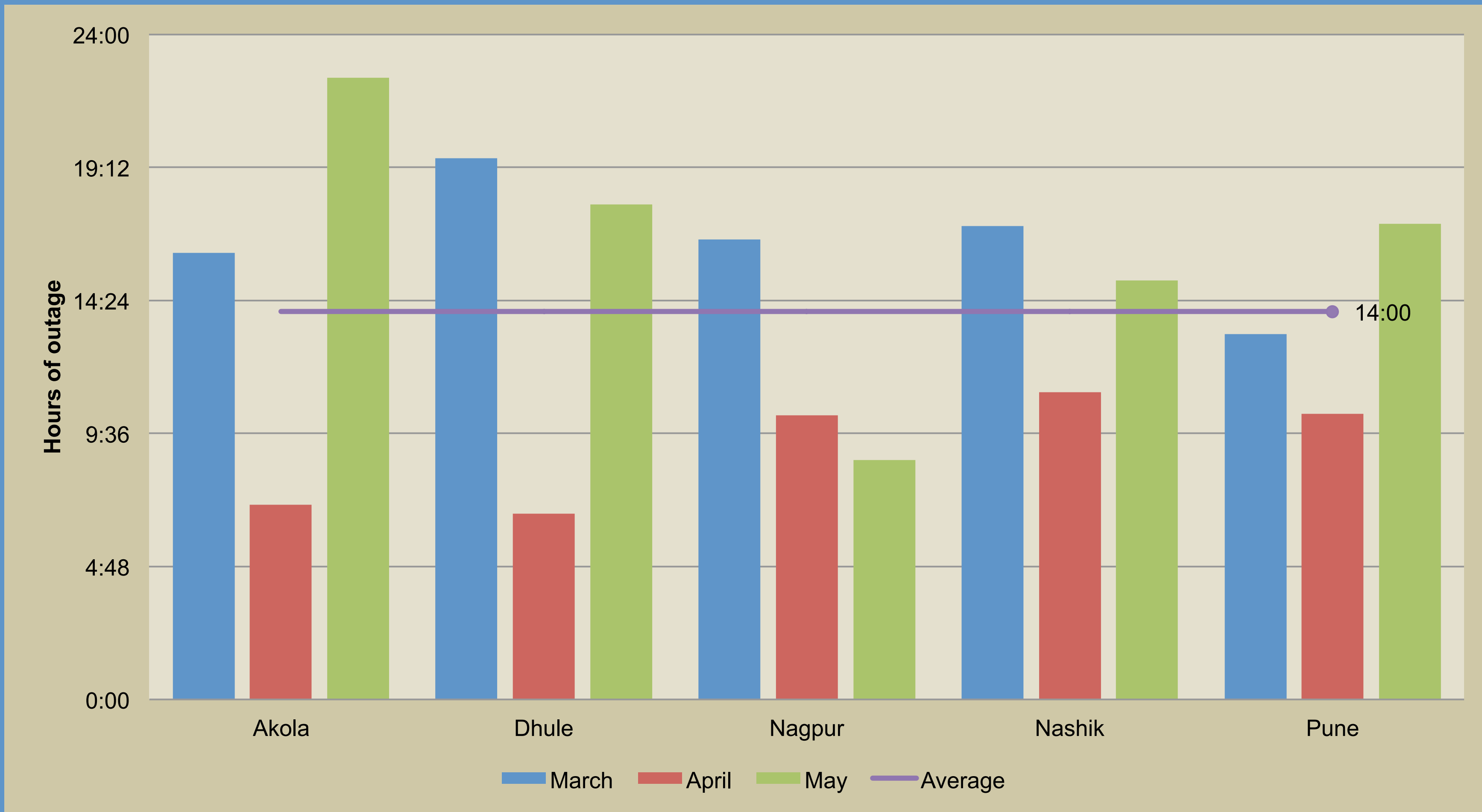
- Cost impact of Rs.900 to Rs. 3943 crores between FY16-FY20
- Need independent evaluation of O&M and Capex cost increase

Supply Quality

Indicator	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Instances where voltage was outside specified range	18362	6852	5301	8415	Data not submitted	
SAIFI (no)	not reported	10.33	8.26	12.05	Data not submitted	
SAIDI (min)	not reported	76.72	85.3	82.36	Data not submitted	
CAIDI (min)	not reported	7.43	10.33	6.84	Data not submitted	

- Continues to be neglected by both MERC and MSEDCL
- Till date, no public process undertaken regarding compliance with Standards of Performance
- No analysis of reliability indices, feeder load data, load shedding and load management by MERC
- No third party audit of capital expenditure or SoP compliance
- Anecdotal evidence suggests the supply quality in urban areas is also very poor

Average hours of outage (>15 Mins) across urban areas in Maharashtra during March- May 2016

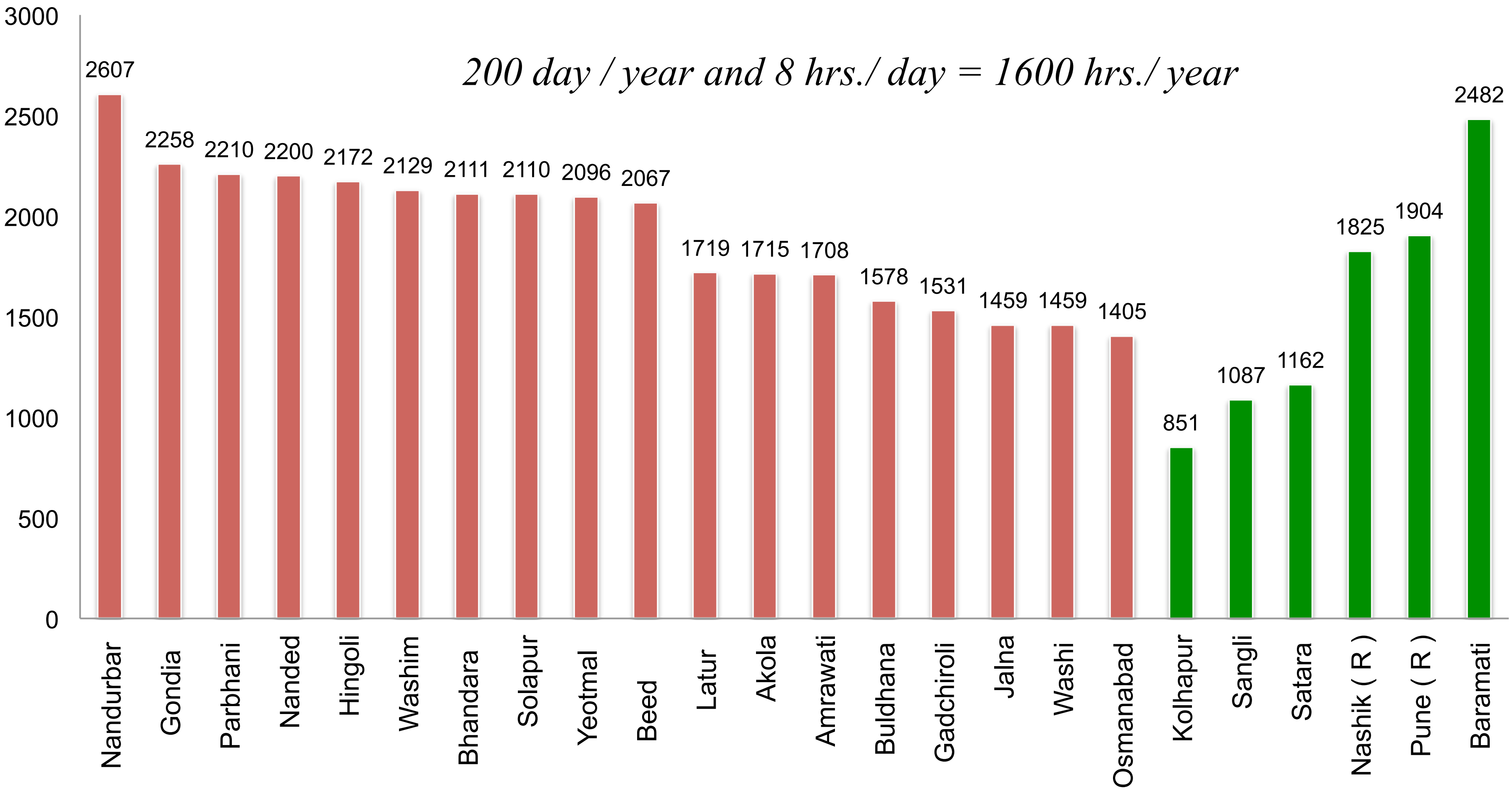


प्रयास
Prayas (Energy Group)

ID : PDALU160702
Source : www.watchyourpower.org

Agricultural Sales estimation and impact on tariff

Hours of operation per year



FY 14-15 circle-wise data

Distribution loss estimation

- 20% increase in unmetered agricultural sales between 2013-14 and 2014-15.
- It is absolutely clear that MSEDCL claims about AG consumption are incorrect, and AG consumption needs to be restated.
- Considering appropriate agricultural pump hours of operation would imply that distribution losses are around 21-23% instead of the claimed figure of 16%

Cost reduction due to loss reduction	FY 16	FY 17	FY 18	FY 19	FY 20
Energy at distribution periphery	123747	127362	126946	131416	136126
Distribution loss as projected by MSEDCL (%)	16%	14%	13%	13%	13%
Distribution loss trajectory after restatement (%)	23%	21%	18%	16%	13%
Reduction in tariff due to re-estimation of sales		1988	4304	7256	10493

Revenue Gap and Carrying Cost

- Carrying cost impact unclear and uncertain
  - MSEDCL estimation of carrying cost unclear
  - MSEDCL defers recovery of carrying cost until true ups
  - Plans to reduce impact by financial discipline, operational efficiency, reduction in open access
  - Impact of assumed carrying cost is also significant

Potential increase in revenue requirement	FY17	FY18	FY19	FY20
Carrying cost not accounted for	1366	1766	1803	1270

- Revenue gap estimation
  - Discrepancies in estimated revenue gap in Table 120, Table 25

Potential impact on tariff

Particulars	FY17	FY18	FY19	FY20
Factors leading to cost escalation				
Levy of carrying cost on revenue gap	2%	3%	2%	1%
Fuel cost increase$	4%	3%	3%	2%
Sales migration#	13%	15%	19%	22%
Capex through unapproved grants	0.4%	1%	2%	2%
Factors that can reduce cost				
Opex as per norms	2%	3%	4%	4%
Realistic loss estimation	3%	6%	9%	12%
Sale of claimed surplus	10%	13%	9%	7%

$ Includes increase in coal cost on account of clean environment cess and CIL notified price increase

 # includes loss of sales and revenue due to open access as well rooftop solar

PEG Submission …1

- Tariff determination process
  - Need for realistic assumptions, clear and consistent estimations.
  - Obfuscation and underestimation of costs will result in significant FAC and revenue gaps, defeating the purpose of MYT
  - Commission is responsible for providing clear and true picture of likely costs and tariff impacts

- Restatement of agriculture sales and distribution loss
  - Data and analysis shows that agriculture sales estimation is totally flawed and unrealistic
  - Restatement of agricultural sales and hence distribution losses to realistic level is a MUST for meaningful tariff determination
  - Delaying this any further would be travesty of the public process

- No new PPA
  - PPA initialed with RattanIndia for additional capacity of 660 MW should not be signed
  - No new MSPGCL / NTPC capacity
  - Explore surrender of stake in high cost NTPC plants such as Solapur, Mauda, etc.

PEG Submission …2

- Sale of surplus
  - Assessment of capacity to be backed down
    - Capacity that cannot be scheduled on account of statutory reasons should not be considered for backing down- need for reassessment of fixed cost payable
    - Quantum and need for additional surcharge to be reassessed in this light
  - Explore options for such capacity to recover expenses
    - Mumbai Discoms purchase significant share (more than 20%) of their total power purchase through short term market. MSEDCL can sell its surplus to Mumbai.
    - Explore options via DEEP

- Need for a fundamental relook at tariff design
  - (RPI-x) fixed tariff for 4 years for LT general category (LT residential and non-residential)
  - Think of innovative measures such as encouraging industrial consumers to consume more than their previous year's total consumption.
  - For every incremental unit that is consumed over and above the past consumption level there could an incentive /rebate.

- ERC white paper – 10 year perspective plan
  - Focus on Competition issues, demand estimation and power procurement, finances, competitive supply for industries
  - Stakeholder consultation –public hearing etc.