

Rural Electrification: Impact on DISCOMs

ODISHA-Case Study

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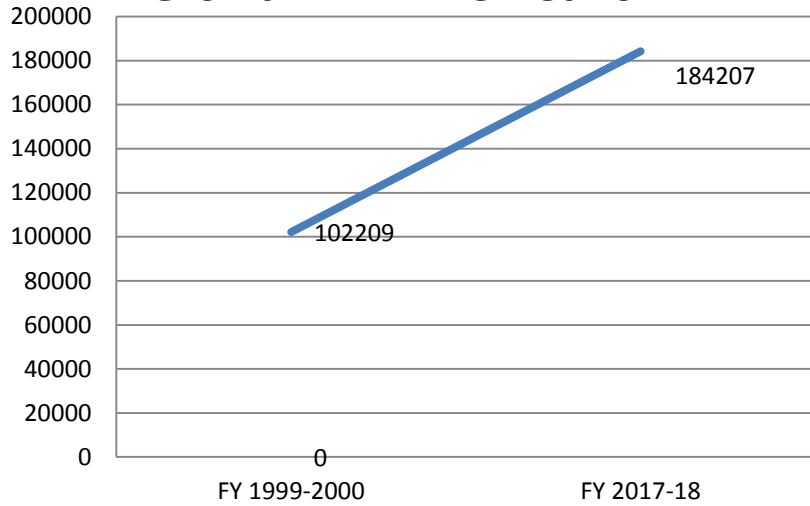
Growth in Infrastructure/ Consumer Strength due to rural electrification (FY 2008-18)

Assets	Line Network (in Ckt. KM)		Sub station (in Nos.)		Consumer Strength (in Lacs)		
	LT	HT	Distribution Sub-station	Primary Sub- Station	BPL	Other than BPL	Total
Before Rural Electrification	1,02,209	1,10,403	1,20,336	1,026	7	22	29
Addition in Rural Electrification	81,998	48,384	1,01,698	104	35	11	46
After Rural Electrification	1,84,207	1,58,788	2,22,034	1,130	41	33	75
Growth (%)	80	45	85	10	500	50	160

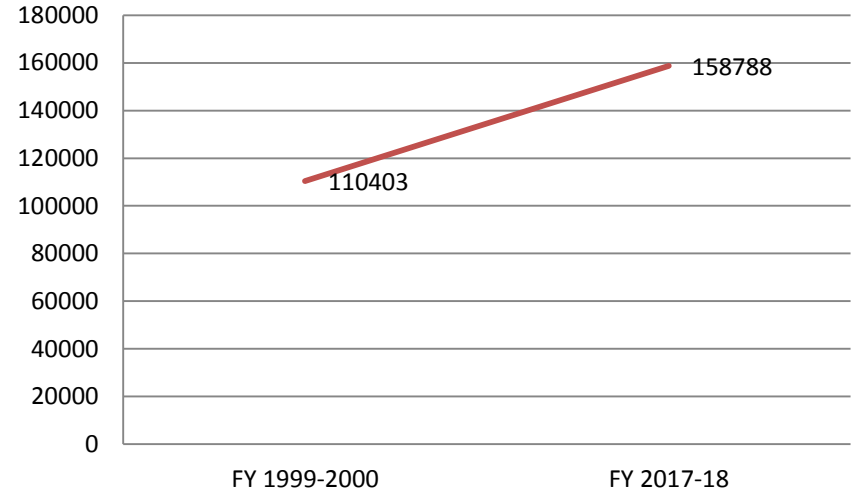
Addition in Infrastructure and Consumer through different Rural Electrification Schemes (FY 2000-18)

Name of Scheme	Line Network (in Ckt. KM)		Sub station (in Nos.)		Consumer Strength (in Lacs)		
	LT	HT	Distribution Substation	Primary Sub- Station	BPL	Other than BPL	Total
RGVY 11th Plan	38,592	31,167	62,371	104	24	0	24
RGVY 12th Plan	16,665	5,334	20,133	0	3	0	3
DDUGJY	1,307	1,085	855	0	0	0	1
BGJY	11,908	6,138	10,274	0	3	0	3
BSVY	525	188	917	0	1	0	1
SOUBHAGYA	13,002	4,473	7,148	0	4	10	14
TOTAL	81,998	48,384	1,01,698	104	35	11	46

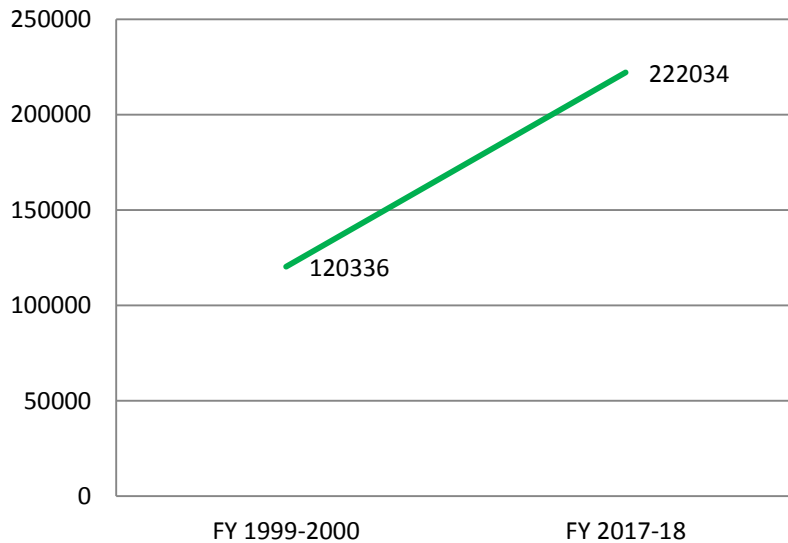
Growth in LT Line Network



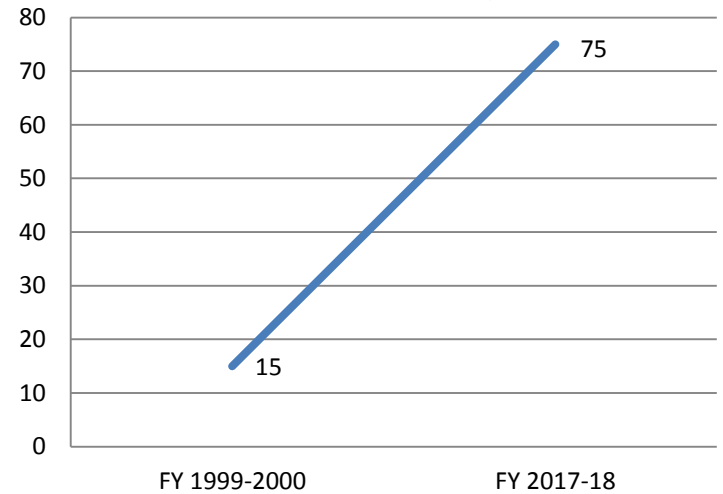
Growth in HT Line Network



Growth in Dist. Sub-Station



Growth in Consumer Strength (in Lacs)



Post implementation challenges

- A. Ensuring Revenue Sustainability**
- B. Maintenance of the huge additional LT network**
- C. Managing Technical and Commercial Losses**
- D. Keeping the Employee Morale high**
- E. Maintaining Consumer Satisfaction**

A. Ensuring Revenue Sustainability

a. Cross-subsidy issue:

- BPL/Domestic consumers are consumers being cross-subsidized by Industrial / Commercial consumers.
- Due to huge addition of BPL/Domestic consumers in the business, the cross-subsidy is increasing resulting in high tariff for industrial/commercial consumers.
- This forces the industrial/commercial consumers to opt for Open Access or Group Captive power plant.
- By this the DISCOMs are losing their high value consumers and burdened with low value/subsidized consumers and the financial status of DISCOMs worsen day by day.

A. Revenue Sustainability

- b. Non-paying attitude of consumers (consumer seem to believe that electricity consumption is free as connection is given free)
- c. Affordability level of the consumers
- d. Increase in O&M expenses
- e. Increase in Manpower Cost
- f. Ensuring proper billing and collections
- g. Actual cost to serve will be higher than revenue generated

B. Maintaining Network

- a. Much wider spread out LT Network
- b. Reduction of Manpower w.r.t. huge network addition - resulting poor O&M activities – Difficult to meet Service level standard
- c. Increased Maintenance Costs- Materials, Manpower etc.
- d. To cover the huge network employees will be spending more time in travelling
- e. Managing networks in remote, forest, hilly terrain
- f. Considerable increase in load in the coming months- Need for up-gradation & augmentation

C. Maintaining Technical and Commercial Loss

Technical

- a. Long line length
- b. Poor Maintenance of DTRs
- c. Skewed LT:HT line length

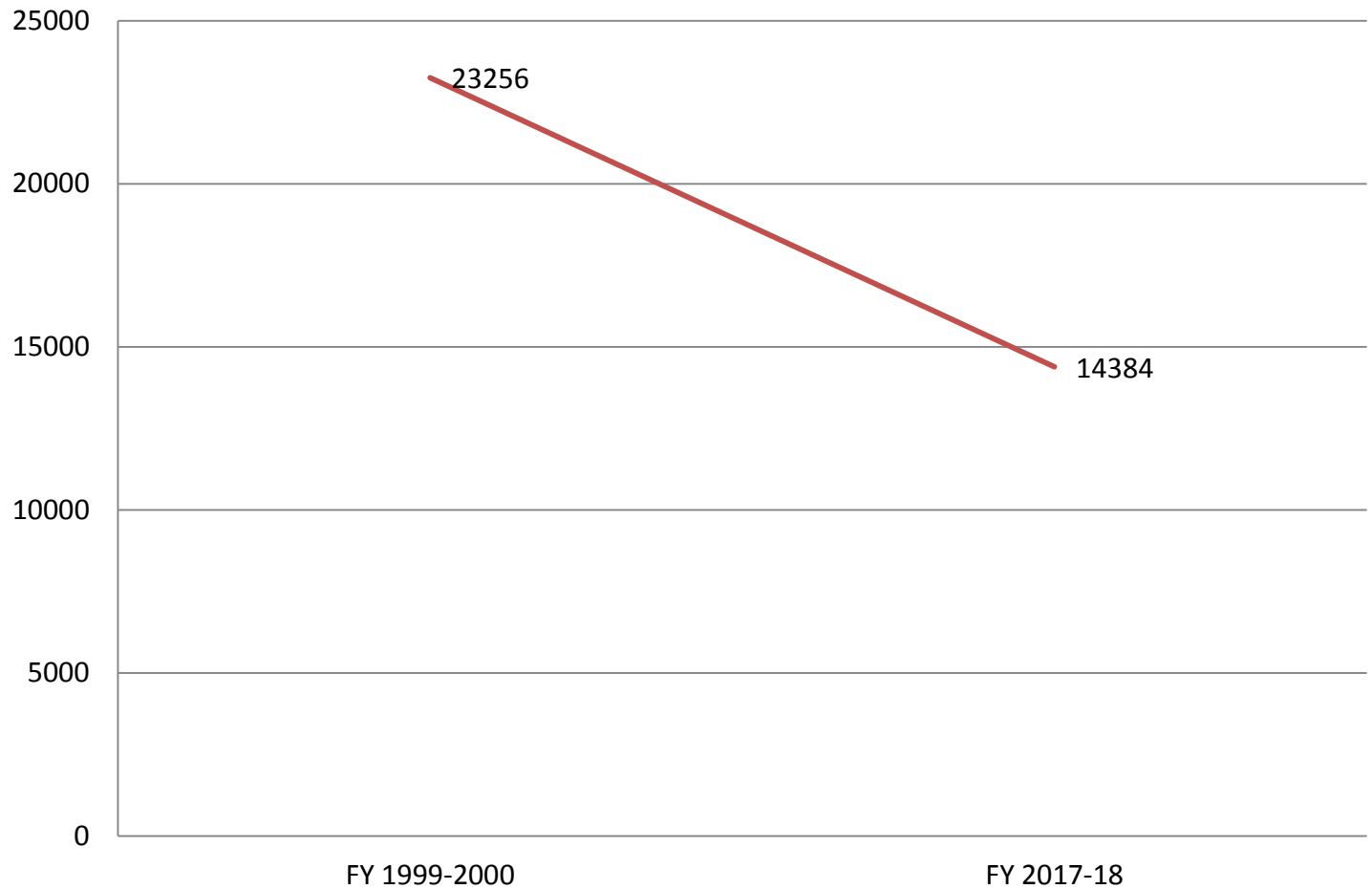
Commercial

- a. Increased incidence of theft
 - b. Lack of energy efficient practice
 - c. Blanket approach to bring down AT&C loss level below 15%
 - d. Absence of Metering at Feeder & DTR level
 - e. Serving of Bill accurately & timely- Key Challenges
 - f. Purchase of additional capacity to meet peak demand
- Draft Amendment Tariff Policy 2016: SERC will not consider more than 15% AT&C loss while determining tariff.
 - Draft Amendment to the EA 2003: DISCOMs will be penalized for not supplying 24x7 power supply, even cancellation of licensee.

D. Keeping the Employee Morale high

- a. Employees are overburdened with sudden exponential rise of work volume--- Frustration
- b. Outsource employees are engaged which leads to rise in IR issues
- c. Job Contracts are also no solution in mid term and long term
- d. Increasing incidence of electrical accidents

Manpower Position of Odisha



Total Domestic consumer strength during FY 2000 to FY 2018 increased from 15 lacs to 75 lacs (5 times)

E. Maintaining Consumer Satisfaction

- a. Huge network leads to more break-down
- b. With less manpower, Consumer services are hampered- sny FoC-
response time high
- c. Serving accurate bill timely is a big challenge
- d. Promoting collection centers within their reach- A key challenge
- e. With increase in the illegal abstraction of electricity, supplying of
quality power to genuine consumer is a substantial challenge

Suggestions

- a. **Rationalization of Tariff: No Cross subsidy-Direct Benefit Transfer of subsidies to Consumers-Key challenge in implementation.**
- b. **Consumer Sensitisation- Creation of consumer awareness for paying the bill regularly**
- c. **Restriction in using low energy efficiency gadgets like Coil heaters**
- d. **Strengthening IT system for close Monitoring and Smart Meter projects**
- e. **Introduction of schemes having CAPEX and O&M for life cycle**
- e. **Provision of Vehicles equipped with proper electrical instruments with subsidy.**
(Improve Mobility, Safety, Employment Generation)
- f. **Renovation and Augmentation schemes: DTR/PTR/AB Cable**
(Increase of substantial load in the coming period, Penalty for not achieving service standards)

Thank You