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Technical Assistance
Enabling PSP in Electricity Distribution

March, 2020

PSP in Power Distribution

Potential Alternative Model for Wider Application

March, 2020

Privatization/ divestiture (through stake sale) has low political acceptability

Agenda

- Why IBDF is sub-optimal
- Why privatization has low acceptability
- Key features of proposed Model

Why Input Based Distribution Franchisee (IBDF) model is suboptimal

Risk of network deterioration due to lack of incentive for continued capex

- Capex focus is on AT&C loss reduction
- Further capex leads to reduction in DF's profit

Baseline data accuracy risk (AT&C Loss, ABR, minimum capex)

Indexation methodology on input rate creates distortion in the O&M remittance

High risk perception, Low return – limited investor appetite for widespread implementation

Unavailability of project finance in the absence of RoE on investment

Neglects efficiencies in power procurement

Why privatization model has low acceptability

Lack of political acceptance for divestiture

Adverse public perception against privatization

Employee resistance

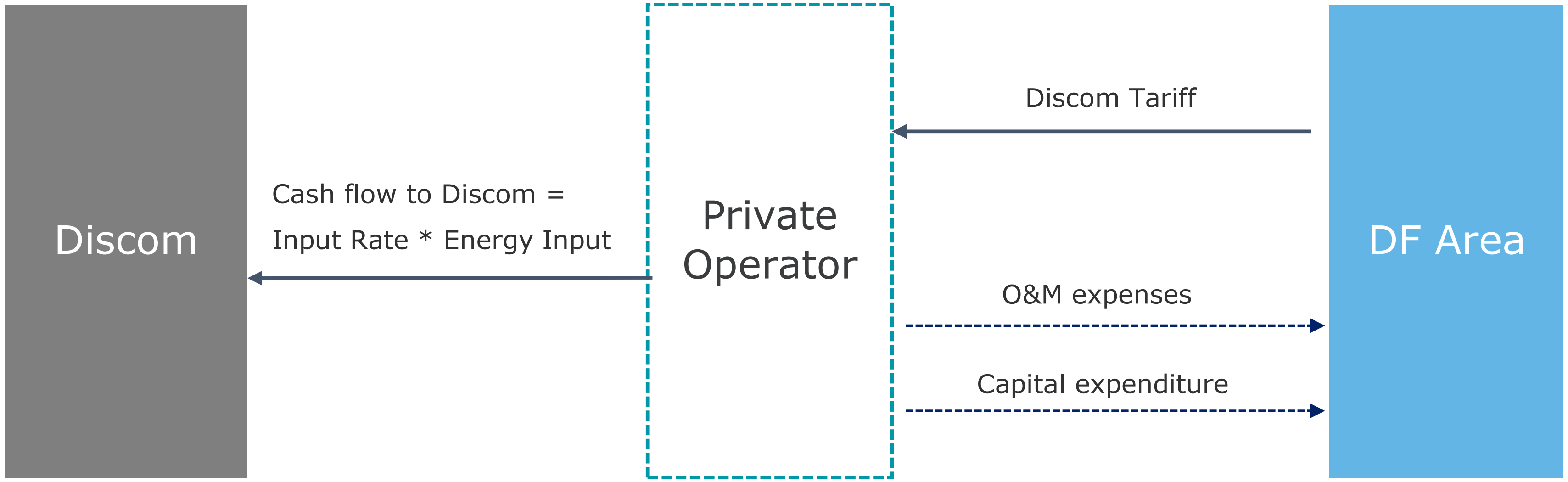
Pressure for differential tariffs
- Allocation of power purchase
- Requires alternative design

Complexities in transaction
- Fixed Asset Register
- Balance sheet clean-up
- Valuation
- Transfer scheme

Difficulty in termination in case of non-performance

Proposed model
Overview

Flexible DF model akin to Delhi Privatization model without share sale



Cash flow to Discom = Energy Sales x ABR – Capex related costs – O&M costs

Energy Sales = Energy Inputs x (1 – Quoted AT&C loss)

Proposed Model
Key Features

Bid Parameter

- AT&C Loss for 20 years

Bid Evaluation

Levelized input rate based on following:

- Savings due to reduction in AT&C Loss for 20 years

Other Features

- Reserve values of AT&C Loss for first 5 years
- Protected capex for first 5 years
- No indexation required
- Capital returns from first year
- O&M Expenses as per SERC regulations/ RFP terms

Proposed Model

Billing

Monthly Invoice by Discom = Input Energy * ABR * (1 - Quoted AT&C Loss) – Capex related costs – O&M costs

where,

Parameter	***Revision Frequency***	***Description***
Input energy	Monthly	Actual energy input during the month
ABR	Monthly	Actual ABR for the month
Capex related costs *(RoE, Depreciation, Interest)*	Annually *(wef 1st Apr)*	1/12th of actual annual capex related costs (on assets capitalized till 31st Mar)
O&M costs	Annually *(wef 1st Apr)*	1/12th of O&M costs based on O&M norms for the year

Reconciliation at the end of year based on:

- Audited ABR for the full year based on IA/ IE's report
- Capex/ capitalization during the year based on IA/ IE's report

Eventualities at the end of Contract Period

Buy-back of assets by utility

- Large payout for utility
- Discom may be left with inadequate manpower

Extension of contract

- Agreement on extended performance trajectory, and other norms
- Enhanced/ direct ERC supervision may widen scope

Conversion into licensee

- Implementation of Transfer scheme
- Regulatory approvals

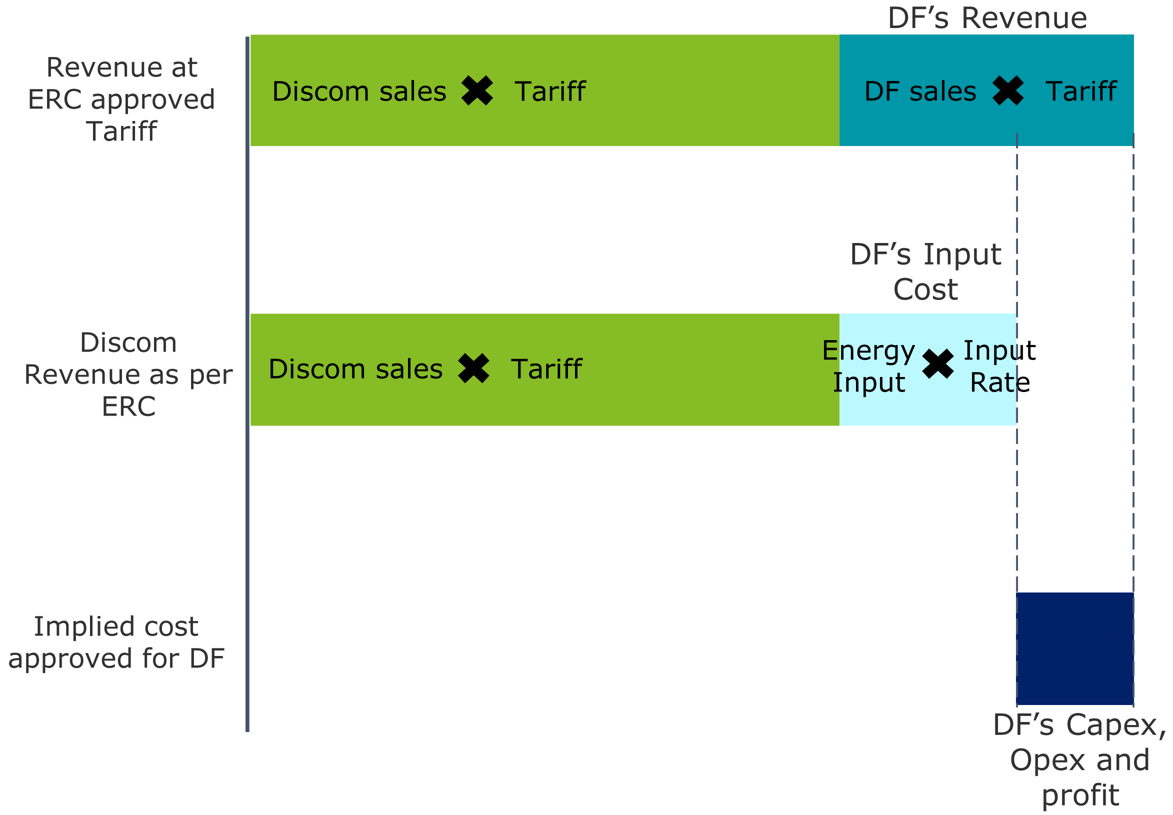
Annexure

Regulatory Treatment of DFs in Tariff Orders

1 Regulator approves total sales and determine tariff for total area

2 Revenue for Discom includes revenue from sale to own consumers and revenue at input rate from DF

3 Difference is the **implied cost approved for DF**



This practice is adopted by SERCs in Maharashtra (for Bhiwandi DF) and Rajasthan (for Kota, Ajmer, Bikaner and Bharatpur DFs)

Proposed Model
Computation of Input Rate

Parameter	Methodology	Reference
AT&C Loss	Quoted numbers	-
Energy Input	Boundary Metering Data (Joint Reading)	As per existing IBDF model
Energy Sales	Energy Input * (1 - Quoted AT&C Loss)	Calculated
ABR	Third Party Audit	As per existing IBDF model
O&M	Regulatory norms/ RFP terms (escalated as per RFP terms/ regulations)	-
Capex	Regulator Approved & Third Party Audit	As per existing IBDF model • First 5 years for minimum capex • Approval from regulator for capex afterwards
Capital related charges (Dep, Int, RoE)	As per RFP terms (RoE, depreciation rate and interest benchmark to be fixed)	Calculated as per year-on-year capex

Tariff Indexation

Sl.	Tariff Indexation	DFs
1	$IR * ABR_{New} / ABR_{Base}$	**Jharkhand:** Ranchi, Jamshedpur, Dhanbad, **Maharashtra:** Aurangabad, Jalgaon, Nagpur **MP:** Gwalior, Sagar, Ujjain **UP:** Agra, Kanpur **Uttarakhand:** Rudrapur **Rajasthan:** Kota, Bharatpur, Bikaner, Ajmer
2	$IR + 75\% * (ABR_{New} - ABR_{Base})$ if $ABR_{New} > ABR_{Base}$ $IR + 100\% * (ABR_{New} - ABR_{Base})$ if $ABR_{New} <= ABR_{Base}$	SBD **Bihar:** Patna
3	$IR * \dfrac{(T_{NewDom}/T_{BYDom}*Rev_{Dom})+(T_{NewAgr}/T_{BYAgr}*Rev_{Agr})+(T_{New\text{-}NDS}/T_{BY\text{-}NDS}*Rev_{NDS})+(T_{New\text{-}Ind}/T_{BY\text{-}Ind}*Rev_{Ind})}{(Rev_{Dom}+Rev_{Agr}+Rev_{NDS}+Rev_{Ind})}$	**Odisha:** Baripada, Jajpur, Bargarh, Bolangir, Aska, Bhanjanagar