Review of the Distribution Franchisee model implemented by MSEDCL in the Bhiwandi circle

By
Prayas (Energy Group) Pune
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प्रयास

About Prayas (Energy Group)

Prayas is a registered charitable trust based in Pune. Prayas' activities cover four substantive areas of Health, Energy, Learning and Parenthood, and Resources and Livelihoods. The Energy Group of Prayas is mainly engaged in policy analysis in the electricity sector and capability building of civil society institutions.

The past work of Prayas Energy Group includes: analysis of the power purchase agreement between Dabhol Power Company and the Maharashtra State Electricity Board, analysis of the Sardar Sarovar Project, development of a least-cost, integrated resource plan (IRP) for the state of Maharashtra, analysis of agricultural power consumption and subsidy, and critique of the activities of the multilateral development banks in the energy sector in India, and organizing numerous capability building workshops. Since the last few years, the Energy Group has focused mainly on issues relating to power sector reforms and regulation. Its work in the areas of reforms and regulations include: study of the regulatory aspects of the Orissa model of power sector reforms; several policy and regulatory interventions at Central and State levels; survey based report on the Electricity Regulatory Commissions and study of reforms in Delhi's power sector. We are also part of the Electricity Governance Initiative, which is a global coalition of civil society organizations interested in promoting good governance in the electricity sector.

All major publications, presentations, and reports of the Energy Group are available on Prayas website.

Prayas (Energy Group)
Athawale Corner
Karve Road, Lakdi Bridge Corner
Deccan Gymkhaha
Pune 411 004

Tel. 020 – 65205726

www.prayaspune.org/peg

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About the Report

The Distribution Franchisee model as implemented by Maharashtra State Electricity Distribution Company (MSEDCL) in its Bhiwandi circle is the latest model in distribution sector reform process. It is first of its kind of an arrangement, which allows a private company to manage distribution business of a franchisee area without going through any fundamental structural and legal changes. Some of the distinguishing features of this arrangement are the use of input rate as a bidding parameter, indexing licensee revenue to tariff changes and very little or no financial support from the licensee.

In the distribution sector, this model has generated lot of interest due to its potential for rapid reduction in technical and commercial losses, and is being considered as the next phase of distribution reforms, with many state licensees planning to implement the model. On the other hand, there have been lots of complaints from consumers about high bills and fast running meters. Several court cases have also been filed on various issues related to the model in case of Bhiwandi as well as Nagpur, the second city where MSEDCL intended to implement the franchisee model.

In this context, this study undertaken by Prayas (Energy Group), and supported by the Planning commission, focuses on analysis of this model, contractual arrangement, post franchisee performance and benefits to consumers and licensee, and areas where improvements are needed.

Prayas (Energy Group) Research Team
Shantanu Dixit, Ashwini Chitnis, Ravindra Kadam and Girish Sant

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Abbreviations

A&G	Administrative and General
ABR	Average Billing Rate
AIR	Annualized Input Rate
ATC	Aggregate technical and Commercial losses
ATE	Appellate Tribunal for Electricity
Capex	Capital Expenditure
CERC	Central Electricity Regulatory Commission
CAGR	Compounded Annual Growth Rate
CPI	Consumer Price Index
Cr	Crore (10 Million)
DF	Distribution Franchisee
DFA	Distribution Franchisee Agreement
FAC	Fuel Adjustment Charge
GoM	Government of Maharashtra
GoI	Government of India
HT	High Tension
I/P	Input
kV	Kilo Volt
kW	Kilo Watt
kVA	Kilo-Volt Amperes
LoI	Letter of Intent
LT	Low Tension
MERC	Maharashtra Electricity Regulatory Commission
MW	Mega Watt
MU	Million Units
MVA	Mega Volt Ampere
O&M	Operation & Maintenance
R&M	Repair & Maintenance
RIE	Revenue from Input Energy
RFP	Request for proposal
Rs	Rupees
SEB	State Electricity Board
SERC	State Electricity Regulatory Commission
TIR	Tariff Indexing Ration
TPL	Torrent Power Limited
UP	Uttar Pradesh
UPPCL	Uttar Pradesh Power Corporation Limited

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1. Introduction, Objectives and Methodology

1.1 A brief history of power sector reforms:

The Indian power sector, after facing a major financial crisis in early 1990s, has been under reform process ever since. The first phase of power sector reforms started off with the entry of private sector in generation, which is the Independent Power Project (IPP) process beginning in the early 1990s. The IPPs were followed by the Orissa Model through which functional unbundling of state electricity board, and setting up of regulatory commission in Orissa in the year 1996 was done with the help of the World Bank.

Following the Orissa's regulatory model as a prototype for further reforms, Regulatory Commissions Act was enacted in 1998 which led to setting up of electricity regulatory commissions (ERC) in various states. This was a very crucial step in reforms, as regulatory model was a fairly new concept in the Indian power sector.

In the year 1999, distribution business in the sate of Orissa was completely privatized. This was followed by privatization of distribution sector in Delhi in the year 2002. The year 2003 marked the most important changes in policy framework of Indian power sector with the enactment of the Electricity Act 2003, which opened new avenues for bringing in private participation in the distribution sector.

In the year 2007 the Distribution Franchisee scheme was implemented in Bhiwandi circle of MSEDCL. This is a new model in public-private partnership and the latest in the distribution reform process of Indian power sector.

1.2. Introduction to Franchisee concept

As mentioned above, Distribution Franchisee is the latest form of public-private partnership in the distribution sector. The proviso to Section 14 of the Electricity Act 2003 states that: "…in a case where a distribution licensee proposes to undertake distribution of electricity for a specified area within his area of supply through another person, that person shall not be required to obtain any separate license from the concerned State Commission and such distribution licensee shall be responsible for distribution of electricity in his area of supply". Thus, the franchisee can operate in many ways in the distribution business. For example it can be catering to small segment of distribution business such as managing a single feeder or distribution transformer, etc to taking care of all the distribution functions for a complete circle, as in the case of Bhiwandi.

The provision was mainly envisaged in the context of rural electrification to encourage local community organizations to take up small segments of distribution business such as metering and billing or collection, etc. But as the Act provides for a lot of flexibility in terms of defining the scope of the franchisee, the concept can be utilized to create any model which involves delegation of some or all of the distribution related responsibilities to a third party on a contract basis. As far as the regulatory framework and the consumers are concerned, the licensee remains the sole body responsible for distribution business in the concerned area.

1.2.1 Rural Franchisee in context of RGGVY:

Under the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), a Government of India scheme, which aims at 100% rural electrification, franchisee is a prerequisite for revenue sustainability and management of rural distribution. Under this scheme, a Franchisee may be an entity empowered by the state to either develop / operate a generation & distribution system or ready to distribute electricity within an identified contiguous area for a prescribed duration and collect revenues directly from rural consumers.

The various franchisee models envisaged under RGGVY range from the ones with the intended role limited to billing, revenue collection, complaints redressal, facilitating release of new service connection, keeping vigil and providing appropriate feedback to the utility to development of rural electric cooperatives and their management through contracting. There is also an Input based Franchisee model under the RGGVY. In this model, the franchisee has to buy electricity from the utility at the 11KV feeder level for which it pays a certain energy charges to the utility at a pre-determined rate. The franchisee’s main job is to then raise bills and collect revenue from all the consumers to sustain its commercial operation.

1.2.2. Introduction to Input based Franchisee Model in Bhiwandi:

Building on the concept of input based franchisee in the RGGVY and based on various provisions in the Electricity Act 2003, MSEDCL significantly broadened the ambit of ‘franchisee’ concept and decided to appoint private companies to manage the entire distribution business in large urban areas. On 20th Dec 2006 MSEDCL signed an agreement with Torrent Power Ltd granting it the rights to act as a distribution franchisee of MSEDCL. By virtue of this agreement, the franchisee is empowered with all the rights, powers and authorities available to MSEDCL as a Distribution licensee necessary to fulfill all the obligations and responsibilities of licensee in the franchisee area.

Under this model, the franchisee pays for supply of power at input points (transmission substations) based on a pre decided input rate. This input rate is decided through a competitive bidding process, to solicit highest revenue for the licensee, which in turn is based on projected ATC loss reduction trajectory. The franchisee benefits financially if it reduces losses over and above the trajectory and has to suffer (financially) if it fails to do so. Agreement has no direct contractual provisions binding for loss reduction. The financial impact, in terms of franchisee’s ability to pay the licensee as per the quoted input rate is the sole incentive/penalty mechanism.

1.3. Objectives of the study

This franchisee model, implemented by MSEDCL in Bhiwandi has generated considerable interest in the sector, due to its perceived ability to rapidly reduce ATC losses and to improve the financial viability of the distribution sector. Many other states are actively considering adoption of this model for distribution reforms. For example, Uttar Pradesh has already embarked upon process to appoint franchisees for seven major cities, and has also awarded contract for Kanpur and Agra to Torrent AEC. On this background following are the broad objectives of this study:

Review of the contractual arrangement with franchisee to identify strengths/weaknesses of the arrangement.

- Assessment of the benefits thus far in terms of loss reduction, billing efficiency, recoveries, quality of supply, quality of service and power availability.
- Assessment of the replicability of the Bhiwandi model to other areas in Maharashtra and elsewhere.
- Assessment of the consumer and other stakeholder response to the franchisee arrangement and its limitations and benefits
- Recommendations, if any, for improving the Bhiwandi model and enhancing its replicability.

1.4. Methodology of the Study

In order to achieve the above-mentioned objectives following broad methodology was used.

- Analysis of secondary data such as franchisee agreement, energy audit and other routine reports prepared by the distribution licensee as well as franchisee.
- A rapid field survey, and informal group discussions, based on semi-structured questionnaire, covering different consumer segments to generate first hand assessment of consumers' response and experience so far.
- Interactions with other key stakeholders in this experiment viz. distribution licensee, licensee's union representatives, civil society representatives, independent researches and consultants etc.

Draft findings of the study were presented to MSEDCL, Maharashtra Electricity Regulatory Commission (MERC), other licensees in the state, and employee unions. M/s.Tata Power, one of the licensees in Maharashtra, made detailed written comments on the draft findings presented at MERC. These are annexed to this report.

In spite of repeated requests, M/s Torrent Power Ltd., franchisee appointed by MSEDCL, did not co-operate and did not share any data or information. This study faced major obstacles on the front of data availability on account of lack of cooperation by Torrent Power Ltd. MSEDCL also could not provide the necessary consumer sales, metering and billing data in a timely manner due to delays in integration of TPL data formats with that of MSEDCL's IT systems. The first letter requesting basic information such as energy input, category wise sales, demand and collection, etc was sent to MSEDCL in July 2008. MSEDCL could not provide the data for a long time. Finally in May 2009, MSEDCL has hosted consumer data such as sales, demand and collection for Bhiwandi circle on its website. Under these circumstances we had to rely solely on this data for our analysis regarding post-franchisee performance.

1.5. Organization of the report

After this background section, second section presents a brief overview of the Bhiwandi circle and franchisee scheme. Third section analyses the post franchisee performance while fourth section presents the results of rapid consumer survey carried out in Bhiwandi. Sections 5 and 6 present our analysis of important issues involved in the bidding process, contractual arrangement and invoice model adopted in the Bhiwandi scheme. Last section presents conclusions and recommendations.

2. Overview of Bhiwandi Circle and Franchisee Scheme

2.1 Introduction to Bhiwandi circle

Bhiwandi is a major textile hub of western India having one third of the country's power looms. It has a customer base of around 1.6 lakh in an area spread over 721 square kilometers. The estimated demand in the circle is 750 MVA with an annual power input of around 2600 million units. About 55% of the total sales are to the power loom sector, and Government of Maharashtra provides significant subsidy to power loom consumers.

The town has a reputation as a chronic defaulter of power bills for more than 10 years and has a record of very high level of Aggregate Technical and Commercial (ATC) losses (around 60% in the year 2006-07). It is also a politically sensitive area with a history of communal violence. Load shedding of around 6-7 hours was a daily practice in Bhiwandi since the past 8-10 years (much before it became prevalent in rest of MSEDCL's urban area)

As can be seen from table 2.1, LT power loom is a dominant category, both in terms of sales and consumer numbers. HT sales contribute to 30% of total sales.

Table 2.1 Bhiwandi sales mix and consumer mix in FY 2006-07

Category	FY 2006-07	
	% of total sales	% of total consumer Numbers
LT domestic	4%	52%
LT commercial	3%	14%
LT Industrial	6%	3%
LT Power loom	58%	30%
HT total	29%	

Source: MSEDCL website

2.2 Bhiwandi Circle performance

Performance of distribution sector in Bhiwandi has suffered in past due to complete neglect of the area by MSEDCL and its predecessor MSEB, both in terms of low investment as well as administrative neglect. The table 2.2 below captures the snap shot of distribution business in Bhiwandi in the base year, i.e. FY 2005-06.

Table 2.2 Bhiwandi circle performance in FY 2005-06 (base year)

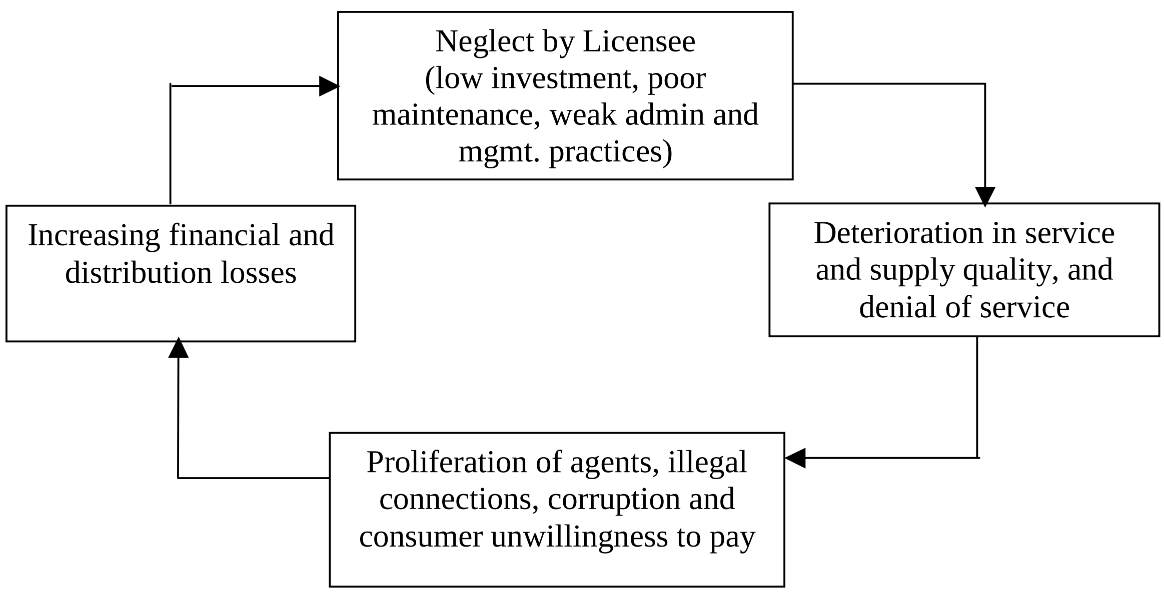
Parameter	Status in FY 2005-06 (base year)
Input Energy in MU	2475
ATC losses	63% (Dist loss 41% Col. Eff 62%)
Annual Transformer failure rate	40%

Source: MSEDCL

There had been effectively no capital investment in Bhiwandi's distribution network in the last decade or so. This had resulted in high level of network overloading and transformer failure rate of around 40% per year! Extremely poor quality of supply, frequent interruptions and rampant theft gave rise to very unique developments in the area. Some examples of such developments are fixed tariff (Rs.50 per month) illegal lines such as 'Tarapur line', 'Padga line', etc supplied by "private agents" to domestic consumers, 110 V bulbs manufactured and used exclusively for Bhiwandi area to address the problem of very low voltages, devices such as 'feeder changer switch' commonly found in house holds to enable switching between official and non-official lines, etc.. Getting official connection or additional load sanctioned was also very difficult, leading to increasing tendency on part of consumers to resort to illegal connections. Most of the cases between years 2002-05 before the Consumer Grievance Redressal Forum (CGRF) /ombudsman related to Bhiwandi circle were in connection with not getting new connection/additional load sanctioned. The metering and billing efficiency was also very low. Around 54% of the total meters in Bhiwandi were either faulty or had average reading, which means they were not read at all!

PEG field survey revealed that consumers (especially power loom owners) had to pay bribes to the tune of Rs.1 lakh to get failed transformer replaced. Considering that there are around 2000 DT in the Bhiwandi circle, on account of failed transformers alone consumers were paying around 8 to 10 Cr. Rs. as bribes. Apart from DT failure for various other fault and repair related tasks, consumers used to pay 'agents' individually. Also the incidents of motor burning, appliance failure was very high and subsequent repair/replacement was a major expense to consumers. The figure 2.1 depicts the vicious cycle in which circles such s Bhiwandi are trapped due to lack of action by utilities on one hand and control of vested interests on the other.

Figure 2.1: Vicious circle of theft and poor supply and service quality



Though MSEDCL had made several efforts to improve the state of affairs in Bhiwandi, it had limited success due to variety of reasons including lack of consistency in efforts for sufficiently long period, lack of political support to improve discipline and administrative set-up, etc. Under such circumstances, MSEDCL's primary objective for appointing a Distribution Franchisee in the Bhiwandi Circle was to minimize ATC losses and to bring improvement in overall management of distribution business and consumer service.

2.3 Input based Franchisee scheme

The input based franchisee model was hoped to bring in certain amount of fixed revenue from circle, which otherwise had very poor collection efficiency. The most important benefit of this arrangement would be that the assumed fixed income would be generated without any cost to MSEDCL. It was also hoped that entry of private player can bring in much needed investment and would help in enhancing customer satisfaction by improving quality of supply and service. Consumers in franchisee area are charged same tariff as consumers in rest of the licensee area.

The table 2.3 below gives a broad overview of the franchisee scheme and responsibilities and roles of franchisee as well as licensee.

Table 2.3 Duties and responsibilities of franchisee and licensee

Duties and Responsibilities of MSEDCL	Duties and Responsibilities of Franchisee
Supply power at Input Points Carry out the meter reading jointly with DF on a monthly basis at input point. Carry out capital works as per its "Minimum Investment Plan"	Discharge all duties and responsibilities of MSEDCL as the distribution licensee such as: ➢ Meter reading, billing and revenue collection ➢ Repair and maintenance of dist assets ➢ Capital expenditure for infrastructure development ➢ Consumer service ➢ Maintain Consumer database and billing records Periodic reporting to MSEDCL as per DFA. Timely payment to MSEDCL based on 'input rate' as determined in DFA

Under this franchisee model, almost all the distribution functions of the licensee were handed over to the franchisee, though it is the licensee's responsibility to ensure compliance with all statutory provisions, regulatory orders, rules and regulations and safe guard consumer rights and interest. Box 1 provides more details about the Bhiwandi franchisee model.

Box 1 - Bhiwandi Franchisee Model

The input based franchisee, as implemented in Bhiwandi is an arrangement under which a private company (TPL) is appointed to manage distribution business of a Bhiwandi circle of MSEDCL for a period of 10 years. The franchisee pays to the licensee for input energy injected into the franchisee area at an agreed 'input rate'. The input rate actually implies the certain level of ATC loss reduction that franchisee will achieve in the area. If it succeeds in reducing losses lower than the input rate it has committed, it makes profit. If it fails to achieve the necessary loss reduction, it makes financial loss as irrespective of the actual ATC loss levels the franchisee has to make payments to licensee based on the agreed input rate.

The selection of franchisee was made based on competitive bidding process. MSEDCL published a request for proposal document (RFP) which had principles of distribution franchisee agreement (DFA), in March 2006 and tenders were invited from interested parties to quote the input rate they are willing pay to for each year of the franchisee term. Being the highest bidder, Torrent Power Limited was appointed as the franchisee for Bhiwandi circle. MSEDCL signed Distribution franchisee Agreement (DFA) with torrent in December 2006 and TPL took over operation of Bhiwandi circle from 26th January 2007. For the term of franchisee i.e. 10 years in this case, it is responsible for all the functions of the distribution licensee within that area. These include metering, billing, repair, maintenance, consumer service, capital expenditure, giving new connections, generating bills, revenue collection etc. The consumers in the franchisee area are charged same tariff as applicable to consumers of rest of licensee area. Franchisee has to comply with all service and supply quality norms, rules and regulations as specified by regulatory commission and other authorities.

As per the DFA, FY 2005-06 is specified as the base year. It is last financial year before the franchisee took over operations. The DFA gives complete autonomy to the franchisee in planning and execution of capital expenditure. There is no need for any regulatory approval. At the end of the term the licensee will reimburse the franchisee at depreciated cost of the assets. The franchisee makes payments to licensee on weekly basis. The revenue earned by licensee from franchisee is indexed to 'input rate' as agreed between the two parties and tariff indexing ratio.

The tariff indexing ratio is calculated as ratio of average billing rate (ABR) of the given month or year to the average billing rate of base year. This helps to capture changes in tariff and/or consumer and sales mix and pass on the due benefits to licensee. As the licensee's revenue from franchised area is directly indexed to ABR, it is of utmost importance to have a correct estimate of the same.

The ABR is calculated as sum total of product of category wise, slab wise sales and their respective tariff, divided by total sales to the franchisee area. It covers all aspects of tariff such as fuel adjustment charges, additional supply charge, reliability charge, etc.

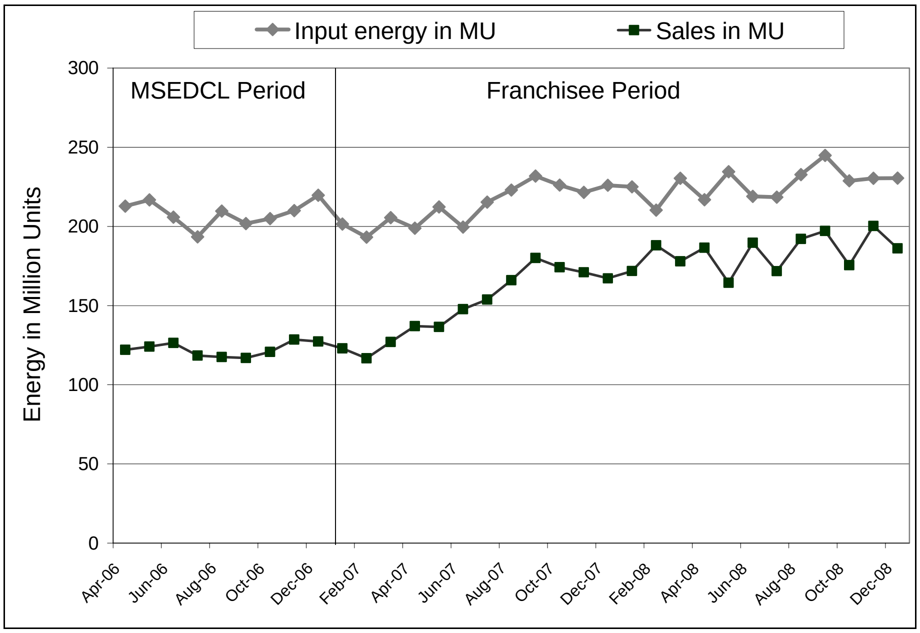
The DFA also has provisions for various independent audits (preferably by one of the big four audit firms) such as annual ABR audit, quarterly audit of subsidy claims, inventory status audit, audit of the franchisee's billing system and database, etc.

3. Post - Franchisee Performance

3.1 Reduction in ATC losses:

Both MSEDCL and Torrent power limited, (TPL), claim significant improvement in loss reduction in Bhiwandi. Figure 3.1 below shows energy input and metered sales on a monthly basis from April 2006 to December 2008.

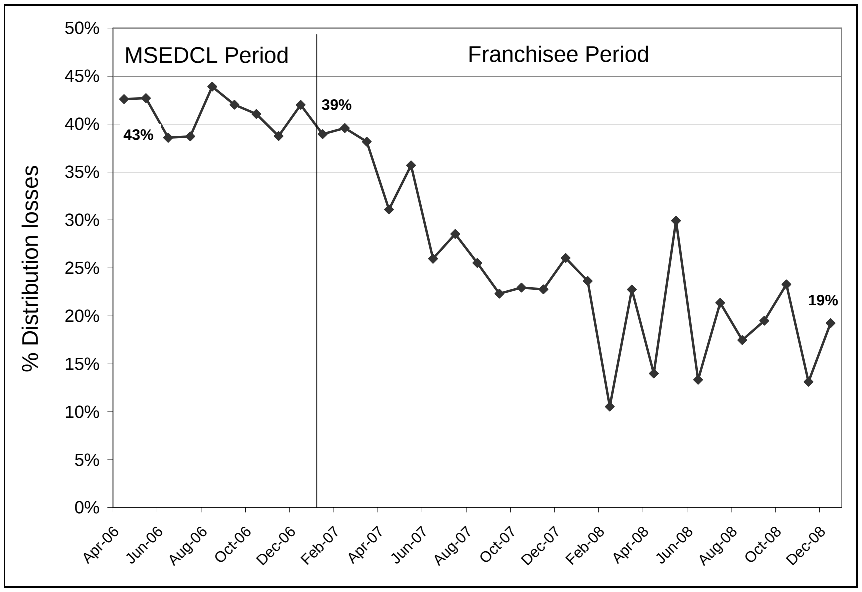
Figure 3.1: Changes in monthly sales from April 06 to Dec 08



Source: MSEDCL

As can be seen, the energy input has not increased much but the metered sales after the franchisee take over have almost doubled. Naturally, the distribution losses have come down significantly, in just two years, from 39% to 19%, as shown in figure 3.2.

Figure 3.2: Changes in monthly distribution loss from April 06 to Dec 08

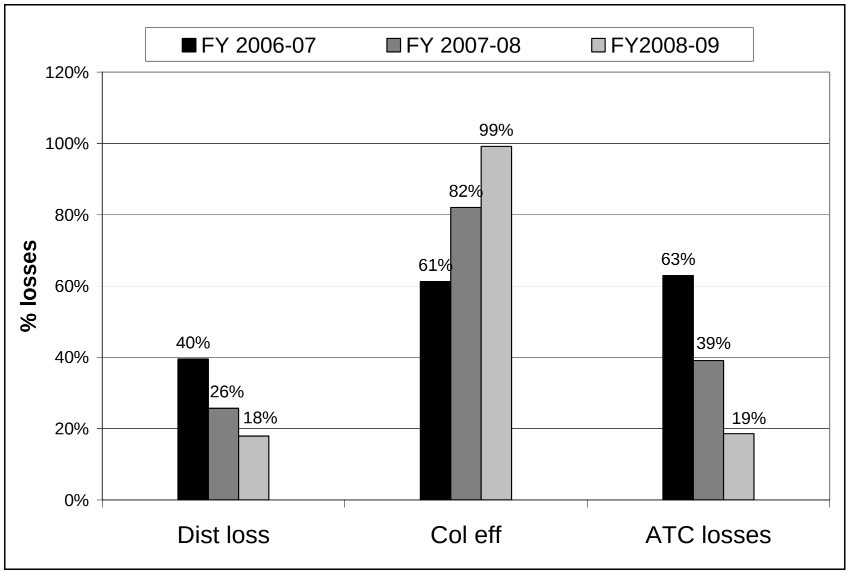


Source: MSEDCL

To analyze these claims detailed data about consumer mix, consumption and billing and recovery is required. Initially MSEDCL made available certain consumer data (e.g. category-wise sales and demand) but on pointing out several inconsistencies in this data, MSEDCL expressed its inability to confirm / correct the data. MSEDCL stated that it is unable to provide the necessary data as the metering and billing data submitted by Torrent is not compatible with MSEDCL's IT systems. It further stated that they are working on data compatibility since 2007, though the current status of this 'system integration' is unknown, very recently, in May 2009, MSEDCL has published certain consumer sales and demand data on its website. Analysis of this data is presented below. Since TPL did not cooperate, additional data / details could not be obtained and further analysis could not be carried out. As per the data on MSEDCL website, it can be seen that distribution loss in Bhiwandi circle have gone down from 40% to around 18% and collection efficiency has gone up from 61% to 99%. As a result, the aggregate technical and commercial losses have gone down from 63% to 19% as shown in figure 3.3 below[1].

[1] Franchisee took over operations in Bhiwandi on 26th Jan 07, i.e. just two months before the end of FY 2006-07. Since for most part of FY 06-07 Bhiwandi operations were handled by MSEDCL, for the sake of consistency and based on availability of data, through out this report we are treating whole of FY 07 as pre-franchisee year. We also use FY 07 as reference year for comparing pre- and post franchisee performance.

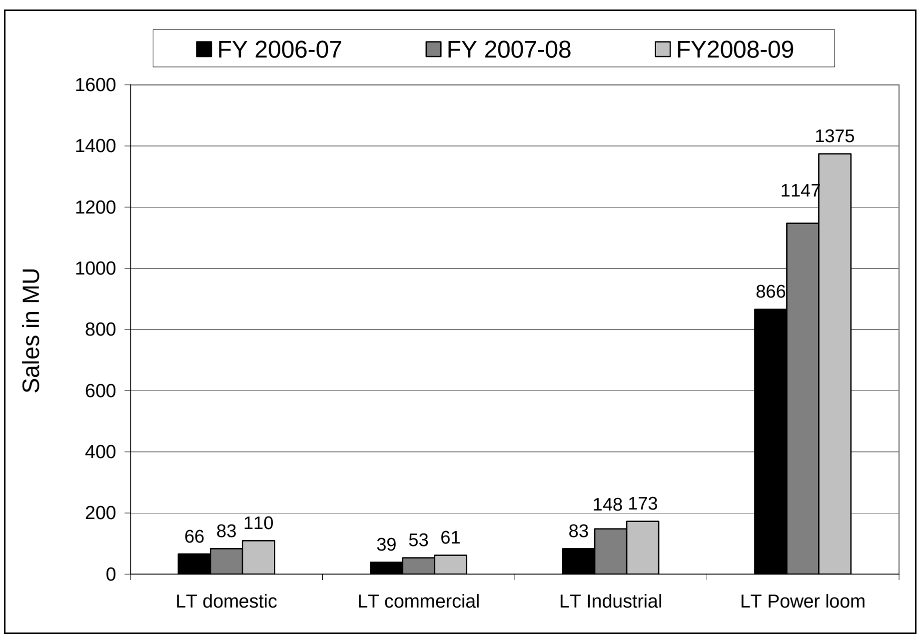
Figure 3.3: Distribution loss, collection efficiency from FY 07, FY 08 and FY 09



Source: MSEDCL website

The total HT sales have increased from 438 MU to 548 MU whereas LT sales have gone up from 1059 MU to 1726 MU. The figure 3.4 below shows the category wise growth in LT sales from FY 07 to FY 09.

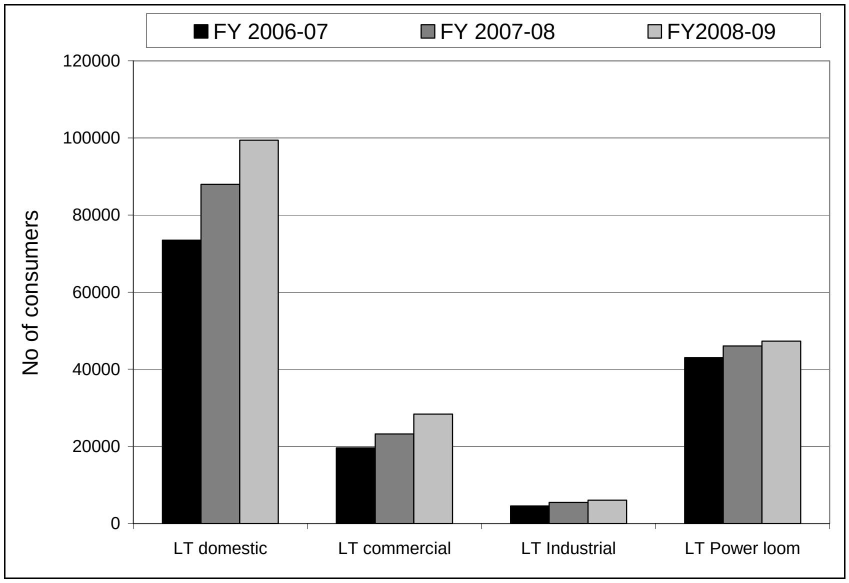
Figure 3.4: Category wise LT sales in MU for FY 07, FY 08 and FY 09



Source: MSEDCL website

There has been a significant increase in number of new connections. As shown in the figure 3.5 below, numbers of residential and commercial connections have increased by nearly 35% and 45 % respectively.

Figure 3.5: Category-wise LT consumer numbers for FY 07, FY 08 and FY 09



Source: MSEDCL website and Annual revenue requirement petition for FY 2009-10

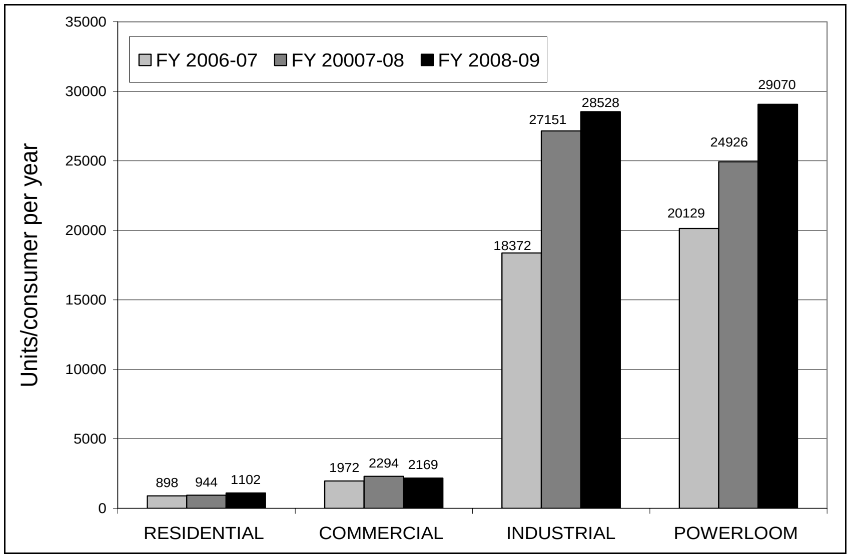
The number of consumers for power loom has increased only modestly and the connected load has also gone up from 369 MW to 409 MW. Table 3.1 below shows the consumer mix of Bhiwandi circle pre and post franchisee.

Table 3.1 Sales mix pre and post franchisee

Category	% share in total sales		
	FY 2006-07	FY 2007-08	FY 2008-09
LT domestic	4%	4%	5%
LT commercial	3%	3%	3%
LT Industrial	6%	8%	8%
LT Power loom	58%	59%	60%
HT total	29%	26%	24%

It can be seen that the overall sales mix has remained same in pre and post franchisee period. Figure 3.6 shows the changes in LT consumption norm (units consumed / consumer / year). It can be seen that consumption norm for LT industrial and power loom consumers has increased by 55% and 45% respectively, indicating significant improvement in metering efficiency. Percentage of faulty and average readings has reduced from 54% to about 20% in two years of franchisee period.

Figure 3.6: LT consumption norm in unit/consumer per year



Source: MSEDCL website

Apart from loss reduction, franchisee also claims to have undertaken an aggressive transformer capacity addition of around 100 MVA by adding 889 new 22KV transformers and increasing capacity of existing ones. 31 Km of 22KV lines and 65 Km of underground feeders were added during the year. Consequently, the transformer failure rate that was as high as 40% per year has gone down to around less than 10%. Franchisee has also undertaken a massive meter replacement drive through which more than 92,000 meters were replaced at consumer premises in the first year itself[2]. Along with this several administrative and management changes have been done to improve the service quality and to reduce losses.

3.2 MSEDCL and Franchisee Revenue from Bhiwandi Circle

Analysis of data available on MSEDCL website shows that significant increase in sales as well as collection efficiency in the first two years of franchisees operations have led to significant increase in revenue of franchisee[3]. Collection from consumers, which was Rs. 272 Cr. in FY 07 (pre-franchisee year), has more than doubled to around Rs. 618 Cr. in FY 09. In the first year of operation, FY 07-08 franchisee revenue, after payment to MSEDCL was Rs. 160 Cr., which has doubled, in the second year of operation to Rs. 344 Cr. Franchisee has to incur operation and maintenance costs as well as repayment of capital expenditure from this revenue share. Considering the likely expenses and capital expenditure made by franchisee, it is evident that this has become a highly profitable activity for franchisee in the first two years itself. Compared to this, increase in MSEDCL revenue has been quite moderate. In fact, compared to pre-franchisee year (FY 06-07) the MSEDCL revenue in first full year of franchisee (FY 07-08) decreased by 3% and in the second year of franchisee operation (FY 08-09) it increased by 7%.

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[2] Source: Director's report of Torrent Power limited
Hhttp://www.torrentpower.com/investors/pdfs/directors_report.pdfH

[3] Source: MSEDCL website,
Hhttp://www.mahadiscom.com/emp/Sale_Demand_%20Collection_Loss_Report/CIRCLE/CF00009.HTMH

As explained in Box 2, MSEDCL revenue is based on fixed annual input rate (determined through the bidding process) and is indexed to average billing rate (ABR). The ABR for FY 06-07, which was about Rs. 4.3 / unit has dropped to around Rs. 3.6 / unit for FY 07-08 and then increased to Rs. 3.75 /unit for FY 08-09. This drop of about Rs. 0.60 / U in ABR in FY 08 compared to ABR for FY 07 has led to MSEDCL earning less revenue than the previous year. Another intriguing factor in this context is only marginal increase in subsidy claim on account of power loom sales. In the first year of franchisee operation sales to power loom increased by about 30 % but the subsidy claim increased by only 2%, leading to about 60 paise per unit decrease in power loom subsidy. This also affects ABR and hence MSEDCL revenue. Any reconciliation / modification in subsidy claims would lead to change in ABR and hence change in MSEDCL revenue as well as government subsidy paid to MSEDCL.

Realizing this importance of ABR, as well as subsidy claims, DFA provides for third party annual audits of such parameters. Unfortunately, even after two years, annual ABR and quarterly subsidy audits as per the requirement of DFA have not been done. Hence, it was not possible to analyze these issues further. This sensitivity of ABR and subsidy for licensee and franchisee revenue is discussed further in section 6.

4. Consumer feedback

Apart from reduction in losses and increase in revenue collection, improvement in service quality and consumer satisfaction is major expectation from this model. To assess the extent of improvement in service quality and consumer satisfaction, we undertook a rapid field survey. This section describes the process and results of field survey.

4.1 Survey methodology

A rapid field survey based on semi-structured questionnaire covering different aspects of supply and service quality was undertaken to generate first hand assessment of consumers' response and experience so far. The survey covered various LT consumer segments such residential, power loom and commercial which constitute more than 90% of total LT consumer mix. As shown in table 4.1 below, the consumer mix covered in the survey closely matches the consumer mix in the Bhiwandi franchisee area. Respondents were selected through knocking- on –the-door methodology. Total 204 consumers were interviewed. As shown in figure 4.1, these respondents were selected from different areas within the franchisee area to ensure coverage of all localities (urban, semi-urban, slums, high income areas, power-loom areas etc.) Triangles show the area where interviews were held.

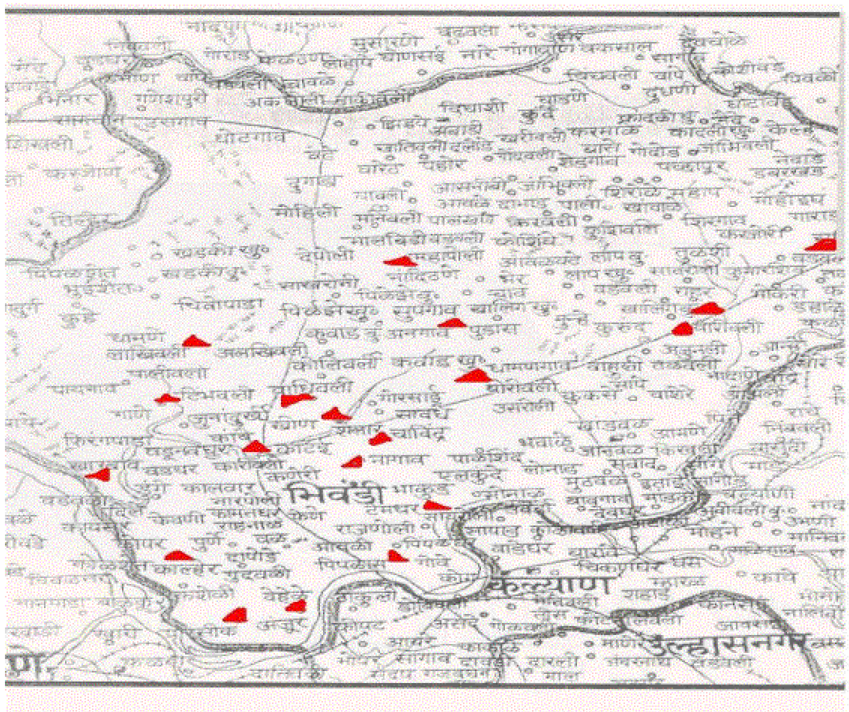
Table 4.1 Actual and Survey Consumer mix

Consumer Category	Circle (%)	Survey (%)
Residential	52	57
Power loom	30	24
Commercial	14	17
Others	4	1

Survey environment and challenges:

Before analyzing and reviewing the survey results, it's essential to appreciate the challenges that were faced on field. People have very strong feelings about the issue and it is highly politicized also. Almost 50% of people approached, refused to participate in the survey. We were refused entry into one village when we mentioned about survey on electricity. Consumers have strong opinions about the changes in electricity service provider, and often it becomes impossible to interview individual consumer, as immediately number of people gather to argue about electricity issues and the impact of change in operator.

Figure 4.1: Map showing consumer survey locations within franchisee area



4.2 Survey findings:

Based on semi-structured questionnaire, consumers were interviewed to assess changes in service quality. Broadly the questionnaire covered following aspects of service quality, New connections, Metering and billing issues, Quality of supply and service and overall response / feedback. Subsequent sub-sections present key findings and responses on each of these issues.

4.2.1 New Connections

Getting an official new connection or getting additional load sanctioned was a very painstaking exercise during the MSEDCL era in Bhiwandi. As a result, many consumers resorted to illegal means of getting power such as hooking or getting supply from fixed tariff illegal lines. Hence the survey tried to find out how things have changed after the advent of franchisee. Consumer feedback about this is summarized in figure 4.2

Table 4.2: Consumer response- Ease of getting new connections

Question Asked	Yes	No	Don't know	NA
Getting new connection has become simpler?	46%	5%	34%	16%
New Connection for Disconnected Consumers?	23%	4%	55%	18%
Copies of regulations to New Consumers?	1%	46%	13%	40%

NA – no response or don't know.

It can be seen that getting new connections has become much simpler in the franchisee regime. This is also reflected in the fact that number of residential consumers has almost doubled. Clearly many of them where anyway using power but not officially. Survey also points out that even the previously disconnected consumers are getting new connections (which is not allowed as per DFA unless arrears are recovered[4])

4.2.2 Metering and Billing Issues

Quality of metering and billing is very crucial for consumers, as it has direct monetary impact. This aspect becomes even more crucial in the context of Bhiwandi as in the pre-franchisee era the metering and billing services were very poor with large number of unauthorized connections. For example, even amongst official connections, around 54% of the total meters were either faulty or had average reading.

On this background, consumer feedback about metering and billing services, which is summarized in table 4.3 below, clearly indicates major improvement. The feedback also highlights that there is still a long way to go with 30% consumers saying that they do not get bills regularly. Another striking finding is that over one third (38%) of the consumers have complaints about meters (mainly meters being fast)

Table 4.3 – Consumer response – Metering and billing

Question Asked	Yes	No	NA
Is Meter working?	88%	3%	9%
Is your meter being read regularly?	75%	11%	14%
Do you receive Bill regularly?	60%	30%	9%
Any complaint about meter	38%	52%	9%
Is there improvement in metering and billing?	46%	37%	17%

NA – no response or don't know.

[4] The recovery of arrears by franchisee is miniscule. Till now franchisee has recovered less than 10 Cr. Rs. on account of arrears.

4.2.3 Quality of supply and service

As mentioned in the previous section, the supply and service quality in Bhiwandi area was really in pathetic shape with annual transformer failure rate of 40% and high incidence of accidents associated with electricity. Any fault resolution took a lot of time and money on part of consumers. On this background, consumers' feedback about improvement in service quality has been very clear, with about 80 % respondents stating that the service quality, (in terms of voltage quality, reduction in accidents and reduction in technical faults) has improved since the franchisee took over.

Table 4.4: Consumer response – Quality of supply and service

Parameter	Situation Improved	Situation Declined	No change	Don't know	No response
Voltage Quality	78%	16%	0%	1%	4%
Transformer Failure rate	90%	0%	5%	1%	3%
Technical Faults (line breakdown etc.)	87%	1%	8%	0%	3%
Electric Accidents	80%	4%	5%	10%	1%
Quality of Supply	76%	11%	0%	6%	7%

As far as improvement in supply quality is concerned, the best anecdotal evidence for the same can be the fact that appliances such as 110 Volt incandescent bulb which was easily available in Bhiwandi (to over come the difficulty of low voltage) during MSEDCL regime has disappeared from the market!

4.2.4 Overall response / feedback:

Apart from the main issues concerning new connections, metering, billing and supply and service quality, the survey also dealt with overall response of consumers. These are summarized below. Out of a total 204 respondents, (ref figure 4.2) 68% respondents felt that the change is good, 18% felt that is not so where as 15% had mixed feelings. As shown in figure 4.3, main factors contributing to positive feedback have been improvement in the supply quality due to system improvements, whereas most of the consumers who felt that the change was not good attributed this impression to high bills and meters being fast.

The 15% consumers who had mixed opinion majorly agreed that the system has improved and things are better but had high bills as their major concern, as shown in figure 4.4.

Figure 4.2: Overall consumer response

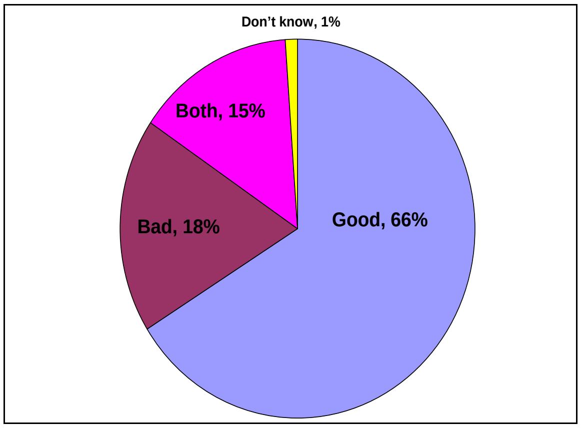


Figure 4.4: Factors contributing to mixed consumer response

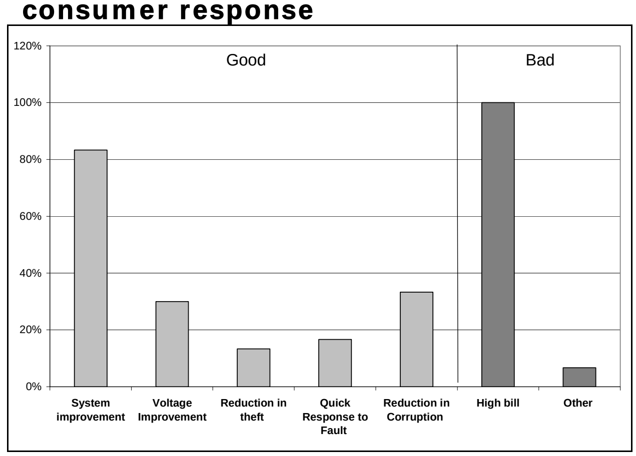
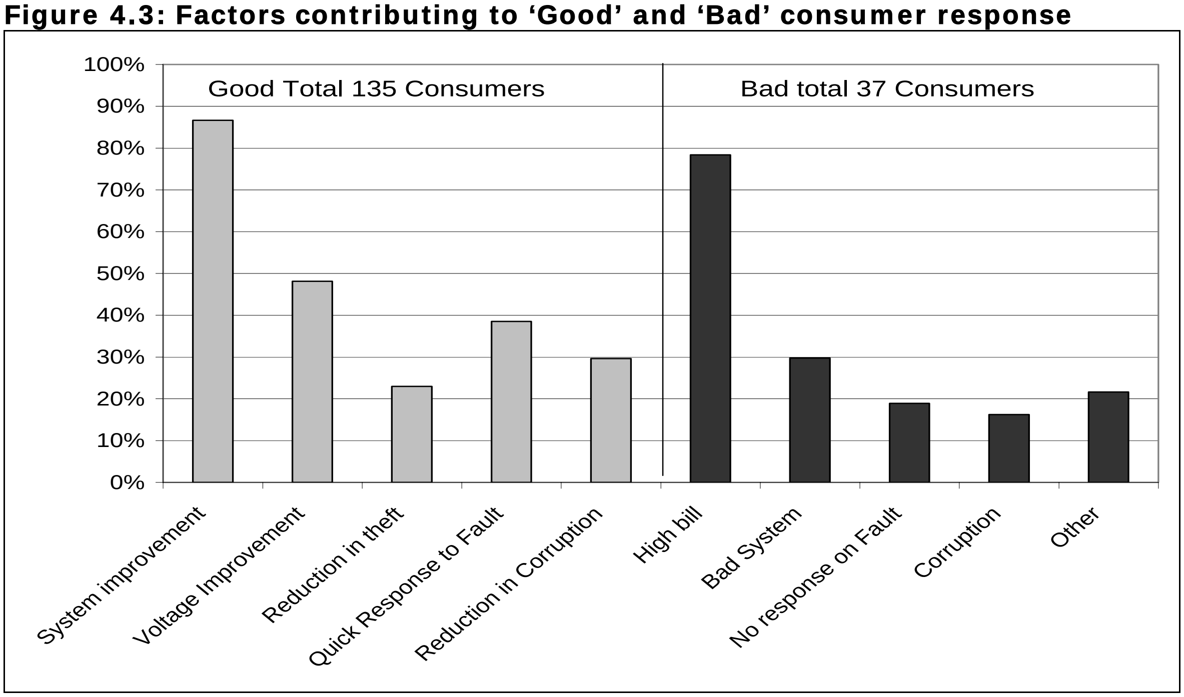


Figure 4.3: Factors contributing to 'Good' and 'Bad' consumer response



Some of the other important observations that came up through the survey discussions are as follows:

- 99% of the consumers surveyed were unaware of regulatory institutions, regulations, supply code, consumer grievance redressal forum etc. This is important as it highlights the fact that simply having legal provisions that franchisee has to follow / will be bound by service quality standards and grievance redressal mechanisms established by regulatory commission will not be sufficient, and major efforts are required to create awareness about these amongst consumers.
- Majority of the consumers are very poor and hence electricity bill is a major expense for many people.
- With the energy bills going up, there is a higher tendency towards conserving electricity, with measures such as stopping usage of electric heaters and greater use of CFLs.
- Metering and billing issues are serious concerns, which need careful attention. There is lack of consumer confidence in the utility's metering and billing practices, strong perception of high bills and fast running meters which calls for efforts on part of the licensee as well as franchisee to win consumer's confidence. Also it's important to remember that majority consumers are very poor and electricity bill amount is significant for them, indicating that the current cost of good quality supply might be unaffordable for many consumers.

5. Review of bidding process and contractual arrangement

5.1 Bidding process and selection of franchisee

The selection of franchisee is based on a single stage bidding process. The Bidders were asked to bid for year-wise fixed Input Rate for power injected by MSEDCL in the Franchisee Area, for entire franchisee term of 10 years. The input rate quoted by the bidders was expected to factor in a certain ATC loss reduction trajectory[5]. The contract that would fetch MSEDCL the highest annualized input rate (which implies maximum loss reduction) would win the bid. The evaluation of the proposals would be carried out by comparing the levelized annualized Input Rate for entire term of DFA, computed at a discount rate of 6.19%.

MSEDCL published a request for proposal (RFP) document in March 2006. The RFP contained brief description of the franchisee model, information about the past performance of Bhiwandi circle and it laid down the principles for the distribution franchisee agreement (DFA). Apparently, five bidders purchased the RFP but only two viz. Torrent Power Limited (TPL) and Crompton Greaves Limited submitted the actual bids. Both the parties where technically and financially qualified.

The RFP contained technical evaluation criteria, which are designed to encourage participation by large corporate organizations. RFP required that the bidder should be a stock exchange listed company with an experience of handling 500 employees or 2 lakh retail customers for at least 2 years. This is a desirable feature, as it would ensure participation of large, organized companies with long term interests in the business. In case of Nagpur this aspect has been further strengthened by not allowing bidding through consortium. As per DFA in case of default or failure of franchisee to attain specified performance levels MSEDCL would have limited options of holding franchisee accountable if it is dealing with a Special Purpose Vehicle type of entity or small company with limited assets. In such a scenario, to ensure serious, effective bidding and commitment by bidders, it is essential to ensure participation by large, organized companies only.

Another desirable feature of the bidding process is the clear, simple bidding parameter. Bidders are required to quote only fixed input rate for each year of the franchisee. This avoids complications in bid evaluation and the resultant possibilities of manipulation to select particular bidder.

In order to establish benchmark for expected ATC loss reduction over the franchisee term, RFP provide projected ATC loss reduction trajectory and bidders were required to consider the same while arriving at year-wise input rate. As discussed later in section 6, as per benchmark trajectory ATC loss reduction of 42 % was expected, but winning bid was for ATC loss reduction in the range of 25 to 30%.

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[5] The article 5.3.2 in the RFP talks about loss reduction that should be factored into the quoted input rate. It says: 'The annualized Input Rate, as quoted by the Bidders shall factor minimum 5% reduction in T&D losses and 4% improvement in collection efficiency every year for first three years from the Effective Date and minimum 3% reduction in T&D losses and 3% improvement in collection efficiency every year after three years and up till seventh anniversary of DFA and minimum 1% reduction in T&D losses and 3% improvement in collection efficiency every year after seventh anniversary and up till the Expiry Date. The Bidder shall consider the T&D losses and collection efficiency of 2005-06 as base for estimating the improvement in performance during the term of DFA.'

Based on the highest input rate criterion, TPL won the contract and was issued with the Letter of Intent on 12th June 2006. This was done even though the actual Distribution Franchisee Agreement (DFA) was still being drafted. Table 5.1 shows the year-wise input rate quoted by TPL.

Table 5.1 Agreed input rate for franchisee term

Year	DFA quoted input rate in Rs/unit
1	1.8
2	1.81
3	1.88
4	1.95
5	2.02
6	2.09
7	2.18
8	2.27
9	2.35
10	2.45

5.2 Lacunae in Bhiwandi franchisee bidding process:

Though the bidding process adopted has certain positive features as mentioned above, the entire processes had one major shortcoming. The RFP circulated to all prospective bidders contained only principles of franchisee agreement, and actual franchisee agreement was prepared after awarding letter of intent to winning bidder – i.e. TPL. Though the bidding process was complete in three months and letter of intent was issued, actual franchisee agreement was signed in December 2006, i.e. six months after issuing letter of intent.

Subsequent to signing DFA on 20th December 2006, on 25th January 2007, a day before TPL took over operations at Bhiwandi on 26th Jan 2007, a supplementary agreement to DFA was signed between MSEDCL and TPL. This agreement made some major essential improvements / corrections in the DFA. These are

In the earlier DFA the base ABR was calculated for the entire MSEDCL consumer mix. This error was corrected in the supplementary agreement, which clearly specifies that the base indexation shall be based on the change of tariff as applicable to all the MSEDCL consumers in Bhiwandi circle. The ABR calculation earlier only included fuel adjustment charges; this was corrected to include all components of tariff barring those which are of the nature of taxes and duties. In the original DFA, independent audit of only base year ABR was mandated. Supplementary agreement mentions that independent audit of ABR will be carried out every year.

Though these desirable changes were effected before actual handover of area to franchisee, the final franchisee agreement revel some major changes compared to the principles of agreement included in RFP at the time of bidding. Important amongst these are dropping of profit sharing clause and dilution of arrears recovery clause. Principles of agreement included in RFP stipulated that DF needs to share 50% of the revenue with MSEDCL if the net annual revenue of DF for a financial year exceeds twice that of Base Year[6]. This profit

[6] As per clause no 19 of the request for proposal document

sharing arrangement has been completely removed from final DFA. Principles of agreement in RFP also stipulated that the franchisee should recover 100% arrears from current live consumers, accrued in one month prior to effective date. In the final agreement this obligation was diluted and franchisee was required to collect at least 65% of these arrears. Though the desirability or merit of these changes could be debated, the process of making these changes needs consideration. In spite of repeated queries MSEDCL has been unable to confirm that these changes were made before the close of bidding process and that these changes were communicated to all prospective bidders. Thus, it appears that these major changes, which have implications on franchisees revenue potential and hence projected input rate were made after issuing letter of intent to M/S. TPL. This is certainly not a desirable practice and to say the least raises questions about transparency of the entire bidding process.

5.3 Lacunae in Nagpur franchisee bidding process:

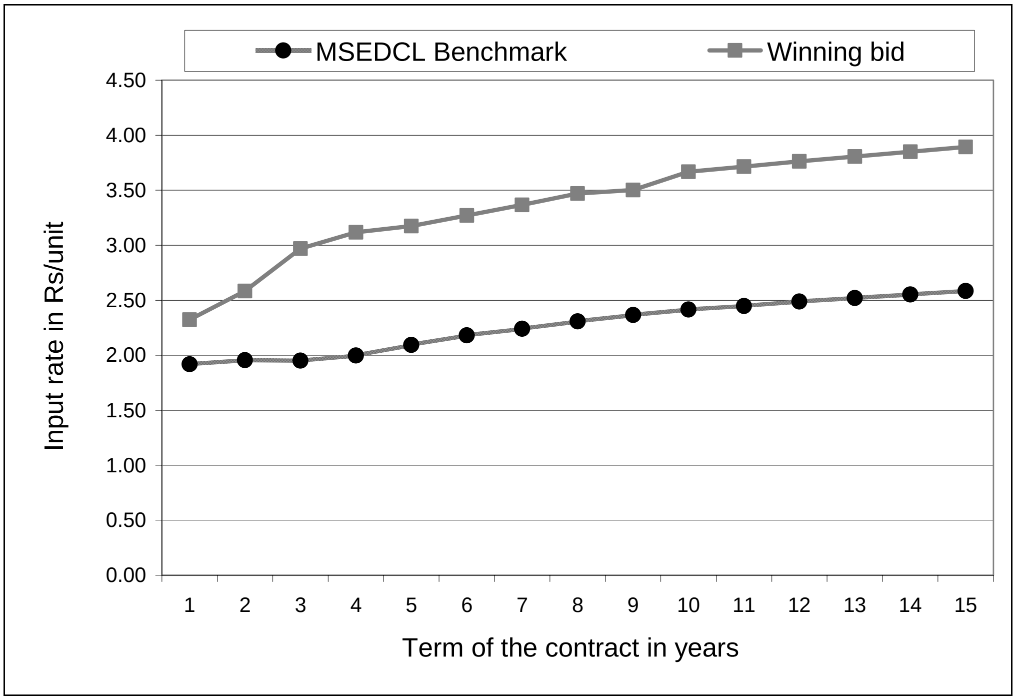
Subsequent to Bhiwandi experiment, MSEDCL also undertook similar franchisee arrangement for Nagpur circle, which is also a high loss area. Analysis of bidding process for Nagpur also highlights serious lacunae in the bidding process, though of different nature. In a major improvement over Bhiwandi, in Nagpur case, RFP contained full-fledged franchisee agreement and not just principles of agreement. But here the shortcoming was in the bid evaluation process.

The franchisee model in Nagpur is the same as input based Bhiwandi model, with a slight modification of introducing separate LT and HT input rates as bidding criteria and franchisee term of 15 years. Another distinguishing factor in case of Nagpur is that, MSEDCL has explicitly stated expected minimum input rate trajectory instead of implicit loss reduction that needs to be factored into input rate as in case of Bhiwandi RFP. This was inter-alia based on projected ATC loss reduction from 39% to 12% by the 15th year.

Figure 5.1 below shows the MSEDCL stipulated input rate trajectory and trajectory as quoted in winning bid (by M/s. Crompton Greaves Ltd.). Winning bid quoted an input rate of Rs.4.68/unit for HT and Rs.3.69/unit for LT in the final year, which is 47% and 51 % higher than the MSEDCL stipulated rate of Rs.3.18/ unit for HT and Rs.2.43/unit for LT respectively. MSEDCL's projections were based on the assumption of bringing down overall loss levels to 12% by the final year. Input rate trajectory of the winning bid, implies that, even without accounting for manpower and other O&M costs that franchisees would have to incur, in order to simply pay quoted input rate to MSEDCL, franchisee would have to show negative losses after first few years itself. This clearly implies that the winning bid was unviable![7]

[7] There were four other successful bids in case of Nagpur and these bids were 25 to 30% lower than the winning bid.

Figure 5.1: Nagpur Franchisee Bidding – Benchmark and winning bid Input rate trajectories



Even though the un-viability of the winning bid is so apparent, this was not highlighted during the bid evaluation process. MSEDCL accepted the bid being highest revenue earner and issued letter of intent to M/s. Crompton Greaves. During the process of appointing franchisee for Nagpur, there has been litigation in Nagpur High Court challenging MSEDCL's decision to franchise parts of Nagpur circle. During this litigation, while dealing with questions of loss reduction and benefit to MSEDCL, High Court referred the matter to MERC regarding it a competent authority to evaluate such techno-economic aspects of the DFA. Unfortunately the issue of unviable bid was not reflected during the High Court proceedings. It was also not highlighted in the MERC scrutiny of the arrangement as MERC chose to restrict itself only to very specific issues referred to it by the High court (and concluded that the franchisee arrangement is in the interest of MSEDCL as it would lead to higher revenue). Thus the three tier evaluation by MSEDCL, High Court and MERC failed to point out the unviable nature of the bid.

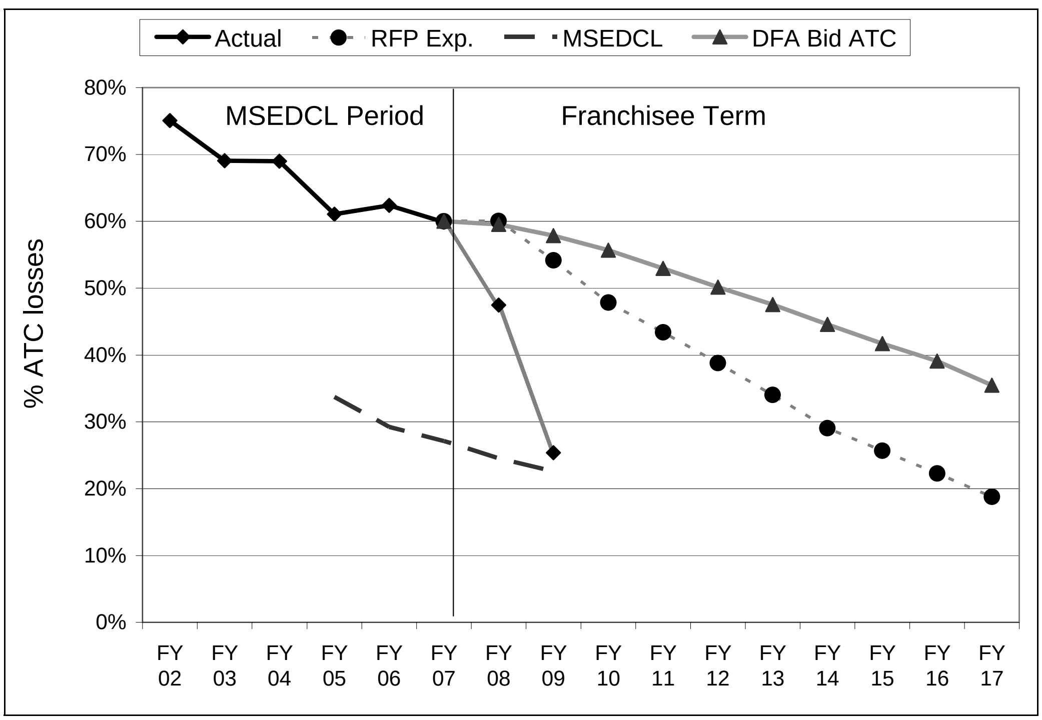
In this context, the winning bidder has refused to take over the circle under the pretext of dispute over the validity of billing rate and other billing and collection data provided by MSEDCL in RFP. As a result, effectively, the Nagpur franchisee experiment has been abandoned.

These two instances of major shortcoming the in the process of awarding franchisee contracts highlight the underlying dangers and weakness in utilities ability to conduct transparent, rational bidding process. It is critical to address these weaknesses to ensure effective competition and to maximize benefits to licensee, as the revenue potential (and ATC loss reduction trajectory) is determined solely on the basis of competitive bidding process. These instances also indicate that, while appointing franchisee, licensees would tend to focus only on 'apparent' revenue earning potential of the arrangement and would give limited attention to other crucial issues such as of ensuring accountability of the franchisee, rational allocation of revenue amongst licensee and franchisee and consumer interests in terms of service quality and fair metering and billing practices. This also indicates the ‘desperation’ on part of licensee to hand over loss making areas to private entities and in the process there is a danger of licensees accommodating franchisees demands for more and more liberal contract terms. This is already evident. Nagpur franchisee proposal extends franchisee term to 15 years, where in subsequent franchisee processes in UP, (Refer Box 3) the term has been extended to 20 years. Eligibility and technical qualification criteria have also been diluted significantly in case of UP process.

5.4 Actual ATC loss reduction and MSEDCL benefit in Bhiwandi

Although the ATC loss reduction claims, as described in section 3, in Bhiwandi seem impressive, it is important to analyze how much MSEDCL has actually benefited out of it. Hence we analyze the ATC loss reduction trajectory in Bhiwandi as juxtaposed with MSEDCL performance before franchising, MSEDCL expectations as per RFP, Franchisee bid and actual loss reduction claims by Franchisee. The figure 5.2 below shows all the loss reduction trajectories mentioned above.

Figure 5.2: Comparison of the RFP, DFA and actual loss reduction trajectories



The actual ATC losses, which were around 75% in FY 02 came down to 60% by FY 07. This was the year after which franchisee took over the operations of the circle. MSEDCL as per its RFP expected ATC loss reduction (as indicated) from 60% to 18% in the span of 10 years. The DFA bid is the trajectory implied by input rate defined in the DFA. In its bid, TPL promised ATC loss reduction ranging between 25-36% over the span of 10 years[8], whereas

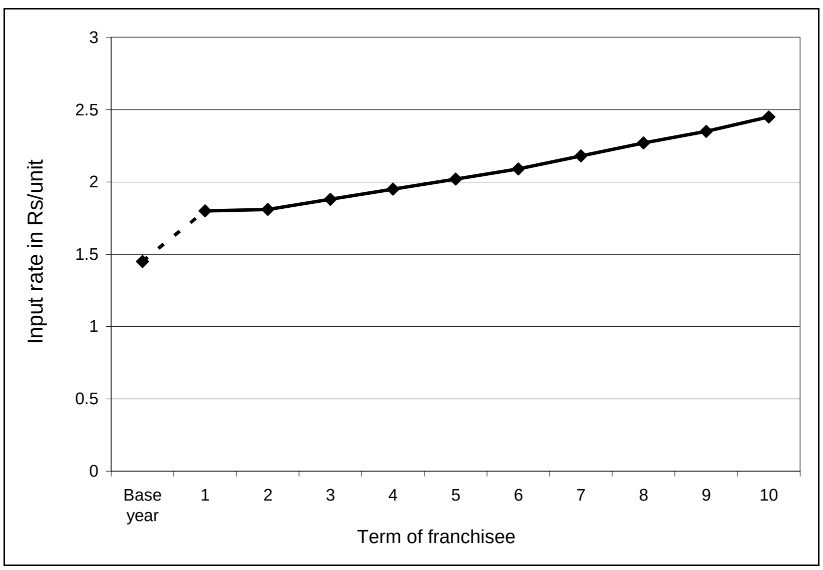
[8] ATC loss reduction can be achieved in two ways; one is by aggressive distribution loss reduction and other with aggressive collection efficiency improvement. The ATC loss reduction trajectory (implied by DFA input rate) as depicted above is determined considering a combination of reduction in distribution loss and improvement in collection efficiency.

it claims to have reduced ATC losses by 36% in first two years itself. It is interesting to note that MSEDCL on a whole reduced its own ATC losses (Actual) from 34% to 22%, i.e. by 12 % points during FY 06 to FY 08.

It is important to note that input rate is linked to distribution loss and collection efficiency, i.e. the ATC losses. The benefit of introducing input rate instead of ATC losses as a bidding criterion is that it captures the essential feature of loss reduction without the need to actually monitor losses. As the bidding was on the basis of input rate, irrespective of actual loss reduction achieved by the franchisee, MSEDCL revenue would be paid as per the input rate quoted in the winning bid, i.e. analogous to the ATC reduction trajectory projected in the winning bid. For example, say in FY 09 even though the franchisee has reduced ATC losses to the level of 19%, payment to MSEDCL would be on the basis of ATC losses of 58% as quoted in the winning bid. The difference in revenue earned by franchisee at 19% ATC losses and revenue paid to MSEDCL (on the basis of ATC losses of 58%) is the revenue margin for franchisee to cover its expenses (such as O & M expenses and return on capital expenditure) and profit.

In Bhiwandi like franchisee arrangements, licensee, in this case MSEDCL benefits on two accounts. First, it earns revenue from franchisee (which is based on quoted input rate in the bid) and second, it saves costs, in terms of O & M costs which otherwise it would have incurred, i.e. avoided cost savings. Figure 5.3 shows the input rate trajectory that MSEDCL would get based on the winning bid.

Figure 5.3: Input rate trajectory for the franchisee term



As per MSEDCL's own claims, its net revenue realization in Bhiwandi circle, after excluding distribution cost of 25 paisa/unit was Rs.1.45/unit in the base year, i.e. FY 2005-06. As per the DFA, input rate for first year is Rs.1.8/unit and goes up to Rs.2.45/unit by the 10th year. Thus, assuming no increase in tariff as well as O & M costs, MSEDCL's net revenue from Bhiwandi would increase from Rs. 1.45 /unit to Rs. 2.45 / unit in 10 years. This implies 70% increase in its net realization from Bhiwandi circle at a compounded annual growth rate (CAGR) of 5%. Without considering the avoided cost and simply considering the DFA promised increase in input rate from Rs.1.8/unit to Rs.2.45/unit, MSEDCL would achieve 40% increase in its net realization at a CAGR of 3.5%. As mentioned above this is independent of actual loss reduction trajectory as the MSEDCL revenue is decided through the competitive bidding process.

This again highlights the importance of proper bidding process. Another significant observation in this regard is the importance of proper estimation of likely avoided costs. A large part of MSEDCL's benefit is on account of avoided costs. Hence correct estimation of the actual, likely avoided cost is important. For example, reduction in employee cost would be a large part of avoided costs, but this would be applicable only in cases where there is possibility of absorbing employees from franchisee area in other areas of utility. If this is not feasible (either due to already over staffed utility or appointment of number of franchisees, as in case of UP) then the benefit to licensee would significantly go down.

Above analysis of benefit to licensee is highly sensitive to the changes in average billing rate as well as composition and scale of government subsidy to certain consumer categories. This is discussed further in section 6.

Box 3: Franchisee model in UP

After Maharashtra, UPPCL too has embarked upon plans to implement franchisee model in many major cities such as Kanpur, Agra, Aligarh, Meerut, Varanasi, Bareilly, Moradabad, Gorakhpur and Allahbad. Out of these, contracts have already been awarded to Torrent APC as franchisee for Kanpur and Agra. Uttar Pradesh Power Employees Joint Action Committee (JAC) competed for the bid along with private companies

Following are some of the major features of UP DFA:

- Term of the franchisee is for 20 years
- DFA mandates the Franchisee to achieve a loss level of 15% ATC Losses within first 5 years of operation, otherwise a penalty equivalent to 10% of the revenue lost due to non-achievement of the target will be recoverable by the licensee
- Invoice model is the same as that of Bhiwandi
- The frequency at which the franchisee should submit its subsidy claims is not specified and requirement to conduct an independent audit of the same is diluted.
- Frequency of electricity duty audit too is unspecified
- Provision for upgrading the Performance guarantee in every quarter based on average energy input in previous quarter and applicable input rate for the year indexed to Tariff Indexing Ratio of previous quarter
- The franchisee needs to submit metering, billing and collection data on monthly basis but it has to be kept confidential by licensee and used only under conditions of default.

5.5 Other important observations about RFP / DFA

As mentioned earlier, DFA in case of Bhiwandi has a term of 10 years. During this period, all the consumers residing in franchisee area will be charged electricity tariff as per the MERC tariff applicable to all the consumers in Maharashtra. All the regulations and laws for example; service quality, Standards of Performance, etc that apply to MSEDCL are contractually binding on the franchisee. This sub-section reviews other important provisions of the DFA pertaining to vital issues related to distribution business.

Capital expenditure

In case of Bhiwandi, franchisee has complete autonomy to plan and implement its capital expenditure. There is no need for any approval from licensee or regulator. MSEDCL has also made a commitment for investing Rs.12 Cr. every year for 5 years in the franchisee area. Initially MSEDCL was supposed to spend this amount for specified assets, but later on MSEDCL has agreed to reimburse franchisee to the extent of its commitment rather than MSEDCL itself making investments. At the end of the franchisee term MSEDCL would pay franchisee depreciated value of capital expenditure incurred by the franchisee and would take over those assets.

DFA for Nagpur requires the franchisee to get regulatory approval for its capital expenditure and the licensee will reimburse (at depreciated value) only the assets that fall under approved schemes. Also MSEDCL has realized the limited role of its investment in franchisee's capital expenditure and in case of Nagpur; it has made no investment commitment.

The strategy of letting the franchisee decide its own capex planning is encouraging for the private sector, however as MSEDCL is bound to compensate the franchisee for the assets added by it, at the depreciated value and hence there is need for regulatory oversight at least for any capex undertaken after say 5th year of franchisee term. This will provide the necessary flexibility for franchisee in the initial years while ensuring regulatory oversight to ensure prudence of capital expenditure in the later years.

The asset valuation methodology that shall determine the depreciated value of a given asset is ambiguous both in case of Bhiwandi and Nagpur. It states that 'applicable revision of schedule of costs' should be used for calculating transfer value of the asset. It is not clear if the applicable cost will be the cost at which the asset was purchased or the cost of such an asset at the time of calculating transfer cost.

Provisions pertaining to sections 126 and 135 of EA2003

One of the significant lacuna of RFP/DFA is that it is completely silent on legal provisions and role of franchise in matters concerned with section 126 and 135 of EA2003 dealing with theft and unauthorized use of electricity. There is no requirement on behalf of the franchisee to report theft assessments and recovery cases handled by it under these sections. Given the stringent nature of these provisions, in order prevent undue harassment of consumers, it is extremely important to have a clear definition of franchisee's authority and role in such cases and a proper mechanism for reporting of revenue collected and actions taken under these sections to licensee. Further it needs to be evaluated if any authority / powers under the said sections could at all be delegated to franchisee within the ambit of current legal structure.

Security deposit from existing consumers:

The entire RFP and DFA mentions security deposit only in the context of new consumers and does not talk anything about increase in security deposit of existing consumers and how it should be passed on to the licensee. In the absence of clear provisions on this issue franchisee may get to keep the increase in security deposit while the responsibility of paying the security deposit would rest with licensee.

Provision for audits and various other reports

Franchisee is required to submit data regarding billing and collection inclusive of electricity duty, Security Deposit collected on account of new connections. The DF needs to maintain separate accounting for its subsidy, electricity duty collection and allow for yearly audit of assets and inventories within its area. Apart from the audit requirements mentioned above, the DF is also required to generate periodic Management Information System (MIS) and energy audit reports as per formats prescribed in the DFA.

Table 5.2 gives the details of major audits and reports to be prepared as per the requirement of the DFA.

Table 5.2 Details of various Audit provisions as per DFA

Responsibility	Document/Report title	Frequency
Franchisee	Updating the Asset register	Quarterly basis for the 1st year and thereafter on a monthly basis
Franchisee	Inventory status reports	Annual
Franchisee	Complaint handling procedure	
Franchisee	statement of subsidy claims	Quarterly
Franchisee	MIS reports	Monthly
Franchisee	Energy Audit	Monthly
Independent Auditor	Audit of statement of subsidy claims	Quarterly
Independent Auditor	Audit of electricity duty	Not specified
Independent Auditor	Audit of the Base year Average Billing Rate	Once
Independent Auditor	Audit of annual average billing rate	Yearly
MSEDCL or Independent auditor	Audit of the billing data including the system and database	Annual
MSEDCL	Asset Register of the Franchise Area	One time activity
MSEDCL	Audit of assets and inventories	Annual
MSEDCL & Franchisee	Inspection of permanently disconnected Consumers	Quarterly

All the joint audits such as joint verification of base year distribution losses, collection efficiency, arrears, assets, etc were supposed to be completed within 60 days of signing the contract. This is a desirable feature of DFA to specify number of such independent audits which is essential to ensure transparency and accountability, but unfortunately, as discussed in section 6, most of these audits have not been carried out.

Metering and Billing data:

As mentioned in the article 13 of DFA, the Franchisee is required to submit data regarding billing and collection inclusive of electricity duty. However, the supplementary DFA that was signed on 25th Jan 2007 has a curious clause related to metering and billing data. It states as follows: *"The Distribution Franchisee shall provide consumer-wise information in the format specified by MSEDCL detailing the billing, collection and all related information on a monthly basis every month by a mutually agreed date. Such information shall be kept confidential by MSEDCL and shall be used only under conditions of default by Distribution Franchisee under the Distribution Franchisee Agreement"*

Though the requirement that franchisee has to submit metering and billing data is essential and welcome, the condition of confidentiality and linking metering and billing data to conditions of default needs to be reassessed.

Subsidy:

As highlighted in the earlier sections, LT consumer mix of Bhiwandi circle has a large percentage of power loom consumers[9]. Similar to agriculture, State Government provides subsidy on electricity tariff for power loom business. Based on statement / claim of subsidy from licensee (which is based on billed units to subsidized categories) government releases subsidy amount to MSEDCL.

The DFA necessitates the franchisee needs to submit statement of subsidy claims on quarterly basis to the licensee, based on which licensee will collect the subsidy. In the event of subsidy defaults by the GoM the Franchisee is supposed to comply with MSEDCL policy directives for such events.

As the franchisee gives credit to the subsidized consumers (by charging them subsidized tariff), the subsidy claimed to be given to consumers by franchisee is deducted from Licensee's revenue in the invoice calculation. Hence Subsidy amount has direct impact on licensee's revenue.

In the subsequent section, we shall analyze the DFA invoice model and its sensitivity to subsidy in more detail.

[9] According to MERC categorization, LT power looms are to be charged tariff as per the LT-V Industrial category. As per the current subsidy structure for LT power loom, looms with connected load of less than 27HP, do not have to pay any fixed charges and get 50% concession on energy and other variable charges. Fixed charges have been waived off for LT looms with connected load greater than 27 Hp too and they have 40% concession on energy and other variable charges.

Consumer Service

The franchisee is mandated under the DFA to comply with Electricity Supply Code and other conditions of supply as approved and modified by MERC from time to time. DFA also requires franchisee to establish consumer service centers and provides specifications for the same. From the consumer survey carried out in Bhiwandi, it is very clear the large numbers of consumers on one hand are not aware about regulatory provisions and their rights and on the other hand there is significant lack of confidence in franchisees metering and billing services. This was the experience in Delhi also. Considering this the DFA should mandate large scale consumer awareness campaign along with systematic third party monitoring and verification of franchisees metering and billing processes and consumer complaints in this regard. This will go a long way is avoiding large scale consumer unrest and complaints in the initial period when the system is undergoing massive changes.

6. Invoice Model

The crux of the input based franchisee model is that the payment made by the franchisee to the licensee is based on input energy. This needs to be adjusted to reflect changes in tariff approved by the regulatory commission and subsidy paid by government. The licensee revenue as per 'invoice model' adopted in case of Bhiwandi model is indexed to:

- Year-wise input rates, which are specified in the DFA based on outcome of the bidding process and
- Tariff indexing ratio (TIR) which is ratio of Average billing rate (ABRn) for a given year to Average billing rate of Base year (ABRbase). The base year is 2005-06 in case of Bhiwandi and the base year ABR as per supplementary franchisee agreement was decided as 3.4987 Rs/unit[10].

As per the DFA article 7, MSEDCL Revenue from franchisee is calculated as:

Monthly Invoice = (Revenue from I/p energy + Wheeling charges, if any + Electricity duty + Tax on sale of electricity + Security deposit from new connections + Penalty, if any) less (Subsidy + 20% Credit for arrears recovery from PD consumers + 10% Credit for arrears recovery from current live consumers)

Revenue from I/p energy (RIE) is calculated as:

RIE = (I/p energy (MU) * I/p rate (as per DFA) * ABRn/ABRbase)

As can be seen, the revenue from input energy, which is dependent on input energy and ABR for the given month/year and the subsidy are the key factors that decide the licensee's revenue. Input energy is to be ascertained on the basis of joint meter readings at input (transmission) points in the substation. Thus, the licensee's revenue is mainly sensitive to given month/year's ABR and Subsidy.

6.1 Sensitivity of ABR

ABR for a given period is computed as sum product of total billed units and approved tariff for each Consumer category divided by total billed units of all consumer categories.

[10] As per the provisions of the DFA this base year ABR need to be audited by independent auditor and this was to be done in 60 days from signing of the agreement. Though independent auditor has been appointed the final report of the auditor has not yet been adopted by franchisee and MSEDCL.

Box.2 - Impact of ABR changes

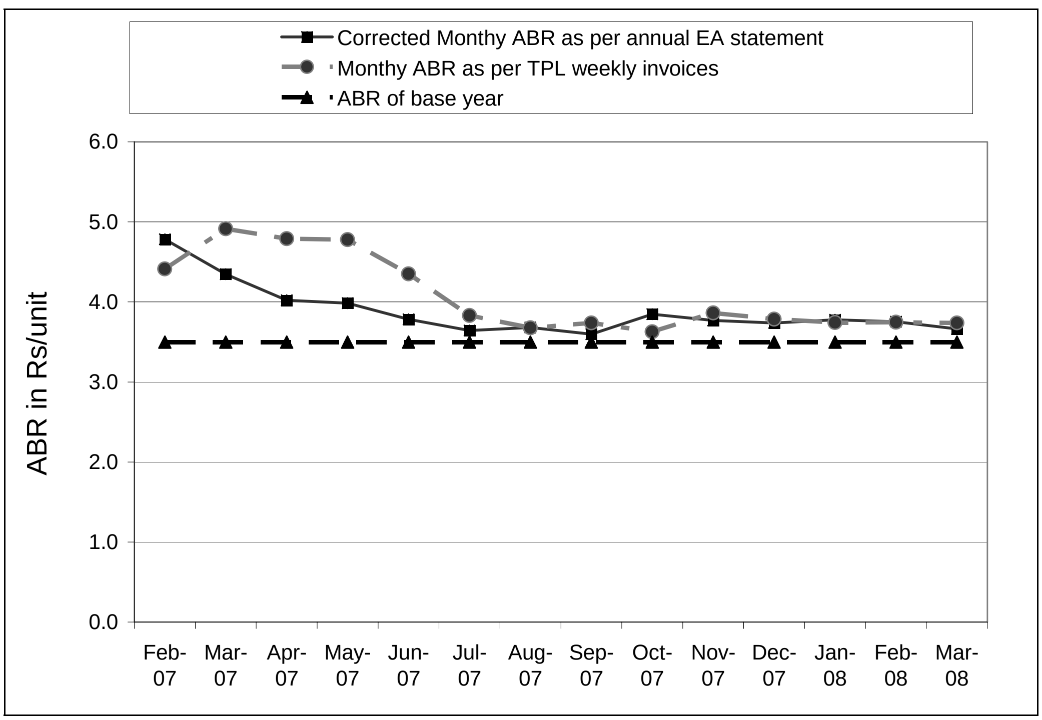
In order to appreciate impact of changes in ABRn on Licensee's revenue, let us take a small example.

Input Energy in KWh (A)	Input Rate in Rs/KWh (B)	ABRn in Rs/KWh (C)	ABRbase in Rs/KWh (D)	Tariff Indexing ratio (E) = C/D	Subsidy in Rs (F)	Licensee's Revenue in Rs (G) approx = ((A*B*E) - F)
100	1.8	3.95	3.5	1.13	40	163
100	1.8	3.75	3.5	1.07	40	153

Thus, it can be seen that even a slight change in ABRn can have significant impact on the Licensee's Revenue. And hence it becomes critical to ensure that the ABR has been assessed correctly.

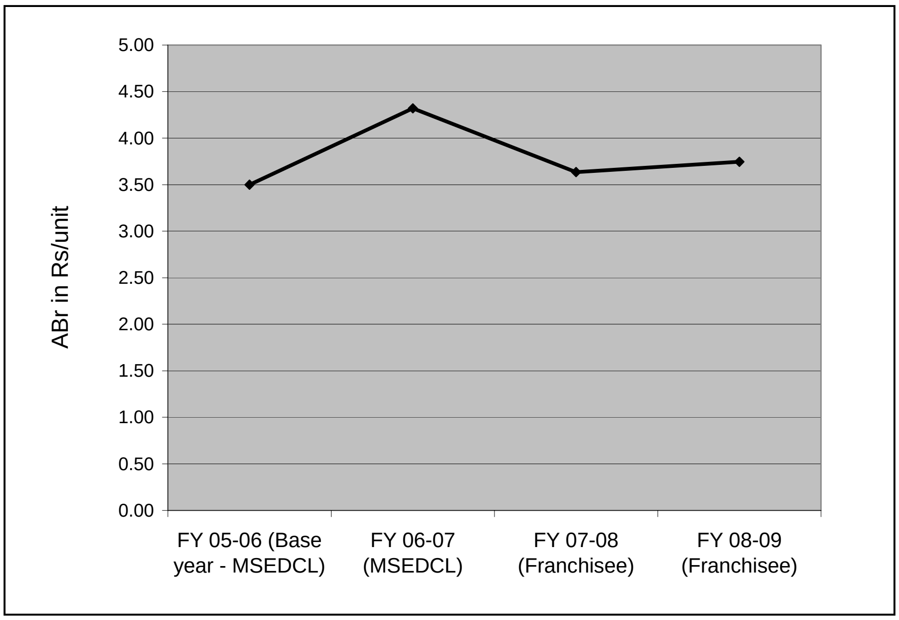
Franchisee is required to submit weekly invoices to MSEDCL, which state the ABR achieved in the previous month. Figure 6.1, shows the Monthly ABR for the period February 2007 to March 2008 i.e. first year of franchisee operation, as reported in these weekly invoices. Subsequently, at the end of the year franchisee restated its sales as well as ABR, and the same is also depicted in figure 6.1 under the caption 'corrected' ABR. There is significant difference in original ABR and this 'corrected' ABR.

Figure 6.1: Variations in Average billing rate as claimed by DF for FY 07-08



As can be seen from the figure 6.1, the average annual ABR for FY 2007-08, as reported in weekly invoices was around Rs.3.99 per unit. This figure got revised to Rs.3.77 per unit in the annual energy audit report. The impact of this change on MSEDCL's revenue is around Rs. 30 Cr which is approximately 10% of its revenue from Franchisee. Figure 6.2. shows the changes in annual ABR for pre-franchisee and post franchisee period. There is a significant drop in ABR in the first year of the franchisee. Considering the sensitivity of ABR for licensee's revenue and changes in ABR in the post franchisee period, it becomes utmost important to have through independent audit of ABR as required in terms of the DFA. Unfortunately, any of the ABR audits stipulated in DFA are not complete as yet.

Figure 6.2: Changes in Average Billing Rate since base year



6.2 Impact of Subsidy on Licensee's Revenue

Similar to ABR, licensees' revenue is also sensitive to government subsidy to certain consumer categories. Incase of Bhiwandi, subsidized consumers are a very significant part of the total LT consumers and it becomes very essential to analyze subsidy impact in more detail. After the announcement of tariff by regulator government decides to provide subsidy to certain consumer categories and the same is paid directly to utility based on consumption by that particular category. As a result, collection efficiency of subsidy can be easily assumed to be 100% as this money comes from the Government. However the revenue collected from the subsidized consumers is subject to collection efficiency. Hence percentage of subsidy in total demand (including subsidy) affects DF revenue, as it is based upon collection efficiency. Keeping all other factors same, if proportion of subsidy in total demand increases, net DF revenue would also increase. Thus changes in quantity of sales / billing to subsidized consumers, change in subsidy proportion in tariff and/or change in tariff of the subsidized category, all will have impact on licensee's and hence franchisee's revenue. Following example illustrates the impact of changes in various aspects of subsidy on franchisee's and licensee's revenue.

Table 6.1 Illustrative example on impact of subsidy on revenue of licensee and DF

Parameter		Case 1	Case 2	Case 3
I/P energy in KWh		10	10	10
Total sales in KWh*		8	8	8.5
Collection efficiency		0.78	0.78	0.78
MERC Tariff in Rs/unit		4	4	4
Tariff paid by consumers Rs/unit (excl govt. subsidy)		2.5	2	2
ABR for the given month		4	4	4
ABR for the base year		4	4	4
Tariff indexing Ration (TIR)		1.00	1.00	1
Annualized input rate fixed for the year		1.80	1.80	1.8
Subsidy claimed by Franchisee		12	16	17
MSEDCL revenue	From FRANCHISEE	6	2	1
	From Govt. subsidy	12	16	17
Total MSEDCL Revenue		18	18	18
DF Revenue		9.6	10.48	12.26

*For the sake of example, it is assumed that all the sales are to the subsidized consumers.

As can be seen from the above example, changes in the sales quantum (billing), subsidy amount and/or proportion, and changes in subsidized tariff have significant impact on franchisee's share of payment to licensee. For example, in above illustration, even though licensee's revenue remains same in all cases, franchisee revenue changes significantly in case no 2 and 3 i.e. when either subsidy or subsidized sales billing increases.

Thus, what comes out very clearly is that given the sensitivity of franchisee's revenue to subsidy, it is very crucial to have strong mechanism for auditing and monitoring of subsidy claims.

6.3 Monitoring and Auditing – ABR, Subsidy and Metering & billing systems

Above analysis demonstrates the importance of through monitoring and scrutiny of ABR and subsidy claims to ensure rational revenue for franchisee as well as licensee. This also requires monitoring and analysis of metering and billing systems of franchisee. Accordingly, the DFA has prescribed quarterly reporting of subsidy claims by franchisee and annual independent audit of the same. DFA also prescribes audit of franchisees metering and billing systems and database11.

Initially DFA only prescribed independent audit of base year ABR but through supplementary agreement ABR audit for subsequent years was also included. MSEDCL claims to have appointed auditors to audit ABR claims for subsequent years also. With regard to subsidy, there is requirement of quarterly audit of franchisee's subsidy claims along with an independent subsidy audit every year. However, even though there is a provision for these audits in the DFA, the actual progress on auditing and reporting front is highly incomplete.

[11] Section 9.4 and 9.5 of the DFA talk of quarterly subsidy claims audit whereas the sections 13.2.1 deals with inventory status audit and section 13.2.2 talks about the audit of the billing data including the system and database and Consumer service centres operated within the scope of the Franchise Area.

The figure 6.3 marks the various audits that were necessary to be conducted as per the DFA.

Figure 6.3: Timelines and status of ABR and Subsidy Audits

FY 2007-08											
Apr-07	**May-07**	**Jun-07**	**Jul-07**	**Aug-07**	**Sep-07**	**Oct-07**	**Nov-07**	**Dec-07**	**Jan-08**	**Feb-08**	**Mar-08**
Base ABR audit				Quarterly Subsidy audit				Quarterly Subsidy audit			Annual ABR, Biiling data and system and inventory status audit

FY 2008-09											
Apr-08	**May-08**	**Jun-08**	**Jul-08**	**Aug-08**	**Sep-08**	**Oct-08**	**Nov-08**	**Dec-08**	**Jan-09**	**Feb-09**	**Mar-09**
Quarterly Subsidy audit				Quarterly Subsidy audit				Quarterly Subsidy audit			Annual ABR, Biiling data and system and inventory status audit

Name of the Audit	Status
Base ABR audit	Not complete
8 Quarterly subsidy audit	Not complete
Annual ABR audit of FY 08 and FY 09	Not complete
Billing data and system audit	Not initiated
Inventory Status audit	Not initiated

Unfortunately, not even the base year ABR audit is completed till date. Similarly there has not been any progress on subsidy claims and inventory status audit. Audit of billing data including the billing software and databases, even though specifically mentioned in the DFA has not even been initiated. Thus even though the DFA recognizes importance of various audits and stipulates processes and timelines for the same, actual progress about these has been very limited.

7. Conclusions and recommendations

a) Input based Franchisee model is a via-media between fundamental structural and ownership changes and continuation of status quo. The model can be implanted without any fundamental ownership changes within the current legal structure. Data made available by MSEDCL indicate that the franchisee has been able to significantly reduce losses in the Bhiwandi circle. In the first two years of operation aggregate technical and commercial losses have come down from 63% to about 19%. These changes have been brought about by significant capital investment (over Rs. 200 Cr. in the first year itself) to upgrade the distribution system coupled with several management and administrative changes. Field survey undertaken by PEG, revels that in the post-franchisee period service and supply quality in Bhiwandi has improved substantially. Consumers are finding it much easier to get new connections; transformer failure rates and accidents have reduced significantly and overall, about 66% respondents opined that the change has been good for consumers. The survey also reveled that large numbers of consumers do not have confidence in franchisees metering and billing systems. High bills and fast meters were common complaints made by consumers during the survey. The Bhiwandi experiment demonstrates that such a model can have substantial potential to rapidly reduce ATC losses and improve consumer service and quality of supply.

b) In this model the franchisee effectively gets a clean slate to start with, which contributes significantly to franchisee's ability to rapidly bring down ATC losses. Most of the chronic loss areas have huge amount of past arrears, which get effectively written off in such an arrangement. In case of Bhiwandi claimed arrears were to the tune of Rs. 1000 Cr. but till today franchisee has collected less than Rs. 10 Cr. towards arrears. Further the franchisee has more flexibility in dealing with legal and administrative limitations such as giving new official connections to permanently disconnected consumers or illegal settlement, etc. and support of government machinery such as police and courts. Franchisees would be able to seek support local people who are capable of perusing consumers to adopt regular payment and metering practices and to prevent illegal use of electricity. The licensee often does not get this kind of flexibility in operation. Franchisees are also not required to take over licensee's employees and would often employ people on contract basis, giving franchisees another crucial operational flexibility not available to licensees.

c) The franchisee can be successful in rapidly reducing ATC losses, but that may not necessarily imply large benefits to the licensee, as in case of Bhiwandi, actual increase in licensee's revenue compared to pre-franchisee year is not significant. This is due to the fact that, post appointment of franchisee, licensee's revenue is largely determined by the input rate quoted by winning bidder and the Average Billing Rate (ABR) for particular year. For the first year of the post franchisee period (FY 07-08) ABR has dropped by about Rs. 0.60 / unit compared to previous year (FY 06-07). This has resulted in drop in licensee's revenue by about 3%. This underscores the sensitivity of licensee's revenue to the ABR. Similar to ABR, licensee's revenue is also highly sensitive to sales to subsidized consumers and subsidy claims from the government. One of the important shortcomings identified through this study is lack of post-franchisee monitoring by licensee. Realizing the importance of ABR and subsidy, the franchisee agreement stipulates certain process and timeline (quarterly and annual) for undertaking audits of ABR, subsidy claims, metering and billing systems / database etc. Unfortunately, even after two years, none of these audits have been completed as yet. The audit of metering and billings systems has not even started.

d) Distribution cost avoided by the licensee while getting DFA promised revenue also forms large part of the licensee's benefit, especially in initial years. Hence its very important to ascertain avoided cost of the licensee before rapidly proliferating the model based on its loss reduction potential. To illustrate this point, take example of employee expenses, which forms a significant portion of distribution cost. If the licensee is understaffed and can easily absorb the excess employees that will be available from the franchised area, the licensee's cost saving will be significant. But if the licensee is overstaffed or plans to franchise too many areas at a time, its employee cost will not reduce. Hence feasibility of cost reduction or saving needs to be ascertained.

e) This review highlighted key lacunas in the bidding process for selecting franchisees. In case of Bhiwandi, major changes in the franchisee terms were affected after completion of the bidding process, while in case of Nagpur, subsequent city where similar model was being implemented, a three tire mechanism of MSEDCL, High Court and MERC failed to point out un-viability of the winning bid.

f) These two instances of major shortcoming the in the process of awarding franchisee contracts highlight the underlying dangers and weakness in utilities ability to conduct transparent, rational bidding process. It is critical to address these weaknesses to ensure effective competition and to maximize benefits to licensee, as the revenue potential (and ATC loss reduction trajectory) is determined solely on the basis of competitive bidding process. These instances also indicate that, while appointing franchisee, licensees would tend to focus only on 'apparent' revenue earning potential of the arrangement and would give limited attention to other crucial issues such as of ensuring accountability of the franchisee, rational allocation of revenue amongst licensee and franchisee and consumer interests in terms of service quality and fair metering and billing practices. This also indicates the 'desperation' on part of licensee to hand over loss making areas to private entities and in the process there is a danger of licensees accommodating franchisees demands for more and more liberal contract terms. This is already evident. Nagpur franchisee proposal extends franchisee term to 15 years, where in subsequent franchisee processes in UP, the term has been extended to 20 years. Eligibility and technical qualification criteria have also been diluted significantly in case UP process.

g) For the success of the franchisee model and to ensure equitable distribution of benefits, it is essential to ensure transparent, rational bidding process and effective post-franchisee monitoring. These functions are essentially in the nature of 'regulating' the sector. This review highlights the weakness in the licensee structure to effectively undertake such a 'regulatory' role. Hence, while undertaking such large scale franchisee schemes it is essential to bring these two processes, one of approving bidding process documents and second of post-franchisee monitoring, under the purview of regulatory commissions. This will ensure higher levels of transparency and opportunities for ensuring accountability through public participation. Regulatory oversight is also essential because as the number of franchisee's increase, the contractual relationship and contractual performance of franchisee will have significant impact on licensee's annual revenue requirement and performance targets. In the absence of regulatory oversight, either regulatory freedom to specify performance trajectories will be compromised or licensees will be exposed to risk of disconnect between regulatory requirements and its contractual terms with franchisee.

h) In light of it's potential to rapidly reduce ATC losses and to improve consumer service and supply quality, this model could be one of the options for high loss areas (ATC losses above 50%) with minimum or no un-metered consumers, where the licensee, because of various political/administrative reasons has failed consistently or has given up hopes for improvement. Even in such cases, several improvements are essential to ensure fair and effective franchisee schemes. Many suggestions for this are presented earlier in this report. Some of the important recommendations in this regard are as follows:

   I. **Regulatory review of bidding process and stringent post-franchisee monitoring:** As mentioned above, the bidding process (similar to the process adopted for competitive bidding for generation projects) and post franchisee performance monitoring should be brought under the purview of state regulatory commissions. The licensee should be required to take regulatory approval for its bidding documents i.e. request for proposal and distribution franchisee agreement (similar to competitive bidding based power purchase agreements) During the annual performance review process of the licensee, the regulator should also evaluate performance of the franchised areas and should ensure compliance with accountability mechanisms such as timely completion of billing audits and adherence to supply code, standards of performance and other regulations.
   II. **Improved quality of base line data:** Before embarking on franchisee model, efforts should be made to build quality base line data. This should include data such as existing level of losses, network status, consumer mix and sales, metering and billing. This is essential on one hand to provide confidence for prospective bidder and to expect realistic bids and on the other hand to increase accountability of licensee as well as of successful bidder for post franchisee performance.
   III. **Term of the franchisee should not be more than 10 years:** The study revels that major efficiency gains could be obtained in the initial few years and franchisees would certainly be able to recover their investments and would make profit within this timeframe. ATC losses are expected to be brought down to very reasonable level within this timeframe (as rapid reduction in ATC losses is the primary motivation of appointing franchisees). As such, there is no reason to have longer time frame of 15 or 20 years. Reasonable time frame of 10 years would enable consideration of different options for further enhancing efficiency (e.g. bidding on the basis of low distribution margin) at the end of franchisee term. This would also make the franchisee accountable to consumers, as there will be realistic threat of replacing franchisee if either the performance is poor or if franchisee fails to secure consumer confidence. Franchisee terms longer than 10 years would be akin to appointing separate licensees but without the system of checks and balances envisaged in the legal structure.
   IV. **Capital investments after 5 years should be regulated:** In case of Bhiwandi, there is absolutely no regulatory oversight and franchisee has complete autonomy to decide cost and time of capital expenditure. The licensee however needs to reimburse for the capex at the end of franchisee term. In case of Nagpur, the DF is required to take regulatory approval for its capex plan and only approved capex will be reimbursed. Looking at the two extremes, it will be more desirable to give the franchisee complete autonomy in deciding the

capex for first 5 years. This capex should not be reimbursed at the end of franchisee term, as it is expected to be largely depreciated by then. However franchisee should take regulatory approval for any capital expense that it intends to undertake after the 5th year till the end of its term and the same should be compensated at the end of the franchisee term at depreciated value. Such an arrangement will ensure that the franchisee has all the autonomy that its needs to undertake the major capex that is necessary to bring about system improvement in first few years but would also prevent indiscriminate capex in later years. Not reimbursing for capital expenditure at the end of the term may pose a danger of franchisee not making adequate investments in the fag end of the term and thereby allowing deterioration of the network.

V. **Need for third party monitoring of metering and billing practices:** The experience of Delhi as well Bhiwandi indicate that when such significant change occurs consumers do not have confidence in metering and billing practices / systems of the new operator. On the other hand it is also possible to have lacunas in the metering and billing systems of the new operator as it takes over the operations in such areas and for such large number of consumers. Often this leads to large number of consumer complaints and unrest in initial years. TO avoid this, at least for initial two / three years it would be desirable to have stringent third party monitoring mechanism to ensure correctness of metering and billing.

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Annexure 1: Other salient provisions of Bhiwandi franchisee agreement

Performance guarantee

As per DFA, franchisee needs to submit an irrevocable and unconditional letter of credit (LoC) from any nationalized bank or other major bank as a performance guarantee to MSEDCL. The value of LoC should be equivalent to two months' estimated amount payable to MSEDCL by the Franchisee based on energy input applicable and Input Rate quoted by the Franchisee for first year of Franchise term. The LoC is valid for one year and shall be renewed 15 days before its expiry date. MSEDCL will review the amount of LoC; however, under no circumstances shall the amount of LoC be revised downwards.

Procuring additional energy

DFA allows franchisee to procure additional energy to overcome shortage / load shedding. But this is subjected to regulatory approval. In such scenario franchisee will pay wheeling charges to licensee for the additional power procured.

Arrears:

In the DFA arrears have been classified in two categories:
Arrears from connected live consumers, which are currently legally connected
Arrears from Permanently Disconnected (PD) Consumers

Distribution Franchisee is liable to collect the arrears from current live consumers accrued in last one month on account of charges accrued for the duration between three months and one month prior to Effective Date on account of charges for usage of electricity prior to Effective Date at least equivalent to 65% Collection. There is no contractual obligation, but the franchisee is expected to make best possible efforts towards collection from PD consumers.

MSEDCL has also offered an incentive to the Franchisee towards collection of arrears @ 10% of total amount net of taxes and duties recovered from current live Consumers and @20% for collections from PD consumer. However, the collection from current live Consumers will be first be appropriated towards current bill and then towards MSEDCL arrears. As per MSEDCL's own records total of around Rs.1000 Cr of arrears are due from Bhiwandi circle. Based on the current invoice data from franchisee, the franchisee has been successful is collecting arrears of less than ten crore rupees.

Employee issues

The existing employees of MSEDCL in the Franchise Area were given an option to join the Franchisee on deputation. Similarly, Franchisee had the freedom to choose from the list of willing employees. However most of the employees chose to relocate. The franchisee too is more prone to engage contract based labor than employing the licensee's staff.

As such the model gives flexibility to both the utility's employees as well as the franchisee. But it needs to be understood that such an arrangement can be beneficial to the licensee only if it is understaffed and has capacity to absorb the additional manpower that will be available from the franchisee area. Proliferation of many franchisees can lead to increase in unorganized labor force and weakening of the employee unions.

Event of default

Franchisee event of default: The DFA states two types of events of default. The first one being a critical event of default is said to have occurred if franchisee fails to:

- Make timely payments as stipulated by the DFA, or
- Submit critical information[12] as per DFA requirements or
- Maintain performance guarantee and so on.

If any of the above mentioned failures on account of franchisee would not be considered as critical event of default if it has occurred as a result of force majeure event or a breach by MSEDCL of its contractual obligations.

If the Franchisee is unable to eliminate/ mitigate the consequences of Event of Default within the period stipulated, MSEDCL will serve the franchisee preliminary termination notice. If the default is not cured within a period of thirty days, the DFA may be terminated after serving the final termination notice.

The other type of default is a non-critical type of default which can be said to have occurred if the franchisee fails to:

- Submit periodic performance report
- Report consistent energy and revenue accounting information,
- Comply with standards of Performance and MERC supply code and other regulatory mandates, etc

If the conditions for non-critical event of default for a period of more than 60 days, it shall become a Critical Event of Default.

MSEDCL event of default: Failure of MSEDCL to supply adequate quantity of power at acceptable standards amounts to a critical event of default on the part of MSEDCL. MSEDCL Non-Critical Event of Default could be breach of any other material terms and conditions, as applicable under DFA for a consecutive period of thirty days[13].

In case of MSEDCL event of default, the franchisee may issue an initial event of default notice to MSEDCL. If MSEDCL is unable to eliminate the consequences of event of default, within a period of thirty days from the date of serving of preliminary termination notice, DFA may be terminated after serving the final termination notice.

Termination / expiry

Upon expiry/termination, Franchisee has to settle all the dues payable to MSEDCL, whereas MSEDCL needs to compensate the Franchisee for the Distribution Assets added by it, at the depreciated value of these assets. In case of pre-mature termination of the contract, both parties should continue to perform their respective obligations until the serving of final termination notice. After receiving final termination notice, MSEDCL needs to exercise its step-in rights. The Franchisee is contractually bound to extend transition assistance for a period of 30 days from the serving of such Final termination notice, failing which the costs and expenses incurred by MSEDCL on the account of non-provision of such assistance shall be recovered from the termination payment of the Franchisee

[12] As per the clause no 16.1.1.1 Failure on the part of franchisee to submit data regarding billing and collection inclusive of electricity duty, Security Deposit collected on account of new connections amounts to critical event of default

[13] If the default continues for a period of more than 60 days, it shall become a Critical Event of Default.

The DFA gives MSEDCL option of extending the contract at its own discretion provided the franchisee too is willing for such extension and makes a written application in this regard one year prior to the date of expiry. If the contract is to be extended, the terms and conditions of the new contract need to be designed with mutual consent.

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Bhiwandi

TATA

April 27, 2009
REG/MERC/09/123

Secretary
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No 1, World Trade Centre
Cuffe Parade, Mumbai 400 005

Dear Sir,

<u>Comments on assessment by Prayas of Bhiwandi Distribution Franchisee</u>

We thank the Hon'ble Commission for inviting us for the presentation by Prayas Energy Group regarding its assessment of the Bhiwandi Distribution Franchisee arrangement.

As directed by the Hon'ble Commission we enclose our comments/ suggestions on the presentation made by Prayas on Bhiwandi and also on the Distribution Franchisee Model in general.

Yours faithfully,

VHWagle

(V H Wagle)
Assistant General Manager

Cc to:
Prayas Energy Group
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004
E-mail: peg@prayaspune.org

Comments / Suggestions on M/s. Prayas Energy Group's Assessment of Bhiwandi Distribution Franchisee Arrangement

In 2006, MSEDCL invited bids for appointing distribution franchisee in Bhiwandi Distribution Circle. The bidding criteria was the input energy rate (Rs./kWh) at the input point to Bhiwandi. Thereafter in 2007, through competitive bidding process, M/s. Torrent Power Limited emerged as the winner and the Bhiwandi Distribution Circle was handed over to them. The term of this distribution franchisee arrangement is 10 years.

Prayas Energy Group has been appointed by Planning Commission, Government of India for assessing the performance of Bhiwandi Franchisee Model implemented by MSEDCL and operated by Torrent Power. Prayas made a presentation to MERC on April 17, 2009 wherein all the utilities in Maharashtra were invited. MERC has directed all utilities to submit comments on the presentation and the issues with respect to distribution franchisee model.

Tata Power's comments/ suggestion on the Distribution Franchisee model are:

1. Qualification Criteria:

The RFQ needs to lay down stringent qualifying criteria in order to discourage non serious players. In our opinion the following criteria needs to be included:

a) Adequate experience in managing and operating electricity distribution business (specify minimum years of experience)

b) Experience in servicing large consumer base

c) Adequate manpower with relevant technical and commercial expertise

d) Minimum financial capabilities to sustain and operate the business for the entire period of the agreement

e) Reasonable Performance Guarantee amount

2. Bidding Criteria:

The input rate based bidding criteria as adopted in Bhiwandi seems to be reasonable as this provides enough incentive to the franchisee to aggressively reduce the distribution loss and also increase the collection efficiency. The quantum of Capital Expenditure required to achieve the desired performance level is left to the Distribution Franchisee. Our initial assessment is that both the franchisee and the distribution licensee benefit from this model.

3. Capital Expenditure & Transfer Scheme:

As the model is structured, the Distribution Franchisee (DF) should be allowed enough flexibility in incurring reasonable capital expenditure to reduce the distribution loss and also to improve the collection efficiency. In areas where the distribution network is old and dilapidated, the only method through which the franchisee can reduce distribution loss is to invest in renovating and modernizing the network. Hence it should be left to the franchisee to take a call on the capex requirement. Any monitoring/ approval of capex plans of the DF by the licensee or the regulator will only delay the turn around (in terms of loss reduction, network improvement, increase in collection efficiency, etc) of the particular distribution area.

However, this poses a problem at the time of transfer back to the Distribution Licensee at the end of the term. There is an apprehension that if the assets are transferred at the Book Value, there is a tendency to incur heavy capital expenditure during the end of the term. Further as there is no scrutiny of the capital expenditure neither in terms of the prudency, nor in terms of the appropriate price of the asset procured, it may lead to "over invoicing". This needs to be clearly curbed.

It is therefore suggested that the asset be transferred at nil cost to the Distribution Licensee at the end of term and such condition be made clear upfront. This will enable the Distribution Franchisee to bid suitably. As the DF would be aware that the salvage value of the assets are Nil, he would adjust the input energy price suitably.

With this however, the term end transactions would not suffer from the limitations it is experiencing now.

4. Baseline data:

The baseline data as provided by the distribution licensees in most of the cases is incorrect and the margin of error or deviation from actual is too high. If the bidder is expected to quote based on this data, the business risk is very high and may not result in a fair bidding process. To overcome this, we suggest that such data should be audited by reputed organization.

The baseline data is given for a limited period of time. Hence we suggest that the data should be for a period of at least past 2-3 years in order to give a fair insight regarding the trajectory of sales growth, consumption pattern across consumer category, distribution loss profile, etc. This is extremely important as it would give the bidder a realistic picture of the business. Such realism provides an opportunity for realistic bid and also increases the probability of success of the model. It is suggested that standard formats be developed for providing the data.

It is observed that the area given out to the Franchisee is relatively small as compared to the size of the distribution licensee. Hence further in order address the issue of incorrect baseline data and to validate the same, we suggest that a hand holding period (say 2-3 months) should be introduced during which certain activities are carried out by interested franchisees in coordination with distribution Licensee. During this period there will not be any financial obligations between the franchisee and distribution licensee. Some of the field activities which can be carried out during this period:

1. Joint Survey for taking a inventory of Distribution Assets , identification of network modernization and augmentation needs, identification of defective/tampered consumer meters, etc
2. Establishing the IT system for Billing, MIS and transferring the Database and Billing Package
3. Energy Audit and Accounting

5. Franchisee term:

The term of distribution franchisee is critical since the bidder should get enough time to augment and modernize the distribution network to improve the performance i.e. reduce AT & C losses, improve service quality, etc. The bidders should be given enough time to implement and get adequate returns for the efforts and investment done by the bidder. They should see enough business/ commercial upside during the operation of the franchisee term.

Even considering the depreciation of an asset in the range of 5-7 % , a period of 15-20 years would be necessary to fully depreciate the asset procured.

Hence in our opinion a term of 15 years would be an adequate franchisee term to generate interest among larger number of bidders. This can be further extended by another 5 years with mutual consent. The extension clause can be a part of the DFA right from the start of the bidding process.

It will not be out place to mention the Franchisee Model of Agra has adopted a term of 20 years.

6. Regulatory Overview:

The SERC's have issued several regulations to ensure quality of supply and service to the consumers. As per EA 2003, the concerned distribution licensee is responsible for operating and maintaining the said distribution license area as per the prevalent rules and regulations. Hence we are of the opinion that the distribution franchisee should not be subjected to regulatory monitoring. The Distribution Franchisee Agreement should have enough built in provisions for effective monitoring of the distribution franchisee's performance vis-à-vis the prevailing rules and regulations. The SERC can monitor the distribution area under the franchisee through various compliance data submitted to the SERC by the distribution license. The Distribution Licensee should act as a Regulator for monitoring the franchisee's performance. For this distribution licensee should improve their monitoring mechanism and built capacity to do it effectively.

In short the there is no need for a separate Regulatory Overview as such and the overseeing by the Distribution Licensee would suffice.

7. Power Purchase:

Across the country many of the Government controlled distribution companies have been finding it difficult to procure enough power to supply for 24 hrs to its consumers. Also with the increase in demand supply gap, the number of hours of load shedding has been increasing sharply. One of the major consumer grievance has been lack of continuous and reliable power supply and hence the reluctance to pay the electricity bills. However even after appointment of distribution franchisee in some areas, this issue has been unresolved. We are of the opinion that if it makes economic sense or is commercially available to the distribution franchisee, it should be allowed to procure power over and above the power supply by the distribution licensee by paying the appropriate charges. This will further help in improving the power supply and also the perception regarding distribution franchisee model with respect to quality and reliability of power supply.

Here again a cue from the Agra franchisee model may be taken.

8. Arrear Collection and incentive mechanism

The distribution licensees have large amount of arrears which are to be collected from the consumers of the said area. It would make commercial sense to evolve a mechanism for arrear collection after the franchisee takes over the said area. Both the parties can mutually agree on the amount of arrears to be collected during the hand holding period and sign off on the quantum of arrears. Thereafter the franchisee can be responsible for collection of the arrears from the consumers. For this the franchisee should be given some percentage (may be 20 to 25 %) of the arrears collection. This mechanism needs to be included during the bidding stage and also in the franchisee agreement. This will also act as another incentive mechanism for the bidder and the licensee is able to collect the arrears which it would have written off as doubtful debts.

9. Confidentiality of data:

There is no gainsaying the position of the Distribution Franchisee as an extension of the Distribution Licensee. However the nature of the business of the Distribution Franchisee is different to the extent that the DF bears the greater risk unlike the DL whose performance is measured on a yearly basis. Further the business of DF has been obtained by following a due process of competitive bidding. Hence it may be unfair to expect to share the success story (in case it is successful) of DF before the term is over as it will draw undue attention of the world at large.

Hence, as for any project procured on competitive bidding basis, during the course of operation of the distribution franchisee area, the franchisee should be entitled to confidentiality of data since any business will involve sensitive data which cannot be shared. The Distribution Franchisee Agreement needs to incorporate clauses which will ensure confidentiality of data.

10. Contractual Arrangements:

a) The Distribution Franchisee Agreement should clearly spell out the obligations and responsibilities of each party.
b) The terms and conditions of the bidding process and also the Distribution Franchisee Agreement should not be changed after the bidding process is completed. There should not be any relaxation of the terms and conditions of the bid process after the bidding is completed.
c) The Distribution Licensee should ensure that third party audit of various claims made by the franchisee should be done on a regular basis as provided in the agreement.

11. Exit Clause:

The Distribution Franchisee Agreement needs to have an exit clause for the Franchisee to exit after the circle is handed over to the winning bidder in the following circumstances:

a) The baseline data is erroneous (i.e. variation in data as per bid document & actual is say beyond 15 to 20 %)
b) The distribution licensee fails to supply adequate power as per the Agreement.

12. PPP model vs Distribution Franchisee model:

In the end, we wish to draw the attention to India's two successful models for operating the distribution business as commercial viable entities, one being the Delhi model and other the Bhiwandi Distribution Franchisee model. As everyone is aware the Delhi model has been highly successful in not only reducing the AT&C losses but also improving the quality of supply and service to the end consumers. In Delhi, the Government no longer provides budgetary support in terms of subsidy to the distribution companies and hence has helped the Government in utilizing its limited resources in the development of infrastructure and other social issues. The PPP model is a sustainable model in the long term since the private company and the

Government are equity holders in the venture. Further the Regulator also exercises direct jurisdiction on such entity since it is distribution license holder.

The Distribution Franchisee model seems to be performing well at least in Bhiwandi. However in our opinion the major lacuna in the arrangement is the long term viability of this model. Once the Franchisee period is over, the area again reverts back to the Distribution License, which in the first place was responsible for the non performance of the said circle. It may so happen that the circle may again become commercial unviable.

Although the Distribution Franchisee model does not involve the political fallout associated with the privatization of a State-owned utility since the distribution assets stay under State control and also the opposition from employees towards privatization is not being experienced. However in our opinion this is not a long term solution for the distribution business which is in a perilous condition and needs urgent solutions to make the power sector viable.

Hence in the long term, solution the privatization using a Public Private Participation model as in Delhi may be preferred over the Franchisee Model.