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

Executive Summary

By

Prayas (Energy Group) Pune
June 2009

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.

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Introduction and background:

On 20th Dec 2006 MSEDCL signed an agreement with Torrent Power Ltd granting it the rights to act as a distribution franchisee of MSEDCL. It is a new experiment in public-private partnership and the latest in the distribution reform process of Indian power sector. 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. 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, which in turn is related to ATC loss reduction trajectory. Franchisee benefits if it reduces losses over and above the committed trajectory and has to suffer losses if it fails to do so. Thus, the financial impact acts as incentive/penalty mechanism

The scheme has generated considerable interest in the sector, due to its perceived ability to rapidly reduce ATC losses and improve the financial viability of the sector. Many other states are actively considering adoption of this model. 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 this study undertaken by Prayas (Energy Group), focuses on analysis of this model, contractual arrangement, post franchisee performance and benefits to consumers and licensee, and areas where improvements are needed. The study is based on analysis of documents such as Request for Proposal, Distribution Franchisee Agreement (DFA) and other performance data as hosted by MSEDCL on its website. To assess consumers' feedback about the changes in service quality we also undertook a rapid field survey, and informal group discussions. Draft findings of the study were presented to Maharashtra Electricity Regulatory Commission, Distribution licensees (MSEDCL, Tata Power, Reliance and BEST) and union representatives.

The franchisee in Bhiwandi, i.e. M/s Torrent Power Limited did not co-operate and did not share any data or information, as such the study faced major obstacles on the front of data availability. The first letter requesting basic information such as energy input, category wise sales, demand and collection, etc was made to MSEDCL in July 2008. MSEDCL could not provide the data for a long time on account of 'system incompatibility' in MSEDCL and TPL IT systems. Finally in May 2009, MSEDCL has hosted consumer data such as sales, demand and collection for Bhiwandi circle on its website which forms the basis for analyzing post-franchisee performance.

Brief overview of the Bhiwandi circle and franchisee scheme:

Bhiwandi is a major textile hub of western India having one third of the country's power looms. 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 these 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).

The input based franchisee model was hoped to bring in certain amount of fixed revenue from circle. MSEDCL signed Distribution franchisee Agreement (DFA) with Torrent in December 2006 and TPL took over operation of Bhiwandi circle from 26^{th} January 2007. For its entire term, i.e. 10 years in this case, franchisee is responsible for all the functions of the distribution licensee within that area. The consumers in the franchisee area are charged same tariff as applicable to consumers of rest of licensee area. The DFA gives complete autonomy to the franchisee in planning and execution of capital expenditure without requiring any regulatory approval. At the end of the term, the licensee will reimburse the franchisee at depreciated cost of the assets.

Franchisee makes payments to licensee on weekly basis. The revenue earned by licensee 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 (FY 05-06). 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 has provisions for various independent audits (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.

Salient observations:

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.

In the first two years of franchisee period, consumer payments have doubled due to reduction in distribution losses. Similarly gross revenue of franchisee has also doubled from Rs. 160 Cr. in first year to Rs. 344 Cr. in second year. Compared to this, increase in licensee (MSEDCL) revenue is 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%.

This is because 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. In the initial years major benefit for the licensee comes from the avoided cost, arising out of saving in employee cost and operation and maintenance cost for franchisee area. Considering this, the winning bid in case of Bhiwandi implies a revenue increase of 5% p.a. for the 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. Unfortunately, none of these audits have been completed as yet. The audit of metering and billings systems has not even started.

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. Thus, 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) 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 5^{th} 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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