A Report
on
Reliance Infrastructure Limited-
Distribution Business (Rinfra-D)

CONTENTS

1. Background and Legal / Regulatory Framework

Background

The Government of Maharashtra (GoM), in its letter ref: REL2009/CR 227/NRG-1, dated June 25, 2009, has inter-alia, stated as under:

> *"Whereas and in the circumstances referred to above, Government of Maharashtra is of the opinion that Government should seek advise from the Maharashtra Electricity Regulatory Commission and in order to protect the interest of common consumer from getting unreasonably burdened.*
>
> *&*
>
> *Therefore, under the powers delegated under section 108 read with section 86(2), Government hereby directs Maharashtra Electricity Regulatory Commission to investigate as to whether M/s Reliance Infrastructure Ltd. has discharged its duties as envisaged in the Act in the most economical manner so as to not to result in unnecessary avoidable burden on the consumers of that area and take further action as may be considered necessary. The said investigation shall be carried out considering the above points and any other relevant point in that context.*
>
> *The above direction may be compiled within fifteen days from the date of issue of this direction.*
>
> *The Government of Maharashtra also directs Maharashtra Electricity Regulatory Commission to take emergent steps as it may deem fit, relating to policy of Government of Maharashtra of protecting consumers interest in a monopoly situation, as may be necessary to ensure that no unreasonable and unjustified bills are collected in the intervening period in which this investigation is in progress."* (The complete letter of GoM is given at Annexure I to this Report)

Accordingly, the Commission is submitting this Report on various issued raised in the above-said GoM letter.

Legal and Regulatory Framework

The legal and regulatory framework under which the Maharashtra Electricity Regulatory Commission (hereinafter referred to as "MERC" or "the Commission") regulates the electricity Utilities in the State of Maharashtra, is *inter-alia* as under:

Relevant extracts of the Electricity Act, 2003 ("EA 2003") are as under:

Section 61: Tariff Regulations

"(1) The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely: -

a. the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

b. the generation, transmission, distribution and supply of electricity are conducted on commercial principles;

c. the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;

d. safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;

e. the principles rewarding efficiency in performance;

f. multi year tariff principles;

g. that the tariff progressively reflects the cost of supply of electricity and also, reduces cross-subsidies in the manner specified by the Appropriate Commission;

h. the promotion of co-generation and generation of electricity from renewable sources of energy;

i. the National Electricity Policy and tariff policy:

Provided that the terms and conditions for determination of tariff under the Electricity (Supply) Act, 1948, the Electricity Regulatory Commission Act, 1998 and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or

until the terms and conditions for tariff are specified under this section, whichever is earlier." (emphasis added)

Section 62: Determination of Tariff

"(1) The Appropriate Commission shall determine the tariff in accordance with the provisions of this Act for –

a. supply of electricity by a generating company to a distribution licensee:

Provided that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees, for a period not exceeding one year to ensure reasonable prices of electricity;

b. transmission of electricity ;

c. wheeling of electricity;

d. retail sale of electricity.

Provided that in case of distribution of electricity in the same area by two or more distribution licensees, the Appropriate Commission may, for promoting competition among distribution licensees, fix only maximum ceiling of tariff for retail sale of electricity… …

(3) The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

(4) No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.

(5) The Commission may require a licensee or a generating company to comply with such procedures as may be specified for calculating the expected revenues from the tariff and charges which he or it is permitted to recover.

(6) If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee." (emphasis added)

Section 63: Determination of Tariff by Bidding Process

"63. Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government."

Section 65: Provision of Subsidy by State Government

"65. If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government:
Provided that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by State Commission shall be applicable from the date of issue of orders by the Commission in this regard."

Section 86: Functions of State Commission

"(1) The State Commission shall discharge the following functions, namely:

(a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

(c) facilitate intra-state transmission and wheeling of electricity;

(d) issue licences to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

(e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licence;

(f) adjudicate upon the disputes between the licensees, and generating companies and to refer any dispute for arbitration;

(g) levy fee for the purposes of this Act;

(h) specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of section 79;

(i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;

(j) fix the trading margin in the intra-State trading of electricity, if considered, necessary; and

(k) discharge such other functions as may be assigned to it under this Act.

(2) The State Commission shall advise the State Government on all or any of the following matters, namely :-.

(i) promotion of competition, efficiency and economy in activities of the electricity industry;

(ii) promotion of investment in electricity industry;

(iii) reorganization and restructuring of electricity industry in the State;

(iv) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

(3) The State Commission shall ensure transparency while exercising its powers and discharging its functions.

(4) In discharge of its functions the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3."

Section 108: Directions by State Government

"108. (1) In the discharge of its functions, the State Commission shall be guided by such directions in matters of policy involving public interest as the State Government may give to it in writing.

(2) If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the State Government thereon shall be final."

While discharging its functions, the Commission is to be guided by the National Electricity Policy ("NEP") notified by the Ministry of Power, Government of India. The NEP was notified on February 12, 2005 by the Ministry of Power in the Gazette of India (Resolution No. 23/40/2004-R&R (Vol.II)) in exercise of powers vested in it under Section 3 of the EA 2003. The NEP inter alia lays down as under:

"5.4 Distribution

5.4.1 Distribution is the most critical segment of the electricity business chain. The real challenge of reform is in the power sector lies in efficient management of the distribution sector.

5.4.2 The Act provides for a robust regulatory framework for distribution licensees to safeguard consumer interests. It also creates a competitive framework for the distribution business, offering options to consumers, through the concepts of open access and multiple licensees in the same area of supply.

5.4.3 For achieving efficiency gains proper restructuring of distribution utilities is essential. Adequate transition financing support would also be necessary for these utilities. Such support should be arranged linked to attainment of predetermined efficiency improvements and reduction in cash losses and putting in place appropriate governance structure for insulating the service providers from extraneous interference while at the same time ensuring transparency and accountability. For ensuring financial viability and sustainability, State Governments would need to restructure the liabilities of the State Electricity Boards to ensure that the successor companies are not burdened with past liabilities. The Central Government would also assist the States, which develop a clear roadmap for turnaround, in arranging transition financing from various sources which shall be linked to predetermined improvements and efficiency gains aimed at attaining financial viability and also putting in place appropriate governance structures.

5.4.4 Conducive business environment in terms of adequate returns and suitable transitional model with predetermined improvements in efficiency parameters in distribution business would be necessary for facilitating funding and attracting investments in distribution. Multi-Year Tariff (MYT) framework is an important structural incentive to minimize risks for utilities and consumers, promote efficiency and rapid reduction of system losses. It would serve public interest through economic efficiency and improved service quality. It would also bring greater predictability to consumer tariffs by restricting tariff adjustments to known indicators such as power purchase prices and inflation indices. Private sector participation in distribution needs to be encouraged for achieving the requisite reduction in transmission and distribution losses and improving the quality of service to the consumers.

5.4.5 The Electricity Act 2003 enables competing generating companies and trading licensees, besides the area distribution licensees to sell electricity to consumers when open access in distribution is introduced by the State Electricity Regulatory Commissions. As required by the Act, the SERCs shall notify regulations by June 2005 that would enable open access to distribution networks in terms of sub-section 2 of section 42 which stipulates that such open access would be allowed, in not later than five years from 27th January 2004 to consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one mega watt. Section 49 of the Act provides that such consumers who have been allowed open access under section 42 may enter into agreement with any

person for supply of electricity on such terms and conditions, including tariff, as may be agreed upon by them. While making regulations for open access in distribution, the SERCs will also determine wheeling charges and cross-subsidy surcharge as required under section 42 of the Act.

5.4.6 A time-bound programme should be drawn up by the State Electricity Regulatory Commissions (SERC) for segregation of technical and commercial losses through energy audits. Energy accounting and declaration of its results in each defined unit, as determined by SERCs, should be mandatory not later than March 2007. An action plan for reduction of the losses with adequate investments and suitable improvements in governance should be drawn up Standards for reliability and quality of supply as well as for loss levels shall also be specified, from time to time, so as to bring these in line with international practices by year 2012.

5.4.7 One of the key provisions of the Act on competition in distribution is the concept of multiple licensees in the same area of supply through their independent distribution systems. State Governments have full flexibility in carving out distribution zones while restructuring the Government utilities. For grant of second and subsequent distribution licence within the area of an incumbent distribution licensee, a revenue district, a Municipal Council for a smaller urban area or a Municipal Corporation for a larger urban area as defined in the Article 243(Q) of Constitution of India (74th Amendment) may be considered as the minimum area. The Government of India would notify within three months, the requirements for compliance by applicant for second and subsequent distribution licence as envisaged in Section 14 of the Act. With a view to provide benefits of competition to all section of consumers, the second and subsequent licensee for distribution in the same area shall have obligation to supply to all consumers in accordance with provisions of section 43 of the Electricity Act 2003. The SERCs are required to regulate the tariff including connection charges to be recovered by a distribution licensee under the provisions of the Act. This will ensure that second distribution licensee does not resort to cherry picking by demanding unreasonable connection charges from consumers.

5.4.8 The Act mandates supply of electricity through a correct meter within a stipulated period. The Authority should develop regulations as required under Section 55 of the Act within three months.

5.4.9 The Act requires all consumers to be metered within two years. The SERCs may obtain from the Distribution Licensees their metering plans, approve these, and monitor the same. The SERCs should encourage use of pre-paid meters. In the first instance, TOD meters for large consumers with a minimum load of one MVA are also to be encouraged. The SERCs should also put in place independent third-party meter testing arrangements.

5.4.10 Modern information technology systems may be implemented by the utilities on a priority basis, after considering cost and benefits, to facilitate creation of network information and customer data base which will help in management of load, improvement in quality, detection of theft and tampering, customer information and prompt and correct billing and collection . Special emphasis should be placed on consumer indexing and mapping in a time bound manner. Support is being provided for information technology based systems under the Accelerated Power Development and Reforms Programme (APDRP).

5.4.11 High Voltage Distribution System is an effective method for reduction of technical losses, prevention of theft, improved voltage profile and better consumer service. It should be promoted to reduce LT/HT ratio keeping in view the techno economic considerations.

5.4.12 SCADA and data management systems are useful for efficient working of Distribution Systems. A time bound programme for implementation of SCADA and data management system should be obtained from Distribution Licensees and approved by the SERCs keeping in view the techno economic considerations. Efforts should be made to install substation automation equipment in a phased manner.

5.4.13 The Act has provided for stringent measures against theft of electricity. The States and distribution utilities should ensure effective implementation of these provisions. The State Governments may set up Special Courts as envisaged in Section 153 of the Act.

5.5 Recovery of Cost of Services & Targeted Subsidies

5.5.1 There is an urgent need for ensuring recovery of cost of service from consumers to make the power sector sustainable.

5.5.2 A minimum level of support may be required to make the electricity affordable for consumers of very poor category. Consumers below poverty line who consume below a specified level, say 30 units per month, may receive special support in terms of tariff which are cross-subsidized. Tariffs for such designated group of consumers will be at least 50 % of the average (overall) cost of supply. This provision will be further re-examined after five years.

5.5.3 Over the last few decades cross-subsidies have increased to unsustainable levels. Cross-subsidies hide inefficiencies and losses in operations. There is urgent need to correct this imbalance without giving tariff shock to consumers. The existing cross-subsidies for other categories of consumers would need to be reduced progressively and gradually.

5.5.4 The State Governments may give advance subsidy to the extent they consider appropriate in terms of section 65 of the Act in which case necessary budget provision would be required to be made in advance so that the utility does not suffer financial problems that may affect its operations. Efforts would be made to ensure that the subsidies reach the targeted beneficiaries in the most transparent and efficient way.

…

5.7 Competition Aimed at Consumer Benefits

5.7.1 To promote market development, a part of new generating capacities, say 15% may be sold outside long-term PPAs. As the power markets develop, it would be feasible to finance projects with competitive generation costs outside the long-term power purchase agreement framework. In the coming years, a significant portion of the installed capacity of new generating stations could participate in competitive power markets. This will increase the depth of the power markets and provide alternatives for both generators and licensees/consumers and in long run would lead to reduction in tariff. For achieving this, the policy underscores the following:-

…

Development of power market would need to be undertaken by the Appropriate Commission in consultation with all concerned.

The Central Commission and the State Commissions are empowered to make regulations under section 178 and section 181 of the Act respectively. These regulations will ensure implementation of various provisions of the Act regarding encouragement to competition and also consumer protection. The Regulatory Commissions are advised to notify various regulations expeditiously.

Enabling regulations for inter and intra State trading and also regulations on power exchange shall be notified by the appropriate Commissions within six months. "(emphasis added)

Relevant extracts of the Tariff Policy (TP) notified by the Ministry of Power, Government of India in January 2006, are as under:

"8.3 Tariff design : Linkage of tariffs to cost of service

It has been widely recognised that rational and economic pricing of electricity can be one of the major tools for energy conservation and sustainable use of ground water resources.

In terms of the Section 61 (g) of the Act, the Appropriate Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.

The State Governments can give subsidy to the extent they consider appropriate as per the provisions of section 65 of the Act. Direct subsidy is a better way to support the poorer categories of consumers than the mechanism of cross-subsidizing the tariff across the board. Subsidies should be targeted effectively and in transparent manner. As a substitute of cross-subsidies, the State Government has the option of raising resources through mechanism of electricity duty and giving direct subsidies to only needy consumers. This is a better way of targetting subsidies effectively.

Accordingly, the following principles would be adopted:

1. In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per month, may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.

2. For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify roadmap within six months with a target that latest by the end of year 2010-2011 tariffs are within ± 20 % of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.

For example if the average cost of service is Rs 3 per unit, at the end of year 2010-2011 the tariff for the cross subsidised categories excluding those referred to in para 1 above should not be lower than Rs 2.40 per unit and that for any of the cross-subsidising categories should not go beyond Rs 3.60 per unit.

3. While fixing tariff for agricultural use, the imperatives of the need of using ground water resources in a sustainable manner would also need to be kept in mind in addition to the average cost of supply. Tariff for agricultural use may be set at different levels for different parts of a state depending of the condition of the ground water table to prevent excessive depletion of ground water. Section 62 (3) of the Act provides that geographical position of any area could be one of the criteria for tariff differentiation. A higher level of subsidy could be considered to support poorer farmers of the region where adverse ground water table condition requires larger quantity of electricity for irrigation purposes subject to suitable restrictions to ensure maintenance of ground water levels and sustainable ground water usage.

4. Extent of subsidy for different categories of consumers can be decided by the State Government keeping in view various relevant aspects. But provision of free electricity is not desirable as it encourages wasteful consumption of electricity besides, in most cases, lowering of water table in turn creating avoidable problem of water shortage for irrigation and drinking water for later generations. It is also likely to lead to rapid rise in demand of electricity putting severe strain on the distribution network thus adversely affecting the quality of supply of power. Therefore, it is necessary that reasonable level of user charges are levied. The subsidized rates of electricity should be permitted only up to a pre-identified level of consumption beyond which tariffs reflecting efficient cost of service should be charged from consumers. If the State Government wants to reimburse even part of this cost of electricity to poor category of consumers the amount can be paid in cash or any other suitable

way. Use of prepaid meters can also facilitate this transfer of subsidy to such consumers.

5. Metering of supply to agricultural / rural consumers can be achieved in a consumer friendly way and in effective manner by management of local distribution in rural areas through commercial arrangement with franchisees with involvement of panchayat institutions, user associations, cooperative societies etc. Use of self closing load limitors may be encouraged as a cost effective option for metering in cases of "limited use consumers" who are eligible for subsidized electricity.

8.4 Definition of tariff components and their applicability

1. Two-part tariffs featuring separate fixed and variable charges and Time differentiated tariff shall be introduced on priority for large consumers (say, consumers with demand exceeding 1 MW) within one year. This would also help in flattening the peak and implementing various energy conservation measures.

2. The National Electricity Policy states that existing PPAs with the generating companies would need to be suitably assigned to the successor distribution companies. The State Governments may make such assignments taking care of different load profiles of the distribution companies so that retail tariffs are uniform in the State for different categories of consumers. Thereafter the retail tariffs would reflect the relative efficiency of distribution companies in procuring power at competitive costs, controlling theft and reducing other distribution losses.

3. The State Commission may provide incentives to encourage metering and billing based on metered tariffs, particularly for consumer categories that are presently unmetered to a large extent. The metered tariffs and the incentives should be given wide publicity.

4. The SERCs may also suitably regulate connection charges to be recovered by the distribution licensee to ensure that second distribution licensee does not resort to cherry picking by demanding unreasonable connection charges. The connection charges of the second licensee should not be more than those payable to the incumbent licensee.

8.5 Cross-subsidy surcharge and additional surcharge for open access

8.5.1 National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access.

A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the cross subsidy surcharge. The computation of cross subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. A consumer would avail of open access only if the payment of all the charges leads to a benefit to him. While the interest of distribution licensee needs to be protected it would be essential that this provision of the Act, which requires the open access to be introduced in a time-bound manner, is used to bring about competition in the larger interest of consumers.

Accordingly, when open access is allowed the surcharge for the purpose of sections 38,39,40 and sub-section 2 of section 42 would be computed as the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the distribution licensee to supply electricity to the consumers of the applicable class. In case of a consumer opting for open access, the distribution licensee could be in a position to discontinue purchase of power at the margin in the merit order. Accordingly, the cost of supply to the consumer for this purpose may be computed as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding liquid fuel based generation, in the merit order approved by the SERC adjusted for average loss compensation of the relevant voltage level and (b) the distribution charges determined on the principles as laid down for intra-state transmission charges.

…

The cross-subsidy surcharge should be brought down progressively and, as far as possible, at a linear rate to a maximum of 20% of its opening level by the year 2010-11.

…

8.5.4 The additional surcharge for obligation to supply as per section 42(4) of the Act should become applicable only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through wheeling charges.

8.5.5 Wheeling charges should be determined on the basis of same principles as laid down for intra-state transmission charges and in addition would include average loss compensation of the relevant voltage level.

8.5.6 In case of outages of generator supplying to a consumer on open access, standby arrangements should be provided by the licensee on the payment of tariff for temporary connection to that consumer category as specified by the Appropriate Commission."

The Commission has also notified the MERC (Conduct of Business) Regulations, 2004 in August 2005, which specifies the procedure to be adopted by the Commission in undertaking the different functions as mandated under the EA 2003, under the following broad heads, inter-alia:

(a) Proceedings of the Commission
(b) Adjudication Proceedings
(c) Initiation of Proceedings
(d) Petitions and pleadings before the Commission
(e) Participation of Consumer Representatives and other persons
(f) Filing of reply, objections and oppositions
(g) Hearing of the matter
(h) Review of decisions, directions and Orders
(i) Proceedings to be open to Public
(j) Publication of Petition
(k) Issue of orders and directions

The Commission has also notified the MERC (Terms & Conditions of Tariff) Regulations, 2005 in August 2005, which specifies the manner in which the Commission will determine the Revenue Requirement and tariff for generation, transmission, wheeling, and retail supply, including the performance norms for different businesses, under the following broad heads, inter-alia:

(a) Procedure for determination of tariff
(b) Multi-Year Tariff
(c) Electricity purchase and procurement
(d) Generation
(e) Transmission
(f) Wheeling
(g) Retail sale of electricity

2. Tariff Orders issued for RInfra-D

The Commission issued the first Tariff Order for the erstwhile BSES Limited (which had then been recently renamed as Reliance Energy Limited) on July 1, 2004. The Order was issued for the integrated Utility, i.e., for the Generation, Transmission and Distribution functions combined.

The second Tariff Order was issued for the erstwhile Reliance Energy Limited (REL) on October 3, 2006 for the integrated Utility, i.e., for the Generation, Transmission and Distribution functions combined.

All the subsequent Tariff Orders have been issued separately for the Generation, Transmission and Distribution functions. The Tariff Orders for the distribution function have been issued on the following dates:

- § April 24, 2007: MYT Order for REL-D for the first Control Period from FY 2007-08 to FY 2009-10 and Tariff Order for FY 2007-08
- § June 4, 2008: APR Order for REL-D for FY 2007-08 and Tariff Order for FY 2008-09
- § June 15, 2009 APR Order for RInfra-D for FY 2008-09 and Tariff Order for FY 2009-10

All the Tariff Orders for RInfra-D (as well as for erstwhile REL and erstwhile BSES Ltd.) over the last five years have been issued by the Commission after following the due regulatory process, including publishing of Tariff Petition, invitation to the public to submit comments and / or objections on the Petition, and Public Hearing, wherein interested stakeholders are permitted to make submissions. Thus, the Commission's Tariff Order has been issued after giving due consideration to the submissions made by the stakeholders, and appropriate rulings have been given by the Commission for each issue raised by the stakeholders, while determining the allowable revenue requirement and category-wise tariffs, in accordance with law. The number of stakeholders who participated in the respective public process and the list of issues raised therein, have been summarised below, for each of the above-said Orders in reverse chronological order (i.e., latest Order has been mentioned first and the earliest Order has been mentioned last):

Table 1: Details of Tariff Orders issued for RInfra-D (including BSES Ltd. and REL-D) and Key Issues raised during the Public Hearings

Sl.	Tariff Order	Total Number of Objectors	Key Issues raised
1	FY 2009-10 (Case No. 121 of 2008)	908 (including objections submitted in groups)	Cost plus tariff determination vs. performance based regulation, maintenance of separate books of accounts, capital expenditure, power purchase expenses, distribution loss, impact of Judgments passed by the Appellate Tribunal for Electricity ("ATE") on the tariff orders passed by the MERC, cost of supply and cross-subsidy, tariff philosophy, metering, competition amongst distribution licensees, etc.
2	FY 2008-09 (Case No. 66 of 2007)	60	Maintenance of separate books of accounts, capital expenditure, O&M expenses, power purchase expenses, distribution loss, cost of supply and cross-subsidy, tariff philosophy, metering, etc.
3	FY 2007-08 (Case No. 75 of 2006)	127	Capital expenditure, O&M expenses, power purchase expenses, licence for electricity distribution, tariff philosophy, cost of supply and cross-subsidy, metering, competition amongst distribution licensees, etc.
4	FY 2005-06 and FY 2006-07 (Case No. 25 of 2005 and 53 of 2005)		Licence for electricity distribution, actual performance vs. norms, employee expenses, uniform tariff and consumer categories in Mumbai, tariff slabs, income tax, generation related issues

Sl.	Tariff Order	Total Number of Objectors	Key Issues raised
5	FY 2003-04 and FY 2004-05 (Case No. 18 of 2003)	24	Procedural issues, generation and transmission related issues, Transmission and distribution loss, expenditure, tariff related issues, cross-subsidy, Fuel Adjustment Cost, competition in distribution, etc.

It is observed from the records that the objectors comprised authorised Consumer Representatives, consumer organisations, individual residential consumers, industrial consumers, Political parties, etc.

3. Increase in electricity bill for consumers in RInfra-D licence area

Before discussing the increase in the tariff for consumers subsequent to the Tariff Order issued by the Commission, it is required to understand the proposal submitted by RInfra-D in this regard, and the actual tariff hike sought by RInfra-D, vis-à-vis the revenue gap and tariff increase allowed by the Commission, as elaborated below:

(a) Average Tariff Increase sought by RInfra-D and approved by the Commission

Revenue gap and average tariff increase sought by RInfra-D is given in the Table below:

Table 2: Recovery through Tariff Revision (as proposed by RInfra-D)

Particulars	Rs. Crore
Total Revenue Gap for FY 2009-10	1376
Average Tariff increase required	23%
Tariff Hike proposed	5%
Revenue gap recovered from proposed tariff hike	297
Adjusted towards carrying cost	72
Balance towards Gap	225
Balance Revenue Gap to be carried forward for FY 2010-11 & FY 2011-12	1079

As against the revenue gap of Rs. 1376 crore projected by RInfra-D, the Commission determined the total revenue gap in FY 2009-10 as Rs. 659 crore (as detailed in Table 8 on Page 47 of this Report). If the entire revenue gap of Rs. 659 crore (as determined by the Commission) had been recovered from the consumers through the revised retail tariffs in FY 2009-10, it would have required an average tariff increase of around 11%, which is very high.

In the Order for RInfra-D, the Commission expressed its deep concern about the increasing tariffs to consumers of Maharashtra, and observed that the retail tariffs in RInfra-D licence area are already very high and any further significant increase in tariff may not be sustainable for the consumers. Hence, the Commission decided to restrict the average tariff hike to slightly less than

2% over existing levels, after considering the impact of the Fuel Adjustment Cost ("FAC") and additional FAC that have been merged with the base tariff.

It should be noted that in addition to the FAC cap of 54.5 paise/kWh, the Commission had also permitted RInfra-D to recover the under-recovered FAC of the first quarter of FY 2008-09, though an Additional FAC of 59 paise/kWh over the five-month period from November 2008 to March 2009. It should be noted that Section 62(4) of the EA 2003 provides that *"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."*

Under the provisional truing up exercise for FY 2008-09, the fuel cost has been considered at actuals and the actual revenue from tariffs including FAC and additional FAC, have been considered. Hence, given that FAC (including additional FAC are a part of tariff intended to recover the variation in fuel cost), the Commission considered the same as a part of the existing tariff, while computing the impact of the tariff revision. The concept of FAC has been explained in detail in Section 5 of this Report.

This average increase of less than 2% is expected to yield additional revenue of around Rs. 105 crore, leaving a deferred amount of Rs. 554 crore, out of the total revenue gap of Rs. 659 crore. This is in comparison with RInfra-D's proposal to defer recovery of around Rs. 1079 crore to FY 2010-11 and FY 2011-12.

(b) Tariff Comparison – BSES (2003), BSES (2004-05, after MERC Order) and RInfra-D (FY 2009-10)

There have been several complaints that the tariffs have increased steeply since the year 2003, when the management control of BSES Limited was taken over by Reliance Energy Limited. In order to assess the veracity of the same, the following tariffs have been compared in Annexure II to this Report:

- Tariff applicable in BSES area in the year 2003 (before the Commission determined the tariff for BSES)
- Tariff approved by the Commission for BSES Ltd. for FY 2004-05
- Tariff approved by the Commission for RInfra-D for FY 2009-10

The above comparison shows that the tariff for most consumer categories has increased by around 60% to 100% over the period from 2003 to 2009. It should be noted that the base tariffs were not revised during the period from the year 1997 to 2003, and only Fuel Adjustment Cost (FAC) charge of around Rs. 1 per kWh was being charged in the year 2003, in addition to the base tariffs. However, since the year 2003, the tariffs have been revised almost every year, with the increases being more significant in the recent past, on account of the steep increase in the capital expenditure as well as steep increase in power purchase expenses due to failure on the part of RInfra-D to enter into long-term contracts for required quantum of power purchase, as elaborated subsequently in this Report.

(c) Comparison of tariff of Mumbai licensees

There have also been several submissions stating that the tariffs charged by RInfra-D are much higher than that charged by BEST and TPC to their consumers. In order to assess the veracity of the same, the following tariffs have been compared in Annexure III to this Report:

- Tariff approved by the Commission for TPC-D for FY 2009-10
- Tariff approved by the Commission for RInfra-D for FY 2009-10
- Tariff approved by the Commission for BEST for FY 2009-10

The above comparison shows that the tariff for most consumer categories in RInfra-D licence area is around 100% to 150% higher than the tariff applicable for most TPC-D consumers in the same category, and around 30% to 60% higher than that applicable for BEST consumers in the same category.

(d) Cross-subsidy reduction

While increasing the average tariffs by less than 2% in FY 2009-10 (after considering the impact of FAC, as explained on Page 22 above, the Commission has also continued its efforts to reduce the cross-subsidy between consumer categories over that prevailing in the previous year in accordance with the stipulations of the EA 2003 and Tariff Policy, as shown below:

Table 3: Cross-subsidy reduction in FY 2009-10 (Rs Crore)

Category	Average Cost of Supply (Rs./unit)	Average Billing Rate (Rs./unit)			Ratio of Average Billing Rate to Average Cost of Supply (%)			Percent increase in tariff (%)
		Existing Tariff	Tariff Proposed by RInfra-D	Revised Tariff	APR Order for FY08	Existing Tariff to current ACOS	Revised Tariff to current ACOS	
LT Category								
LT I - Residential	7.06	4.89	5.73	5.24	72%	64%	74%	7%
LT II A - Commercial upto 20 kW		8.27	9.48	8.56	126%	108%	121%	4%
LT II B - Commercial > 20 kW & <=50 kW		10.72	9.13	10.82	166%	140%	153%	1%
LT II C - Commercial above 50 kW		12.41	10.70	11.41	187%	162%	162%	-8%
LT III - LT Industrial upto 20 kW		7.71	10.00	8.01	112%	100%	113%	4%
LT-IV - LT Industrial >20 kW		7.82	7.17	7.82	115%	102%	111%	0%
LT V - Advertisement & Hoardings		17.90	23.14	18.10	289%	233%	256%	1%
LT-VI - Street Lighting		8.80	11.85	8.80	128%	115%	125%	0%
LT VII (B) - Temporary - Others		14.48	18.89	15.88	228%	189%	225%	10%
HT Category								
HT I - Industrial	7.06	7.78	8.04	7.88	115%	101%	112%	1%
HT II - Commercial		10.47	9.21	8.97	179%	136%	127%	-14%
HT III - Group Housing Society		5.42	5.92	5.42	72%	71%	77%	0%

In the above Table,

(a) 'Existing Tariff' refers to the tariff approved by the Commission in the APR Order dated June 4, 2008

(b) 'Revised Tariff' refers to the tariff approved by the Commission in the present APR Order

(c) Ratio of Average Billing Rate (ABR) to Average Cost of Supply (ACOS)

i) 'APR Order for FY08' refers to the ratio of ABR to ACOS as envisaged in the APR Order for FY 2007-08

ii) 'Existing Tariff to current ACOS' refers to the ratio of ABR approved in the APR Order for FY 2007-08 to the ACOS approved in the present APR Order, i.e., Rs. 7.06 per kWh

iii) 'Revised Tariff to current ACOS' refers to the ratio of ABR approved in this APR Order for FY 2008-09 to the ACOS approved in the present APR Order, i.e., Rs. 7.06 per kWh

As seen from Table 3, the tariff for the cross-subsidised categories, viz., LT Residential and HT Group Housing Society (whose Average Billing Rate is lower than 100% of Average Cost of Supply), has been increased such that the ratio of ABR to ACOS is moved closer to 100%. Similarly, the tariff for the cross-subsidising categories, (whose Average Billing Rate is higher than 100% of Average Cost of Supply), has been revised such that the ratio of ABR to ACOS is moved closer to 100%. Thus, the Commission has reduced the cross-subsidy, while at the same time ensuring that there is no tariff shock to any consumer category, by increasing the tariff by a maximum of around 7%.

It may be appreciated that the Commission has been attempting to reduce the cross-subsidy gradually, in accordance with the statutory provisions, as the cross-subsidy cannot be eliminated at one go. In the past, when the revenue gap and the average tariff increase required was very high, despite the best efforts of the Commission, the cross-subsidy could not be reduced for all the consumer categories because the subsidised categories could not be subjected to a tariff shock. Further, the Commission had ruled that consumer categories such as Malls and Multiplexes, which indulge in conspicuous high consumption of electricity, should pay higher tariffs and should get a tariff signal to reduce their consumption of electricity. The affected consumers, viz., Malls and Multiplexes appealed against the Commission's Order before the Appellate Tribunal for Electricity (ATE) and the ATE set aside the Commission's Orders to the extent the cross-subsidy was increased.

The summary of some of the similar Judgments given by the ATE on the issue of cross-subsidy is given below:

(a) Appeal No.146 of 2007

Being aggrieved by the Commission's Order dated 18.05.2007 in Case No. 65 of 2006 (MSEDCL's MYT Order), read with Clarificatory Order dated 24.08.2007 in Case No. 26 of 2007, M/s Spencer's Retail Ltd. had filed an Appeal (146 of 2007) before the Appellate Tribunal for Electricity alleging inter alia that while the average cost of supply has increased by 6% compared to the previous year, the tariff of the category LT-IX has increased by about 80% and has alleged it to be unreasonable, discriminatory and unfair beside being violative of the provisions of Sections 61 and 62 of the Electricity Act, 2003, the Tariff Policy and the National Electricity Policy.

The ATE has set aside the LT-IX category holding inter alia that the Appellant consumer and other similarly placed consumers have been struck by the severe tariff shock associated with substantial increase in the contribution of cross-subsidy in violation of Sections 61 (g) and 61 (i) read with Section 86 (4) of the Electricity Act, 2003. The ATE further observed that *"the cross-subsidy and the cost of supply have strong nexus. Keeping the cost of supply fixed, higher is the increase in tariff of the subsidised consumers, smaller will be the quantum of cross-subsidy. On the other hand, if the tariff of the subsidized category of consumers is not changed, then higher the cost of supply, larger will be the quantum of cross-subsidy. Thus, to progressively reduce the quantum of cross-subsidy, the tariff of the subsided category has to be gradually increased and cost of supply recovered by reducing AT&C losses in line with the planned targets and implementation of various other efficiency improvement measures."*

(b) Appeal No.106 of 2008

Being aggrieved by the Commission's Order dated 04.06.2008 in the matter of REL-D's Petition for APR for FY 2007-08 and Tariff Determination for FY 2008-09, the Mumbai International Airport Pvt. Ltd. (MIAL) had filed an Appeal (106 of 2008) before the ATE.

The ATE has set aside the impugned tariff Order to the extent of placing the Appellant in the newly created category of HT-II Commercial, holding inter alia that *"another ground for interfering with the tariff order is increase in cross subsidy levels and tariff shock caused to the appellant as described in paragraph 17*

above. The appellant, by virtue of nature of its business, has to consume huge quantity of electricity. It will be difficult for the appellant to reduce its electricity bill without affecting the quality of service provided by it. …Causing a tariff shock as well as raising the cross subsidy level are both opposed to the National Tariff Policy. The Commission is required to pay due regard to the National Tariff Policy."

(c) Appeal No.98 of 2008

Being aggrieved by the Commission's Order dated 4.6.2008, as corrected by Order dated 17.6.2008 in Case No. 66 of 2007 in the matter of REL-D's APR for FY 2007-08 and ARR and tariff determination for FY 2008-09, M/s. Spencer's Retail Ltd. had filed an Appeal (98 of 2008) in the Appellate Tribunal for Electricity (ATE).

The ATE has set aside the impugned tariff Order for the category LT-II with sanctioned load of above 20 kW but below 50 kW and with sanctioned load of 50 kW and above, holding inter alia that *"the Commission worked with incorrect figures, as given in the table extracted above, and calculated cross subsidy at much lower percentage than what it actually was. With these principles in mind what the Commission has done cannot be sustained in law since the hike in tariff means an increase in cross subsidy coupled with a tariff shock."*

(d) Appeal No.s 153 to 159 of 2008, Appeal No.161 of 2008, Appeal No.164 of 2008, Appeal No.166 of 2008, Appeal No.167 of 2008, Appeal No.168 of 2008, Appeal No.170 of 2008, Appeal No.177 of 2008, Appeal No.178 of 2008

From the Commission's Order dated 20.6.2008 in the matter of MSEDCL's APR Order in Case No. 72 of 2007, several hospitals had filed the aforesaid Appeals in the Appellate Tribunal for Electricity (ATE), challenging the Commission's Order.

The ATE has remanded back the matter to the Commission holding inter alia that *"the Appellants were not heard by giving them an opportunity to them before deciding the issues in respect of change in tariff design, re-categorization by introducing a new category and in respect of the increase in cross-subsidy charges."*

(e) Appeal No.68 & 69 of 2008

From the Commission's Order dated 30.04.2008 read with Clarificatory Order dated 26.09.2007 passed in Case No. 70 of 2006, in the matter of TPC's MYT Petition for its distribution business for the Control Period from FY 2007-08 to FY 2009-10, (to the extent that the tariff under the LT-5 category has been extended to the malls and multiplexes, receiving supply at HT voltage) and Order dated 24.04.2007 passed in Case No. 75 of 2006 in the matter of approval of REL-D's ARR for the Control Period FY 2007-08 to FY 2009-10 and Retail tariff for FY 2007-08, the Multiplex Association of India had filed the aforesaid Appeal in the ATE, challenging the aforesaid Orders.

The ATE has set aside the impugned Order to the extent of creation of new category (LT-IX in Appeal No. 69 of 2008 vis-à-vis REL and LT-5 on Appeal No. 68 of 2008 vis-à-vis TPC), observing inter alia that *"While the Commission estimated that a tariff hike of 22% would be required over the existing tariff. The hike for the LT-IX category worked out to 100% or more. This not only means increase in the cross-subsidy but also a tariff shock."* The ATE has referred to the views taken by the ATE in Appeal No. 146 of 2007, wherein the ATE had observed that *"the purpose of creating a new classification of LT-IX was not covered by any of the grounds on which the Commission could differentiate certain consumers on the ground that they indulge in "unwarranted commercial consumption" or had "a huge capacity to pay" or had potential to "conserve energy. Further, we noticed that while the proclaimed tariff philosophy preferred reduction in cross-subsidy, creation of LT-IX category in fact led to raising the levels of cross-subsidy for those who fell in this category"*. The ATE further observed that in Appeal No. 146 of 2007, the cross subsidy had been increased exorbitantly (The ATE had applied the ratio of the Judgment in Appeal No. 146 of 2007 to the facts of this case also.)

It is a fact that the issue of reduction of cross-subsidy while determining tariff levied to different consumer categories is one of the biggest dilemmas faced by the Commission today.

In various Judgments passed by the Appellate Tribunal, the principle laid down is that electricity sector being regulated on a cost plus basis, all costs and expenses reasonably incurred by the electricity utilities must be allowed. Hence, even though, the Commission has been carrying out prudence checks

on such costs and expenses, and consequently costs and expenses that cannot be justified, are in fact, disallowed by the Commission in the ARR and Tariff Orders, these are eventually allowed in appeal. Thus, the Commission feels limited on the scope for prudence check to be undertaken (as elaborated in Section 4 on Page 56 of this Report). With this approach, the revenue requirement of RInfra-D increases every year, since RInfra-D submits in its Petition that its actual expenses in the previous year is significantly higher than that allowed by the Commission in its Order, and hence, the difference has to be trued up. The projections for the ensuing year are made by RInfra-D on the increased base of the previous year. Also, with the increase in energy requirement every year, and the absence of long-term Power Purchase Agreements (PPAs) with RInfra-D, the power purchase expense increases every year, with the entire additional requirement being procured from traders and the Power Exchange, at rates ranging above Rs. 8 per kWh. Thus, the average cost of supply increases every year, and the average tariff increase required to meet the revenue requirement every year is also very high.

On the other hand, there is already significant cross-subsidy between the consumer categories, with the industrial and commercial categories paying significantly higher than the average cost of supply, and the residential categories paying lower than the average cost of supply. The Commission is bound by the provisions of the EA 2003, Tariff Policy, as well as the ATE Judgments, to reduce the cross-subsidy in a gradual manner, while at the same time ensuring that there is no tariff shock to any consumer category. While there is no standard definition as to what constitutes 'tariff shock', as a general rule of thumb, a tariff increase of above 10% can be considered as a tariff shock. Also, percentage tariff increases can be misleading, since the percentage of increase depends on the existing tariff. For instance, if the average existing tariff for the residential category is say, around Rs. 3 per kWh, and that for the commercial category is say, around Rs. 8 per kWh, and the average cost of supply is say Rs. 5 per kWh, with an average tariff increase requirement of say, 10%. The cross-subsidy provided by commercial category in this illustration is thus, Rs. 3 per kWh, while residential category is being subsidised by Rs. 2 per kWh, and the tariff differential is Rs. 5 per kWh. The revised average cost of supply is Rs. 5.50 per kWh.

In this illustration, a 10% increase across the board will give the desired revenue requirement, but will amount to a 30 paise increase for the residential category, as compared to 80 paise increase for the commercial category. Thus, a 10% increase across the board will result in increasing the cross-subsidy contribution of commercial category from Rs. 3 per kWh to Rs. 3.30 per kWh (Rs. 8.80 – Rs. 5.50), while subsidy provided to residential category will increase from Rs. 2 per kWh to Rs. 2.20 per kWh (Rs. 5.50 – Rs. 3.30). Since the average tariff increase required is 10%, the cross-subsidy can be reduced, only if the tariff of the residential category is increased by say 20% (increase of 60 paise/kWh), and the tariff of commercial category is increased by less than 10%, say 5% (increase of 40 paise/kWh). If this is done, then the tariff differential will reduce by 20 paise/kWh, to Rs. 4.80 per kWh. Thus, as can be seen, even though the tariff has been increased quite steeply for residential category in this illustration, the cross-subsidy has not reduced significantly. Also, the 20% tariff increase will amount to a tariff shock for the residential category.

The situation faced by the Commission can be likened to a situation *between Scylla and Charybdis*, meaning a situation in which one has to choose between two equally unattractive options, viz., increasing the tariff of the subsidised residential category steeply thereby reducing cross-subsidy, or increasing the tariff of the subsidising industrial and commercial categories, thereby increasing the cross-subsidy, which is not in accordance with the legal and regulatory framework. Put differently, the Commission is faced with a 'Hobson's Choice', i.e., a situation, where there is actually no choice, and the tariff of the residential category has to be increased.

The situation can be made manageable only if the revenue requirement and hence, average cost of supply reduces, which will enable the Commission to reduce the cross-subsidy in a more practicable manner.

(f) Contribution of Electricity Duty (ED) and Tax on Sale of Electricity (TOSE)

Since the bill amount payable by the consumers includes the levy of Electricity Duty (ED) and Tax on Sale of Electricity (TOSE), it is necessary to study the impact of the same on the bills of the consumers.

The ED is collected by the distribution licensee and remitted to the Government of Maharashtra, under the Bombay Electricity Duty Act, 1958, in accordance with Notification ref: ELD. 2003/CR-52/NRG-2 dated March 31, 2003, which stipulates as under:

Table 4: Rate of Electricity Duty

Sl.	Part of the Schedule to the Act, applicable to the use of consumption of energy	Rate of Electricity Duty payable
(1)	(2)	(3)
1	Part A (Residential Purpose)	12% of the consumption charges
2	Part B (Commercial Purpose)	13% of the consumption charges
3	Part C (Cinema & Entertainment Purpose)	8% of the consumption charges
4	Part F (Industrial Purpose)	6% of the consumption charges
5	Part G (Captive Purpose)	30 paise per unit

The TOSE is levied for energy sold by the distribution licensee, under the Maharashtra Tax on Sale of Electricity Act, 1963, in accordance with Notification ref: TAC. 2008/CR-43/NRG-1 dated May 15, 2008, which stipulates as under:

Table 5: Rate of Tax on Sale of Electricity

Sl.	Area	Rate of Tax payable
(1)	(2)	(3)
1	In the areas covered under the license granted to Tata Power Company, Reliance Energy Limited and Bombay Electricity Supply and Transport Undertakings	
(a)	In respect of sale of electricity to industrial or commercial consumers	23 paise per unit
(b)	In respect of sale of electricity to any consumers other than industrial or commercial consumers	15 paise per unit

Sl.	Area	Rate of Tax payable
(1)	(2)	(3)
2	In any other area in the State	
(a)	In respect of sale of electricity to industrial or commercial consumers	8 paise per unit
(b)	In respect of sale of electricity to any consumers other than industrial or commercial consumers	Nil

The total amount collected under these two heads by all the distribution licensees in the State of Maharashtra in FY 2008-09 is as under:

Table 6: Amount collected by GoM from ED and TOSE in FY 2008-09

(Rs. Crore)

Sl.	Particulars	Amount Collected in FY 2008-09
1	Electricity Duty (ED)	2153
2	Tax on Sale of Electricity (TOSE)	257
3	TOTAL	2410

Thus, as seen from the above Tables, ED comprises a significant portion of the bill of the consumers, ranging from 6% of the energy charges for industrial consumers to 12% for residential consumers and 13% for commercial consumers, while TOSE comprises another 5% to 10% of the energy charges, depending on the tariff applicable for the consumer category. Thus, put together, these duties and taxes comprise around 10 % to 20% of the energy bill of the residential category and industrial category consumers.

The preamble to TOSE states that it is an "Act to levy a tax on the sale of electricity in the State of Maharashtra and to provide for the creation of a fund therefrom for the improvement and development of power supply in the State". In accordance with Section 4 of TOSE, every distribution licensee and generating company and CPPs (collectively referred to as "power utilities") are required to pay to the GOM the amount of the tax so collected. These proceeds of tax are required to be credited to the Consolidated Fund of GOM as per Section 5. Tax equivalent to 4 paise per unit paid by the power utilities to the GOM in respect of sale of electricity to commercial and industrial

consumers is required to be transferred to the MEDA for executing schemes of generation of Renewable Energy (RE) and Non-conventional Energy (NCE) sources. The balance amounts of the tax so collected is required to be transferred to the State Electricity Fund. Under Section 5A, the above fund can be expended for executing schemes for development and improvement of power supply and for operating rural electrification schemes. The GOM is also supposed to give from this Fund – subsidies or loans or ways and means of advances to power utilities. Under Section 7, the GOM may, if it considers necessary in the interest of the development of power supply, exempt the sale of energy by any class of power utility or to consumers from the payment of the whole or any part of the tax payable under TOSE. Under Section 10, the GOM may refund whole or part of the tax to the power utility.

One of the measures by which the GoM could reduce the impact of the burden of electricity tariffs on the consumers, is to reduce/waive the ED and TOSE for specified consumer categories, as considered appropriate by the GoM. This would ensure that there is a net reduction in the bills of the consumers, since the tariffs have been increased only slightly as compared to that prevailing in the previous financial year.

a. GOM may exempt the sale of energy by any class of power utility or to consumers from the payment of the whole or any part of the tax payable under TOSE.

b. Refund whole or part of the TOSE to the power utility.

c. GOM can direct that the funds in the State Electricity Fund, be utilised for:-
   - § development and improvement of power supply
   - § giving subsidies or loans or ways and means of advances to power utilities.

It may also be noted that since the Electricity Duty is levied on ad-valorem basis, the revenue collected by the GoM will increase if the energy charges are increased. Also, due to the normal increase in sales every year, the absolute amount of ED and TOSE collected by the GoM increases every year. Thus, the GoM will be able to collect the same amount of revenue

from ED and TOSE in the current year, even if the rate of ED and TOSE are reduced, on account of the increase in demand and increase in tariffs. This reduction will provide some relief to the consumers.

(g) Metering and replacement of electro-mechanical meters

Another reason for increase in consumers' monthly bills is the replacement of old electro-mechanical meters by electronic meters, which are designed to be more accurate, and do not slow down due to wear and tear, which may have resulted in increase in the consumption recorded by the meter. During the Public Hearing held on the Annual Performance Review (APR) Petition filed by RInfra-D in Case No. 121 of 2008, there were quite a few objections on the accuracy of electronic meters installed by RInfra-D, which have been captured in the Order along with the Commission's ruling, as reproduced below:

> *"2.32 Metering*
>
> *Shri Jatin Sanghvi and Shri Shrikant Prabhu submitted that RInfra should submit the calibration test certificates for meters, and faulty meters should be immediately replaced as per CEA Regulations, 2006 wherein it is mandatory to install meters of correct range and correct accuracy duly calibrated at NABL accredited test laboratories.*
>
> *Shri Rajesh Varma enquired whether the consumers have an option to purchase their own meter and give it to the licensee for installation after due testing.*
>
> *Shri N. Ponrathnam, Shri. Gopal, and several others submitted that the electronic meters installed by RInfra-D give incorrect readings, and should be replaced with correct meters duly calibrated in NABL accredited test laboratories.*
>
> *RInfra's Response*
>
> *RInfra-D submitted during the Public Hearing that the meters installed by it at the consumers' premises are in accordance with the prevailing Regulations for metering and meet all the specified standards for the meters, and that there is no problem with the metering accuracy.*

Commission's Ruling

The Commission is concerned with the contentions raised regarding the meters. RInfra-D should ensure that meters are properly checked and calibrated."

It is understood that in New Delhi, a survey of electronic meters by an independent agency revealed that around 90% of the electronic meters installed by RInfra-D's Group Companies (BRPL and BYPL) were relatively fast, but the old electro-mechanical meters were also slow. In RInfra-D' case, the Commission had earlier disallowed replacement of 3 year old electro-mechanical meters with electronic meters, however, RInfra-D appealed before the ATE against the Commission's Order in this regard. The ATE set aside the Commission's Order, and RInfra-D was permitted by the ATE to replace the electro-mechanical meters with electronic meters. During the four-year period from FY 2004-05 to FY 2007-08, RInfra-D has replaced around 13.90 lakh single-phase electro-mechanical meters and around 40,000 three phase electro-mechanical meters with electronic meters, thus covering around 55% to 60% of its consumer base. The increase in the consumers' bills could also be attributed to the increase in the billed consumption, which could be attributed to increase in consumption as recorded by the electronic meter as well as increase in the consumption by the consumer due to change in life-style and increased use of electrical appliances.

Given the above circumstances, in order to verify the growing concerns/apprehensions of RInfra-D's consumers related to higher consumption recorded by imported electronic meters installed by RInfra-D, the Commission has decided to undertake third party meter testing through independent National Accreditation Board Laboratories (NABL) accredited testing agencies to verify the accuracy of operational meters for sample number of consumers from each category. This activity would be undertaken in six months time.

(h) Protection of Consumer Interest

The Commission is aware of the need to protect consumer interest and all the Commission's decisions and Orders are given with a view to protect

consumer interest, while at the same time ensuring that the Utility is also able to recover its legitimate and prudent costs in a reasonable manner.

In the past, there was a grave public concern over the irregularities in billing by distribution licensees by way of issuance of supplementary bills and average bills, not based on appropriate meter readings and issued after a long gap. In this regard the Commission had issued a suo-motu Order restraining the distribution licensees to do so with a direction to refund such amounts which have been collected not based on meter readings. However, RInfra-D (as well as MSEDCL, TPC-D and BEST) filed Appeals against the Order of the Commission before the ATE. The ATE held that the Commission did not have the jurisdiction to intervene in the matter of billing disputes, and set aside the Commission's Orders in this regard. The Commission appealed against the ATE's Judgment before the Honourable Supreme Court and the Supreme Court ruled that while the Commission had the jurisdiction to intervene in the matter to ensure that its Regulations are compiled with, the Commission did not have the jurisdiction to intervene in individual billing disputes and could not issue a blanket order for refund of the amounts recovered by the distribution licensees in this context, in view of the grievance redressal mechanism that was in place in accordance with the EA 2003.

The Commission also issued Orders in the context of various charges being recovered by all distribution licensees under the heads such as Service Line Charges (SLC), Service Connection Charges (SCC) as well as Outright Contribution (ORC) from the prospective consumers. While the SCC basically covers the cost of providing connection through service wires from Distribution Mains (i.e., nearest pole) to consumer premises, the SLC included cost of providing infrastructure from delivery point of supply to the Distribution mains in the system (i.e., Setting up of substations and associated facilities). In many cases, the amount recovered from new consumers towards SLC ranged from Rs 10,000/- to a few lakh of rupees depending upon the location of premises, load demanded and length of line required to feed the consumer.

The Commission, through its various Orders in this regard, simplified the procedures and shifted the burden of paying SLC from the consumer to the

distribution licensee, which in turn recovered the cost towards the same through the ARR, as part of its overall capital expenditure plan towards load growth. The Orders were intended to reduce the harassment to consumers and reduce their grievances. While other distribution licensees have implemented the Commission's Orders in this regard, MSEDCL appealed against the Commission's Order before the ATE, where ATE upheld the Order of the Commission. MSEDCL has further challenged the order of ATE and filed a Civil Appeal in the Supreme Court. The issue is now pending before the Supreme Court.

(i) Uniform tariff in the city of Mumbai / State of Maharashtra

Concerns have been raised by stakeholders and RInfra-D suggesting that the retail tariffs should be uniform across the city of Mumbai, irrespective of whether the consumer is being supplied by BEST, TPC-D or RInfra-D. The ground realities, legal provisions and complexities involved in the same are elaborated as under:

There are five distribution licensees in the State of Maharashtra, viz.,

Table 7: Distribution Licensees in the State of Maharashtra

Sl.	Distribution Licensee	Distribution Licence Area
1	Maharashtra State Electricity Distribution Company Limited (MSEDCL)	Entire State of Maharashtra, except licence area of TPC, BEST and RInfra-D, and including Kanjurmarg, Bhandup, and Mulund in Mumbai city
2	Reliance Infrastructure Limited – Distribution Business (RInfra-D)	From Sion to Kanjurmarg in Central suburbs and from Mahim to Mira-Bhayander in Western suburbs
3	Brihan-Mumbai Electricity Supply & Transport Undertaking (BEST)	Bombay City district, from Colaba to Sion and Mahim
4	The Tata Power Company – Distribution Business (TPC-D)	Overlap with both RInfra-D and BEST licence area

5	The Mula Pravara Electric Co-operative Society Limited (MPECS)	3 Talukas of Ahmednagar District, viz., Rahata, Shrirampur, and Rahuri

Though the EA 2003 permits differentiation between similarly placed consumers, the Commission has attempted to minimize the tariff differential across different licence areas, which has been possible to a limited extent. For instance, in the city of Mumbai, BEST has the distribution licence in Bombay City District, viz., from South Mumbai to Mahim and Sion, whereas RInfra-D has the distribution licence in suburban Mumbai. Also, MSEDCL, the successor Company of erstwhile MSEB, supplies electricity to parts of Bhandup and Mulund, which are a part of Mumbai city. The category-wise tariff for different consumer categories in each of the licence areas has always been different (except in case of MPECS, which used to earlier supply electricity at the same tariffs as charged by MSEDCL), due to reasons of difference in the cost of supply, consumer mix, consumption mix, etc., and it is practically not possible to determine uniform Retail Supply Tariff in the State across all licensees.

The cost of supply depends upon various factors such as cost of power procured, distribution losses, operational and administrative expenses, capital related expenditure such as depreciation and interest, etc., which is bound to vary between different licensees, due to inherent differences in power purchase mix, availability and cost of own generation, operational efficiency in controlling distribution losses, and, therefore, it is practically not possible to determine uniform Retail Supply Tariff in the State across all licensees. The Commission has to determine the category-wise tariffs for different licensees on the basis of the respective cost of supply and consumption mix. Further, Section 62(3) of the EA 2003 permits the Commission to differentiate between consumers even within the same licence area on certain grounds, which is obviously applicable to consumers residing in different licence areas.

The Electricity Act, 2003 (EA 2003) vests the Commission with the statutory powers to regulate the electricity industry with the object of ensuring consumer protection. In determining the category-wise tariffs, the

Commission has been guided by the principle that consumer tariffs should reflect the cost of supply. The Commission has given due consideration to the provisions of the EA 2003 and Tariff Policy (TP) in this regard, as reproduced earlier in this Report. The Tariff Policy notified by the Ministry of Power, Government of India, stipulates as under:

"8.4 Definition of tariff components and their applicability

…

2. The National Electricity Policy states that existing PPAs with the generating companies would need to be suitably assigned to the successor distribution companies. The State Governments may make such assignments taking care of different load profiles of the distribution companies so that retail tariffs are uniform in the State for different categories of consumers. Thereafter the retail tariffs would reflect the relative efficiency of distribution companies in procuring power at competitive costs, controlling theft and reducing other distribution losses." (emphasis added)

All distribution licensees in the State of Maharashtra have to apply to the Commission for approval of their Aggregate Revenue Requirement (ARR) and category-wise tariffs. The Commission scrutinizes the Petition and data and the data deficiencies, if any, are communicated to the distribution licensee. Subsequently, a Technical Validation Session is conducted by the Commission in the presence of the authorised Consumer Representatives, in which additional data is requested from the distribution licensee, if required. The distribution licensee has to submit the revised Petition along with additional data to the Commission, after which the Commission admits the Petition for hearing the matter. Thereafter, the distribution licensee has to publish a Public Notice in the leading newspapers, communicating to all the stakeholders, the salient features of the Petition and proposed tariffs, as well as make available copies of the Petition and Executive Summary at head office and divisional offices, to enable interested stakeholders to submit their comments / suggestions / objections to the Commission within the stipulated period of normally three weeks. The Commission then conducts Public Hearing / s in the matter to give an opportunity to interested stakeholders to present their comments / suggestions / objections before the Commission. All

the objections / comments / suggestions submitted by the stakeholders, and the replies filed by the distribution licensee are considered by the Commission before issuing the Tariff Orders.

The tariff philosophy adopted by the Commission as enunciated in the Commission's various Tariff Orders, are:

1 Reflection of Cost of Supply
2 Prudency of Costs
3 Introduction of two-part tariff for all consumer categories
4 Increase in recovery of fixed costs through fixed charges
5 Reduction of cross-subsidy
6 Rationalization of tariff categories, guided by principles of -
   - Simplicity
   - Targeting of subsidy
   - Time of Use Tariff

The following Graphs provides the comparative data of consumption mix and consumer mix of BEST and RInfra-D, as an illustration:

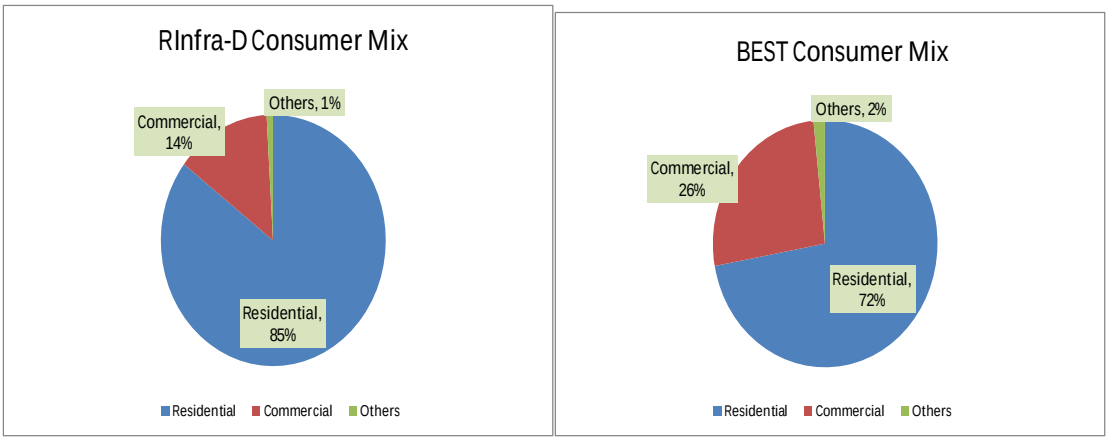

Figure 1: Comparison of Consumer Mix of RInfra-D and BEST

It may be noted that BEST has a significantly higher proportion of commercial consumers and commercial consumption as compared to that of RInfra-D, while RInfra-D has a higher proportion of residential consumers, which enables BEST to cross-subsidise its domestic consumers at the expense of the commercial consumers to a larger extent, which is not possible to the same extent in RInfra-D area. Further, as seen in the Graphs below, the consumption mix of BEST is more favourable than that of RInfra-D, as it has a

higher proportion of subsidising consumers, primarily commercial consumption, where the tariffs are higher.

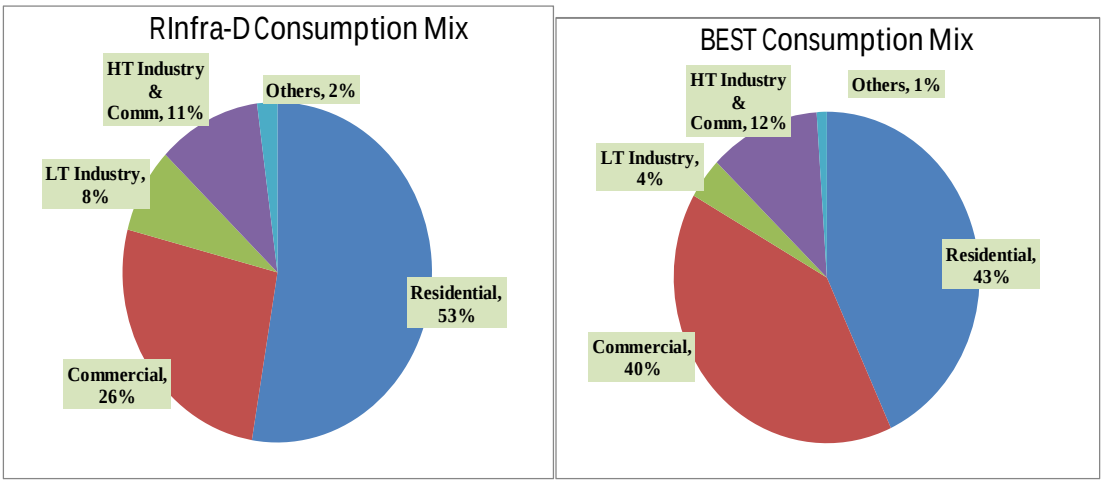

Figure 2: Comparison of Consumption Mix of RInfra-D and BEST

The above analysis shows that any comparison of tariffs between different licence areas has to be seen in the context of the cost of supply, the consumer mix, consumption mix, current level of cross-subsidy, and other factors.

It may also be noted that the Forum of Regulators, a statutory authority under the Electricity Act, 2003, has recommended as under:

> *"15. The proposition of keeping tariffs at the same level in the areas of different licensees in a State is not in accordance with EA 2003 and the Tariff Policy. Differential tariff structure in the area of different licensees in a State should be considered and the tariffs should reflect the efficiencies achieved by a particular licensee and also allocate the PPAs and Capacity of State Generating Stations in different proportions to different licensees.*
>
> *16. Tariff design for various consumer categories should be based on average cost of supply as this is the most common method and has also been envisaged in the Tariff Policy in the context of reduction of cross-subsidy"*

As regards the comparison with the uniform tariffs being levied in other States, viz., Delhi, AP, Karnataka, etc., the following needs to be considered:

There are broadly four types of States, as under:

1. States, where the State Electricity Board (SEB) continues to operate as the vertically integrated Utility even now (TN, Bihar, HP, Kerala, etc.)

2. States, where the SEB has been unbundled and successor Distribution Company/ies have been created, but DISCOMs have not been privatised (Karnataka, AP, MP, Rajasthan, etc.)

3. States, where the successor Distribution Licensees have been privatised (Orissa & Delhi)

4. States, where private Distribution Licensees (Schedule VI Licensees) have been in existence even before the SEB's were created (Gujarat, Maharashtra, and West Bengal)

In Type (1) States, the same distribution licensee is supplying electricity to the entire State, and the tariff is obviously same for any consumer category across the State.

In Type (2) States, though different distribution licensees are supplying electricity to the entire State, the tariff is determined such that the tariff is same for any consumer category across the State. This is managed by providing differential Government subsidy to the distribution licensees, so that the revenue requirement is met, despite the differential consumption mix, efficiency levels, etc. Thus, the State Governments rather than the SERCs are ensuring that the tariffs are same across the State. This method is precisely what has been suggested by the Forum of Regulators in its recent recommendation, in case the State Government desires to ensure uniform tariffs across the State.

In Type (3) States, the SERC has determined uniform tariffs. In Delhi, as part of the privatisation process, the Government of National Capital Territory of Delhi (GNCTD) had notified 'Policy Directions' for a period of five years, which were valid till FY 2007-08 (March 31, 2008). The Policy Directions stipulated that the tariffs should be uniform in the State, and the GNCTD subsidy support should be adjusted in such a manner that the retail tariff are uniform. In one of the years, when NDPL's performance was very good,

DERC amortised the Regulatory Asset created for NDPL at a faster rate, in order that the benefit of NDPL's better performance was passed on to its consumers. However, after the end of the Policy Direction period, there is no binding policy on DERC to determine uniform retail tariffs.

More importantly, DERC has determined differential tariffs for the licence area of New Delhi Municipal Council (NDMC), which is the area of Central Delhi, including Connaught Place, Parliament, etc. The tariff structure and category-wise tariffs of NDMC are totally different as compared to that applicable in the licence areas of BRPL, BYPL and NDPL. Hence, it cannot be said that the tariffs are uniform in the city of New Delhi.

However, in the latest Tariff Orders DERC has determined uniform tariffs for BRPL, BYPL and NDPL, in accordance with Clause 8.4(2) of the Tariff Policy, which stipulates that the Power Purchase Agreements may be allocated in such a manner that the tariffs are uniform across different licence areas, after which the retail tariffs would reflect the relative efficiency of distribution companies in procuring power at competitive costs, controlling theft and reducing other distribution losses. Moreover, under the approach being followed in Delhi, the tariffs are determined in such a manner that the distribution licensee with the highest revenue gap (i.e., BYPL) is able to meet its revenue gap. As a result, distribution licensees having a lower revenue gap (or even revenue surplus, as was the case for NDPL and BRPL) are able to earn additional revenue, which is over and above their approved revenue requirement. This surplus is designed to be retained by the concerned distribution licensee but parked in a separate reserve/fund called MYT Contingency Reserve at a later stage. Thus, the benefit of the additional surplus will have to be passed on to the consumers of the concerned distribution licensee, which will eventually result in differential tariffs for the consumer categories across different distribution licensees, viz., NDPL, BRPL and BYPL.

In Type (4) States, which include Maharashtra, Gujarat, and West Bengal the tariffs charged by different distribution licensees in Mumbai city, Ahmedabad and Surat city, and Kolkata city, respectively, have always been different as compared to that chargeable in the rest of the State, and continue to be

different, even after the SERCs have been established, for reasons elaborated above.

Further, if uniform tariffs are determined across distribution licensees, it will amount to RInfra-D's consumers being subsidised by consumers in other licence areas, including residential, commercial and industrial consumers of BEST and TPC-D, as these consumers will have to pay for the high costs of RInfra-D, though they are served by other distribution licensees.

Moreover, the focus of the EA 2003 is on decentralisation and creation of more competition through open access and parallel licensees and franchisees, in order to encourage efficiency improvement. It is obvious that the expenses of each licensee will be different and hence, tariffs will also be different, to reflect the efficiency and the cost structure of the concerned distribution licensee.

Further, if at all uniform tariffs are to be considered, then why should tariffs be uniform only in the city of Mumbai rather than being uniform in the entire State of Maharashtra, as is the case in several States? This argument could be stretched further to consumers located in border areas of the State, who frequently submit that tariff in neighbouring States/Union Territories (UTs) such as Madhya Pradesh, Daman and Diu, etc., are lower, which is affecting their competitiveness, and hence, their tariffs should be reduced. There are requests from other regions also that the tariffs should be determined on a region-wise basis.

Moreover, the city of Mumbai includes areas of Kanjurmarg, Bhandup and Mulund, which are part of the licence area of MSEDCL. If the retail tariffs in the city of Mumbai are to be made uniform, it would effectively mean that the tariffs of all licensees in the State will have to be uniform, since there cannot be any differentiation for the same category of consumer across different areas of MSEDCL licence area. Also, consumers in Kanjurmarg, Bhandup and Mulund are subjected to load shedding, which is not the case with consumers supplied by other Mumbai licensees. On the other hand, Mumbai licensees are paying standby charges of around Rs. 400 crore every year to MSEDCL to mitigate the threat of load shedding due to outages in their system. This revenue is being used to reduce the tariffs in MSEDCL licence area. Hence,

this is a very complex matter and there is no easy solution available. Any such dispensation has to consider all these aspects.

The Commission is also aware that RInfra-D has been praying for uniform tariff in the city of Mumbai for quite some time, however, tariffs have been different in the State and city ever since the distribution licences were granted, and were different even before the Commission was constituted. This aspect was well known to RInfra-D when they took over the distribution business from BSES Ltd in 2003. Hence, there is no merit in RInfra-D seeking to have uniform tariffs merely because they have taken over BSES Ltd.

From the above, it is clear that if uniform tariff has to be introduced and cross-subsidy has to be retained at the existing levels or increased further, then the EA 2003 and the Tariff Policy may have to be amended, or the State Government may have to provide subsidy to the concerned distribution licensees to compensate for the loss of revenue, since the tariffs for any category would then have to be retained at the lowest level applicable amongst the distribution licensees.

4. Analysis of Expenses

While approving the Revenue Requirement of the Utilities, the Commission undertakes a prudence check, in accordance with the provisions of the MERC Tariff Regulations and in accordance with the applicable ATE Judgments in this regards. The Commission has specified norms for certain performance parameters in the MERC Tariff Regulations. Mere incurrence of the expenses does not entitle the Utility to recover the same through the tariffs. The Utility has to convince the Commission that the expense is justified and in accordance with the EA 2003, and norms specified in the MERC Tariff Regulations and the Commission's previous Tariff Orders. Thus, the allowance of expenses by the Commission in the tariff determination process, is not on a merely 'cost-plus' basis, though it is referred to in this manner, to indicate the type of regulation, i.e. 'cost plus return' regulation.

At the same time, there is no denying that the expenses, and hence, revenue requirement and tariffs, have increased significantly in case of RInfra-D over the last three or four years. The Commission has deliberated on the reasons for the revenue gap determined in the Tariff Order for FY 2009-10, in the paragraphs below:

Primary contributors to revenue gap and tariff increase

(a) The revenue gap for FY 2007-08 works out to Rs. 118.24 crore, which has been added to the ARR of FY 2009-10. The revenue gap for FY 2007-08 has arisen primarily on account of increase in the power purchase expenses, as compared to that approved by the Commission for FY 2007-08 in the MYT Order.

(b) Based on provisional truing up of various elements for FY 2008-09, the revenue gap in FY 2008-09 has been determined as Rs. 680.11 crore (as compared to Rs. 869 crore projected by RInfra-D), which is primarily on account of the increase in the power purchase expenses. This revenue gap has been carried forward to FY 2009-10, while estimating the total revenue requirement for FY 2009-10.

(c) The Net Revenue Requirement for FY 2009-10 and the Revenue Gap are shown in the Table below:

Table 8: Aggregate Revenue Requirement for FY 2009-10 (Rs Crore)

Sl.	Particulars	FY 2009 - 10		
		RInfra-D	Commission	Contribution in Rs/kWh
1	Power Purchase Expenses	4,475.06	4,418.45	5.09
2	Operation & Maintenance Expenses	578.54	566.82	0.65
2.1	Employee Expenses	310.87	306.62	0.35
2.2	Administration & General Expenses	118.34	111.73	0.13
2.3	Repair & Maintenance Expenses	149.32	148.47	0.17
3	Depreciation, including advance against depreciation	87.72	76.16	0.09
4	Interest on Long-term Loan Capital	104.93	67.41	0.08
5	Interest on Working Capital and on consumer security deposits	67.65	68.14	0.08
6	Bad Debts Written off	5.50	5.50	0.01
7	Income Tax	118.04	34.65	0.04
8	Transmission Charges intra-State	260.81	183.72	0.21
9	Contribution to contingency reserves	14.78	6.52	0.01
10	Total Revenue Expenditure	5,713.03	5,427.36	6.26
11	Return on Equity Capital	212.61	176.69	0.20
12	Aggregate Revenue Requirement	5,925.64	5,604.05	6.46
13	Less: Non Tariff Income	77.90	88.41	0.10
14	Aggregate Revenue Requirement from Retail Tariff	5,847.73	5,515.64	6.36
15	Deferred Recovery - MYT Order	138	138	0.16
16	Deferred Recovery - APR Order for FY 2007-08	178	178	0.21
17	Carrying cost on deferred recovery	71	46.74	0.05
18	Revenue Gap / (Surplus) for FY 2007-08	212.06	118.24	0.14
19	Revenue Gap / (Surplus) for FY 2008-09	868.87	680.11	0.78
20	Net revenue requirement for FY 2009-10	7,315.66	6676.73	7.70
21	Revenue realised from existing tariff	5,938.77	6,017.30	
22	Net Revenue Gap for FY 2009-10	1,376.89	659.42	

As seen in the above Table, there is a significant component of revenue requirement that has been deferred for recovery from previous years, and the same has been added to the revenue requirement of FY 2009-10, along with carrying cost.

However, it should be noted that the net revenue requirement and hence, revenue gap for FY 2009-10, determined by the Commission is much lower than that projected by RInfra-D, mainly on account of:

- § Reduction in the power purchase expenses on account of
  - reduction in cost of power purchase from TPC-G, due to the revision in the tariff applicable for TPC-G, as determined by the Commission in a separate Order for TPC-G in Case No. 111 of 2008,
  - revision in the tariff applicable for RInfra-G, as determined in a separate Order for RInfra-G in Case No. 120 of 2008.
- § Reduction in transmission tariff payable by RInfra-D, due to the downward revision in the transmission tariff, as determined by the Commission in a separate Order in Case No. 155 of 2008.
- § Reduction in proposed capitalisation and consequent reduction in interest costs and return on equity components,
- § reduction in approved Income Tax for FY 2009-10.

Contributors to increase in Average Cost of Supply of RInfra-D

The average cost of supply of RInfra-D is the highest amongst the distribution licensees in the State, and possibly the highest in the country as well. The movement of the Average Cost of Supply over the past three years, and as approved by the Commission for FY 2009-10 is given in Table 9 below:

Table 9: Average Cost of Supply of RInfra-D

Sl.	Particulars	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
1	Average cost of supply	4.01	4.98	5.90	7.70

As seen from Table 9 above, the average cost of supply of RInfra-D has been increasing by around Rs. 1 per kWh every year, from FY 2006-07, thus requiring an average tariff increase of around 24% every year, which is impractial. As a result, the entire tariff increase has not been passed on to the consumers, and the approved average cost of supply for the purpose of tariff determination in FY 2009-10 has been considered as Rs. 7.06 per kWh. However, the balance part of the revenue requirement is yet to be recovered through the tariffs.

As seen in Table 8 above, the major contributors to the average cost of supply for FY 2009-10 are as under:

- § Power purchase expenses : Rs. 5.09 per kWh
- § Operation & Maintenance expenses : Rs. 0.65 per kWh
- § Intra-State Transmission Charges : Rs. 0.21 per kWh
- § Return on Equity : Rs. 0.20 per kWh
- § Deferred recovery, with carrying cost : Rs. 0.42 per kWh
- § Revenue Gap of FY 2007-08 : Rs. 0.14 per kWh
  (mainly due to increase in power purchase cost)
- § Revenue Gap of FY 2008-09 : Rs. 0.78 per kWh
  (mainly due to increase in power purchase cost)

Thus, in case of RInfra-D, the base power purchase expenses and increase in power purchase expenses in FY 2007-08 and FY 2008-09 have contributed to Rs. 6.01 per kWh (i.e., 78%), out of the total Average Cost of Supply of Rs. 7.70 per kWh. A detailed analysis of the power purchase expenses is presented in the next Section of this Report. However, the comparison of the overall expenses of the different distribution licensees in the State regulated by the Commission has been elaborated in this Section, as under.

Composition of ARR of all Distribution Licensees

The composition of the Aggregate Revenue Requirement (ARR) of the Mumbai Distribution Licensees, as approved by the Commission, is summarised in the Table below:

Table 10: Break-up of Aggregate Revenue Requirement of Mumbai distribution licensees (Rs. Crore)

Sl.	Particulars	BEST			TPC - D			RInfra - D		
		Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply	Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply	Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply
1	Power Purchase Expenses (including Transmission Charges & SLDC Charges)	1681.60	62.20%	3.94	907.36	78.07%	3.44	4602.17	68.93%	5.30
2	Operation & Maintenance Expenses	258.97	9.58%	0.61	36.72	3.16%	0.14	566.82	8.49%	0.65
3	Capex Related Expenses (Depreciation and Interest on Long term loan capital)	64.72	2.39%	0.15	26.83	2.31%	0.10	143.57	2.15%	0.17
4	Other Expenses (Working Capital, Bad debts, Income Tax, allocation of LCC & Contribution to contingency reserves)	27.02	1.00%	0.06	27.87	2.40%	0.11	114.80	1.72%	0.13
5	Return on Equity	108.62	4.02%	0.25	23.53	2.02%	0.09	176.69	2.65%	0.20
6	Aggregate Revenue Requirement	2140.93	79.19%	5.02	1022.31	87.96%	3.88	5604.05	83.93%	6.46
7	Less: Non Tariff Income	55.53			12.89			88.41		
8	Aggregate Revenue Requirement from Retail Tariff	2085.40	77.14%	4.89	1009.42	86.85%	3.83	5515.64	82.61%	6.36
9	Revenue Gap / (Surplus) of FY 2007-08 after final truing up	225.79	8.35%	0.53	135.43	11.65%	0.51	118.24	1.77%	0.14
10	Revenue Gap / (Surplus) of FY 2008-09 after provisional truing up	392.22	14.51%	0.92	-20.92	-1.80%	-0.08	680.11	10.19%	0.78
11	Impact of Review Order, ATE & Share of gains & losses for FY 2008-09, FY				38.32	3.30%	0.15			

Sl.	Particulars	BEST			TPC - D			RInfra - D		
		Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply	Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply	Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply
	06-07									
12	Carrying cost + deferred recovery on revenue gap for FY 2007-08 & FY 2008-09				0			362.74	5.43%	0.42
13	Total Revenue Requirement in FY 2009-10	2703.41	100.00%		1162.25			6676.73		
14	Total Sales in MU	4263.87			2638.13			8676.00		
14	Average Cost of Supply (ACoS)	6.34		6.34	4.41		4.41	7.70		7.70

More details of the above expense break-up are given at Annexure IV to this Report. The detailed break-up clearly reveals the expenses actually sought by the respective distribution licensees and the significant reduction in expenses and revenue requirement approved by the Commission within the provisions of law and Regulations.

As seen from the above Table, even on a stand-alone basis, power purchase expenses (including intra-State transmission charges and SLDC fees and charges) comprises the biggest component of the ARR for all the Mumbai licensees, though at different contribution levels. Power purchase expenses comprise 62%, 78%, and 69% of the total ARR of BEST, TPC-D and RInfra-D, respectively. If the revenue gap of the previous years after truing up / provisional truing up (which is also largely due to the increase in power purchase expenses) is added, then the contribution of power purchase expenses increases to 85%, 88% and 81%, for BEST, TPC-D and RInfra-D, respectively. However, the contribution of total power purchase expenses (including contribution of truing up) varies significantly in terms of paise / unit of Average Cost of Supply. As seen in the above Table, total power purchase expenses amounts to only Rs. 3.87 per kWh in case of TPC-D, whereas in case of BEST, the same amounts to Rs. 5.39 per kWh, and goes up to Rs. 6.22 per kWh in case of RInfra-D. It should be noted that the average cost of supply of the distribution licensees is significantly different, and ranges from Rs. 4.41 per kWh for TPC-D to Rs. 6.34 per kWh for BEST to Rs. 7.70 per kWh for RInfra-D.

Further detailed break-up of O&M expenses and comparison of productivity ratios of distribution licensees in Maharashtra, has been elaborated in the Table below:

Table 11: Break-up of O&M Expenses of Mumbai distribution licensees (Rs. Crore)

Sl.	Particulars	BEST			TPC - D			RInfra - D		
		Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply	Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply	Commission Approved	% contribution to ARR	Contribution to per unit of Avg. Cost of Supply
1	Operation & Maintenance Expenses	258.97	9.58%	0.61	36.72	3.16%	0.14	566.82	8.49%	0.65
1.1	Employee Expenses	153.39	5.67%	0.36	15.72	1.35%	0.06	306.62	4.59%	0.35
1.2	Administration & General Expenses	76.89	2.84%	0.18	14.03	1.21%	0.05	111.73	1.67%	0.13
1.3	Repair & Maintenance Expenses	28.69	1.06%	0.07	6.97	0.82%	0.04	148.47	2.22%	0.17
2	Total Revenue Requirement in FY 2009-10	2703.41			1162.25			6676.73		
3	Total Sales in MU	4263.87			2638.13			8676.00		
4	Average Cost of Supply (ACoS)	6.34		6.34	4.41		4.41	7.70		7.70

As seen from the above Table 11, O&M expenses comprise 9.6%, 3%, and 8.5% of the total ARR of BEST, TPC-D and RInfra-D, respectively. In terms of contribution to per unit average cost of supply, O&M expenses comprise only Rs. 0.14 per kWh in case of TPC-D, whereas in case of BEST, the same amounts to Rs. 0.61 per kWh, and goes up to Rs. 0.66 per kWh in case of RInfra-D. However, TPC-D is not strictly comparable with RInfra-D and BEST on the aspect of O&M expenses, by virtue of having much lower number of consumers, predominantly HT network, etc.

Table 12: Summary of Revenue Requirement sought by RInfra-D vs. Approved by Commission (Rs. Crore)

Sl.	Particulars	REL - Case No. 25 &53 of 2005			REL - Case No. 75 of 2006			REL - Case No. 66 of 2007			RInfra - D - Case No. 121 of 2008		
		FY 2006-07			FY 2007-08			FY 2008-09			FY 2009-10		
		Petition	Commission Approved	Difference	Petition	Commission Approved	Difference	Petition	Commission Approved	Difference	Petition	Commission Approved	Difference
1	Power Purchase Expenses (including Transmission Charges & SLDC Charges)	2,217.66	2604.43	386.77	2931	3072	141	3,322.76	4046.25	723.49	4735.87	4602.17	-133.70
2	Operation & Maintenance Expenses	414.99	295.38	-119.61	454	428	-26.5	555.36	517.35	-38.01	578.54	566.82	-11.72
3	Capex Related Expenses (Depreciation and Interest on Long term loan capital)	147.56	117.98	-29.59	172	128	-44.5	181.71	150.04	-31.67	192.65	143.57	-49.08
4	Other Expenses (Working Capital, Bad debts, Income Tax, & Contribution to contingency reserves, & DSM Budget)	134.36	43.90	-90.46	117	104	-13	168.35	163.84	-4.51	205.97	114.80	-91.17
5	Return on Equity	170.5	153.28	-17.22	176	161	-15	201.25	189.84	-11.41	212.61	176.69	-35.92
6	Aggregate Revenue Requirement	3,085.07	3214.97	129.90	3850	3892	42	4429.43	5067.32	637.89	5925.64	5604.05	-321.59
7	Less: Non Tariff Income	28.1	51.81	23.71	50	52	2	59.05	59.05	0.00	77.90	88.41	10.51
8	Less: Distributable Surplus from previous years		260.29	260.29			0			0.00			0.00
9	Aggregate Revenue Requirement from Retail Tariff	3,056.97	2902.87	-154.11	3800	3840	40	4370.38	5008.27	637.89	5847.73	5515.64	-332.09
11	Average Cost of Supply (ACoS)		4.01			4.98			5.90			7.70	

As is evident from the above Table 12, the Commission had disallowed a significant amount of O&M expenses for FY 2006-07, as well as capex related expenses, income tax, and other expenses on the ground that the same was not prudently incurred. However, as elaborated in the subsequent sub-section, RInfra-D filed an Appeal before the ATE and won the Appeal in its favour. Moreover, for most of the above years under comparison, it is seen that RInfra-D had been under-estimating the power purchase expenses to show that their ARR is lower. However, the Commission, while approving the ARR and tariff, considered the most realistic power purchase expenses, so that the same would be clearly reflected through the tariff, rather than be charged to the consumers through the route of Fuel Adjustment Charges (FAC). The consumers also requested during the Public Hearing that the tariffs should be charged upfront, so that the incidence of FAC is minimised, if not eliminated altogether. Hence, on the face of it, it may appear that the Commission has approved the power purchase expenses approved by the Commission for FY 2006-07, FY 2007-08 and FY 2008-09, are significantly higher than that sought by RInfra-D in its Petition. However, the fact is that RInfra-D has been under-estimating the power purchase expenses, by considering a lower rate for short-term purchase from bilateral and other external sources, since in any case, the variation in power purchase expenses is allowed to be recovered through the FAC mechanism. The actual power purchase expenses have in fact, turned out to be even higher than projected by the Commission, leading to FAC and under-recovery through the FAC mechanism due to the FAC ceiling of 10%, in turn leading to a revenue gap, which has been allowed to be recovered through the truing up process. The Commission has thus, endeavoured to ensure that the real picture is known to the consumers, and hence, allowed the power purchase expenses on a more realistic basis.

As regards the capital expenditure plan of RInfra-D, in the Order for RInfra-D, while allowing only 51% and 36% of the projected capital expenditure for FY 2008-09 and FY 2009-10, respectively, the Commission observed that the *"Gross Fixed Assets have increased by around 28%, 230%, and 104% for the Generation, Transmission, and Distribution Business, respectively, over the last five years. The pace of asset addition has increased by leaps and bounds over the last five years. RInfra-D has projected to almost double its asset base (as in FY 2004-05) by the end of FY 2009-10, while RInfra-G and RInfra-T have proposed to increase their*

asset base (as in FY 2004-05) to around 1.3 to 3.3 times. Further, when RInfra was operating in an integrated manner in FY 2004-05, the total asset addition every year was less than around Rs. 200 Crore, whereas in FY 2008-09 and FY 2009-10, the Transmission and Distribution Businesses are individually adding assets of more than this amount every year on an average, while the capital asset addition in Generation Business has also increased significantly in scale. The addition to the asset base is clearly not commensurate either with the increase in sales or increase in demand in MW served. Since the Utilities were able to serve the existing consumer base well enough with the existing assets, the rationale for this steep increase in the asset base needs to be examined further."

The Commission's treatment of expenses for FY 2009-10 has already been discussed earlier in this Section. The time-series compilation done in the table above also shows that the Average Cost of Supply (ACOS) has increased from Rs. 4.01 per kWh in FY 2006-07 to Rs. 4.98 per kWh in FY 2007-08 to Rs. 5.90 per kWh in FY 2008-09, to Rs. 7.70 per kWh in FY 2009-10. This indicates a Compounded Annual Growth Rate (CAGR) of as high as 24%.

Impact of ATE Judgment on RInfra-D Tariff

The Commission, in the Tariff Order dated October 3, 2006, decided on the revenue requirement of Reliance Energy Limited (REL) for FY 2006-07. In the same Order, the Commission also dealt with the truing up of cost and revenues for FY 2004–05 and FY 2005–06 based on actuals subject to prudence check.

REL challenged this Order of the Commission in the Appellate Tribunal for Electricity (ATE). The ATE upheld the appeals of REL in its Judgment dated April 4, 2007 in Appeal No. 251 of 2006, as given below:

a) The ATE upheld REL's appeal regarding the allowance of the actual employee expenditure, A&G expenditure and Income Tax of Rs. 207.34 Crore, Rs 102.02 Crore and Rs 101 Crore, respectively, as claimed by REL as against the Commission approved figures of Rs 161.85 Crore, Rs 74.05 Crore and Rs 7.64 Crore, respectively, for FY 2004-05. The total net additional expenditure allowed by ATE for REL as a whole

for FY 2004-05, vis-à-vis the Commission's Tariff Order, works out to Rs. 167 crore.

b) The ATE also upheld REL's appeal regarding the allowance of the actual employee expenditure, A&G expenditure and Income Tax of Rs. 207.26 Crore, Rs 101.64 Crore and Rs 74 Crore, respectively, as against the Commission approved figures of Rs 182.76 Cr, Rs 76.48 Cr and Rs 26.96 Cr, respectively, for FY 2005-06. The total net additional expenditure allowed by ATE for REL as a whole for FY 2005-06, vis-à-vis the Commission's Tariff Order, works out to Rs. 95.7 crore.

c) ATE also upheld REL's appeal in the context of applicability of norms stipulated under the Tariff Regulations, and ruled that the Commission should not deviate from the operating norms for station heat rate, auxiliary consumption and specific consumption of secondary fuel as specified in the MERC (Terms and Conditions of Tariff) Regulations, 2005, even though REL's performance was better than the norms. This has resulted in additional generation cost of around Rs. 80 crore annually, being passed on to the consumers.

The impact of the ATE Judgment has been to increase the base expenses, which has resulted in further increasing the expenses in the subsequent years. The total impact of the ATE Judgments in case of RInfra-D over the last three years is estimated at around Rs. 1000 crore (considering impact of around Rs. 325 crore per year in the base year, based on above computation).

As a consequence of these developments, viz., galloping expenses of RInfra-D and Judgments granted by ATE, the Commission has been unable to pass through the entire un-recovered revenue gap till today, and there is an un-recovered revenue gap of Rs. 554 crore as on date, which will have to be passed on to the consumers at some point in the future, unless RInfra-D decides to waive its claim towards these amounts.

It should be noted that RInfra-D has already filed an Appeal before ATE requesting that the carrying cost on deferred recovery of arrears should be allowed at a higher rate of 10.25%, as compared to 6% allowed by the Commission. If this Appeal of RInfra-D is upheld by the ATE, then there will

be additional impact due to increase in past liabilities that have to be passed through.

Hence, as a goodwill gesture, RInfra-D may voluntarily waive carrying cost on past arrears (unmet revenue gap of past years), and may consider withdrawing the Appeal pending before ATE seeking allowance of higher interest rate for computing carrying cost. However, in such a case, the carrying cost should not be sought to be recovered through truing up or in the ARR, as this will only amount to deferment of the cost.

5. Power Purchase Expenses

The source-wise power purchase quantum and cost as approved in RInfra-D's APR Order dated June 15, 2009 for FY 2007-08 (final truing up), FY 2008-09 (provisional truing up), and FY 2009-10, is given in Table 13 below:

Table 13 below, reveals the following:

(a) The rates of the first three primary sources of power, viz., RInfra-G, TPC-G, and RPS, are determined by the Commission through separate Orders, and are thus, regulated prices

(b) In FY 2007-08, in the absence of any Power Purchase Agreement with TPC-G, the Commission considered RInfra-D's and BEST's share on the basis of the Coincident Peak Demand in the previous year, as a result of which, RInfra's share of TPC-G capacity was higher at 51.6%, and it was able to sell the surplus to other licensees. The average rate of power purchase from TPC-G was Rs. 3.99 per kWh in FY 2007-08.

(c) For FY 2008-09 and FY 2009-10, the share of each distribution licensee in TPC-G capacity has been considered strictly in accordance with the PPAs approved by the Commission, and hence, share of BEST and TPC-D were considered as 800 MW and 477 MW, respectively. The balance 500 MW was considered as RInfra-D's share, though there is still no PPA between TPC-G and RInfra-D, resulting in TPC-G capacity comprising 30% and 29% of RInfra-G's total energy requirement in FY 2008-09 and FY 2009-10, respectively. The average rate of power purchase from TPC-G increased to Rs. 4.83 per kWh in FY 2008-09 on account of the increase in fuel prices and increased outage of one of TPC-G's cheaper gas based Units, and has been approved as Rs. 3.71 per kWh for FY 2009-10.

Table 13: Source-wise power purchase cost of RInfra-D

Sl.	Particulars	FY 2007-08				FY 2008-09				FY 2009-10						
		Commission Approved (Actuals)				Commission Approved (Actuals)				RInfra-D Petition			Commission Approved			
		Quantum		Cost	Rate	Quantum		Cost	Rate	Quantum	Cost	Rate	Quantum		Cost	Rate
		MU	% of total power purchase	Rs Crore	Rs./ kWh	MU	% of total power purchase	Rs Crore	Rs./ kWh	MU	Rs Crore	Rs./ kWh	MU	% of total power purchase	Rs Crore	Rs./ kWh
1	RInfra-G	4,089.09	44.41%	870.44	2.13	3,943.29	41.45%	967.69	2.45	3,911.06	1,038.15	2.65	3,915.24	38.43%	966.12	2.47
2	TPC-Generation	4,747.76	51.56%	1895.79	3.99	2844.59	29.90%	1373.46	4.83	2,928.12	1,119.06	3.82	2,941.98	28.88%	1,091.19	3.71
3	Sale to Other Licenses	-177.32	-1.93%	-44.42	2.51											
4	Renewable Purchase Specification (RPS)	2.24	0.02%	0.78	3.48	63.76	0.67%	22.32	3.50	150	54.75	3.65	611.28	6.00%	223.12	3.65
5	External Power Purchase	465.75	5.06%	255.71	5.49	1919.87	20.18%	1683.44	8.77	2,913.19	2,039.23	7.00	2719.51	26.69%	1903.66	7.00
6	Purchase from Imbalance Pool	80.05	0.87%	24.18	3.02	742.06	7.80%	701.41	9.45							
7	Standby Charges			220.21				222.4		-	222.35		-		224.5	
8	Less Hydel Rebate									-	-		-		-25.2	
9	sub-total (Power Purchase)	9,207.57	100.00%	3,222.69	3.50	9513.57	100.00%	4970.71	5.22	9,902.37	4,473.54	4.52	10,188.01	100.00%	4,383.38	4.30
10	Transmission Charges			189.55				221.63		-	260.81		-		183.72	
	SLDC Charges			1.56				1.52		-	1.52		-		1.07	
11	Reduction of Cost (DSM)			-4.71				-16.01		-	-		-		-	
12	Total	9,207.57		3,409.09	3.70	9513.57		5177.85	5.44	9,902.37	4,735.87	4.78	10,188.01		4,568.17	4.48
13	Impact of the ATE Judgment on TPC-G									-	-		-		34	
14	Total	9,207.57		3,409.09	3.70	9513.57		5177.85	5.44	9,902.37	4,735.87	4.78	10,188.01		4,602.17	4.52

Note: * - Since the actual energy sold is lesser than the quantum of power purchase due to the distribution losses, the average power purchase rates indicated in above Table are lower than the contribution of power purchase expenses to average cost of supply as indicated in Table 10

(d) The power purchase from RInfra-G (quantum and rate) has been considered in accordance with the separate Orders issued by the Commission for RInfra-G, from time to time. RInfra-G capacity comprised 44% of total power purchase in FY 2007-08, which reduced to 41% in FY 2008-09, and which has been projected to reduce to 38% in FY 2009-10, due to increase in sales from year to year, though the quantum of power purchase is projected to remain at FY 2008-09 levels in FY 2009-10 also. The average rate of power purchase from RInfra-G has increased from Rs. 2.13 per kWh in FY 2007-08 to Rs. 2.47 per kWh in FY 2009-10.

(e) The Commission tallies the quantum and cost of power purchase from these regulated sources, viz., TPC-G and RInfra-G, with the revenue considered from sale of power for these regulated entities, hence, the facts are verifiable.

(f) The power purchase by RInfra-D from external sources and imbalance pool has increased to around 28% in FY 2008-09 and FY 2009-10, as compared to only 6% in FY 2007-08; in fact, in FY 2007-08, RInfra-D had surplus power and was able to sell it to the pool (sale to other licensees). In FY 2008-09, purchase from external sources comprised around 20% of total power purchase, while purchase from imbalance pool comprised around 7% of total power purchase.

(g) With the increase in energy requirement every year, the procurement from traders at short-term prices will effectively increase every year, further adding to the burden of the consumers, unless RInfra-D enters into long-term PPAs at reasonable rates for its entire power and energy requirement.

(h) The rates of power purchase from traders and consequently imbalance pool (which reflects the marginal price of power purchase) are the highest amongst all sources of power from where RInfra-D procures its requirement.

(i) The traded rates increased from around Rs. 5.50 per kWh in FY 2007-08 to over Rs. 9 per kWh in FY 2008-09, which have been projected to reduce to an average of Rs. 7 per kWh.

(j) Thus, out of the total power purchase by RInfra-D, all but 20% (from external sources) is regulated by the Commission. Of the external sources, part of the procurement is through the Unscheduled Interchange (UI) route, for which rates have been specified for different frequency bands by the Central Electricity Regulatory Commission (CERC). For the remaining power purchase from traders, though the CERC has specified a trading margin, the trading margin does not come into the picture in many cases, due to power contracted through the power exchanges, where the price is discovered through the open competitive bidding system. Thus, the stipulation of a trading margin is no solution to the problem of prevailing high prices, which are driven by the gap between demand and supply.

Fuel Adjustment Cost (FAC) mechanism

It should be noted that distribution licensees have no fuel cost, since they are purchasing their entire energy requirement from generators and power traders. However, it is important to understand that power purchase expenses comprise around 70% to 80% (as elaborated in Table 10 of this Report) of the Aggregate Revenue Requirement (ARR) of the distribution licensee. In turn, fuel cost comprises around 70% to 80% of the ARR of the Generation Companies. In effect, fuel cost comprises around 50% to 65% of the distribution licensee's ARR, though indirectly, since it is being recovered by the Generation Company through generation tariff and is reflected as power purchase expense by the distribution licensee.

At the time of approving the ARR of the Generating Companies and the Distribution Licensees in the State, while approving the variable cost of generation and power purchase, the Commission considers the prevailing fuel prices for Generating Companies regulated by the Commission and power purchase rate for purchase of power from other sources from where the power is to be procured by the Distribution Licensees

Fuel Adjustment Cost (FAC) charge is a mechanism to pass through the variation in the price of fuel incurred by the Generating Companies to

Distribution Licensees to its consumers. The variation in fuel price can be either negative (reduction) or positive (increase), and accordingly the FAC charge can also be negative or positive. Since variation in fuel costs is intended to be a pass through expenses, as mandated under Section 62 (4) of the EA 2003, the FAC mechanism is designed in such a manner that the distribution licensees are allowed to recover the variation in fuel prices charged by the Generation Companies and power purchase rates and are required to submit the details of the same on a quarterly basis for post-facto approval. Any adjustment in the same, consequent to the Commission's vetting of the FAC computations, is done in the subsequent month's FAC charge.

However, the distribution licensees are allowed to automatically pass through the extra costs to the consumers under the FAC mechanism, only upto a stipulated cap of 10% of the approved variable tariff chargeable to the consumers as per the Tariff Order. By its very nature, FAC is a licensee specific charge, and it is charged at a uniform rate to all the consumers of the Distribution licensee on the units consumed. The FAC mechanism is specified under Regulation 82 of the MERC Tariff Regulations. On account of the time lag involved in accounting of the variable cost of power procured and preparation of the FAC submissions, there is a time delay of around two to three months before the distribution licensees are able to pass on the costs to their consumers.

The FAC charge is computed on normative basis, and any excess cost incurred over and above the allowable norms is disallowed either through disallowing the corresponding energy units or the corresponding costs involved on account of deviations in the following performance parameters stipulated by the Commission:

i) Heat Rate of Generating Unit / Station
ii) Auxiliary Consumption of the Unit / Station
iii) Transit loss of Coal fuel procured by the Unit / Station
iv) Usage of secondary fuel by the generating Unit / Station
v) Distribution Loss incurred by the Distribution Utility

On account of the FAC ceiling, it is possible that in some instances, the distribution licensees are unable to recover the entire FAC incurred. In such cases, the FAC charge is spread over the subsequent months, in order to recover the under-recovered FAC. If there is still any under-recovery, then the same is adjusted under the truing up exercise at the end of the year.

Apart from the variation in imported coal prices, the impact of increase in Indian raw coal and washed coal also impacts the generation tariff of RInfra-G (DTPS) and in turn the power purchase expenses of RInfra-D. DTPS uses a blend of Raw Coal, Washed Coal and Imported Coal for Thermal power generation. The approved ratio of these coal types as per the APR Order for FY 2008-09 is Raw Coal : Washed Coal : Imported Coal as 7 : 73 : 20. Thus, in case the actual fuel mix used by DTPS is different from that considered in the Order, it impacts the cost of generation and hence, the FAC chargeable.

Under the FAC mechanism, RInfra-D has recovered FAC of around 54.5 paise/kWh (equivalent to the FAC cap) for seven months of FY 2008-09, and has recovered FAC of 113.5 paise/kWh (54.5 + 59) for the remaining five months of FY 2008-09, including Additional FAC of 59 paise/kWh, allowed on account of under-recovery in the first quarter of FY 2008-09.

It should be noted that even after recovering the above FAC, there has been an under-recovery of power purchase expenses in FY 2007-08 and FY 2008-09, which has been added to the revenue requirement of FY 2009-10.

In order to minimise the impact of FAC, the Commission projects the fuel cost for the future year by considering the average fuel price prevailing in the previous four to six months. Any variation in the fuel cost over and above the fuel cost considered at the time of tariff determination, whether negative or positive, is passed through under the FAC mechanism. However, there is a time lag between the increase in fuel prices and the recovery of the same through FAC, on account of the inherent time required to compute and levy the FAC. Also, due to the 10% ceiling on recovery of FAC, the entire variation in fuel cost is sometimes not recovered through the FAC, and the balance

under-recovery is recovered under the truing up process at the end of the year.

Failure of RInfra-D to enter into long-term PPAs

The Commission notified the MERC (Terms and Conditions of Tariff) Regulations, 2005 on August 26, 2005. The relevant extracts of the MERC Tariff Regulations, which specify the need for a Power Purchase Agreement / Arrangement, are as under:

> *"7.1.2 Where, as at the date of notification of these Regulations, the power purchase agreement or arrangement between a Generating Company and a Distribution Licensee for supply of electricity from an existing generating station has not been approved by the Commission or the tariff contained therein has not been adopted by the Commission or where there is no power purchase agreement or arrangement, then the supply of electricity by such Generating Company to such Distribution Licensee after the date of notification of these Regulations shall be in accordance with a power purchase agreement approved by the Commission in accordance with Part D of these Regulations:*
>
> *Provided that an application for approval of such power purchase agreement or arrangement shall be made by the Generating Company or the Distribution Licensee to the Commission within a period of three (3) months from the date of notification of these Regulations:"*

> *"24.1 Every agreement or arrangement for long-term power procurement by a Distribution Licensee from a Generating Company or Licensee or from other source of supply entered into after the date of notification of these Regulations shall come into effect only with the prior approval of the Commission:"*

In its Order dated December 9, 2005 in Case No. 3 of 2003, in the matter of disputes between The Tata Power Company Limited and Reliance Energy Limited in the matter of Principles of Agreement dated January 31, 1998, the Commission ruled as under:

"79. The Commission would like to state that with the enactment of Electricity Act, 2003 and notification of subsequent Regulations issued by the Commission, the contractual framework between the Utilities in the State will require modifications. Some of the Contracts or Agreements executed prior to EA 2003 may become redundant and the Utilities may have to enter into new contractual arrangements in line with the provisions of EA 2003 and the Regulations issued by the Commission. The PoA was executed prior to implementation of EA 2003, and though the PoA required both the parties to enter into an agreement in a time bound manner, no agreement was entered into. The Commission is of the opinion that this PoA would not be valid under the provisions of EA 2003, however, in the absence of any agreement for supply of power, the PoA is the only agreement available for supply of power from TPC to REL at 220 kV interconnection."

In another Order dated December 9, 2005 in Case No. 4 of 2003, in the matter of additional outlets for drawal of power by REL from TPC, the Commission ruled as under:

"46. There is no specific detailed agreement between the parties for purchase of power by REL from TPC. REL has mentioned that considering the current carrying capacity of the cables used for distribution, the accepted practice between TPC and REL was that for every 10 or 15 MVA increase in load the need for a new outlet was recognized and accordingly TPC had invariably provided such outlets till 1996. However, REL has not submitted any agreement or supporting document which states that the additional new outlet has to be provided for every 10 or 15 MVA increase in load."

"51 Commission while addressing this issue in its Order on General Conditions and Special Conditions applicable to Distribution Licensee, has mentioned the following special conditions for REL with respect to Power Purchase

a. Licensee shall purchase the electricity in accordance with the provisions of EA 2003 and on the terms and conditions as approved by the Commission

b. *Licensee is authorised to purchase supply from generating companies, other licensees and/or from any other source as may be approved by the Commission*

c. *Licensee shall continue to purchase electricity from such suppliers as the Licensee has been purchasing as on the date of issue of these conditions*

*Though the Commission has addressed this issue in its Order on licences, this situation is bound to create uncertainty about availability of power to Mumbai consumers. Therefore, the Commission hereby directs both the parties to enter into an agreement within three months of this Order to ensure long-term availability of power to Mumbai consumers." (*emphasis added*)*

In the Multi-Year Tariff (MYT) Order for the erstwhile Reliance Energy Limited (REL) dated April 24, 2007 in Case No. 75 of 2006, the Commission observed as under (pp 45-46):

"REL-D in its petition has stated that relationship between TPC-G as supplier and REL-D as buyer of energy has been in existence for all these years on the basis of the provisions in their Licence(s) and various directives of the Commission. REL-D has also stated that in accordance with the Commission's directive, REL-D and TPC-G are in discussions to conclude the PPA. REL has considered the allocation of TPC-G capacity, including Unit 8 to REL-D, BEST & TPC-D at 40.44%, 37.42% and 22.14% respectively on the basis of FY 2006-07 Tariff Order.

The Commission vide its Order dated December 9, 2005 in Case 4 of 2003 directed REL-D and TPC-G to enter into long term PPA within 3 months from the date of the Order. However, the Commission has not received any Draft PPA between TPC-G and REL-D for approval till now.

On other hand, BEST in compliance to the Commission's Order resubmitted the revised PPA executed with TPC-G on December 28, 2006 for the Commission's approval. As regards the PPA between TPC-G and TPC-D, TPC has submitted the same for approval of the Commission on March 16, 2007.

In the absence of approved PPAs, for FY 2007-08, the Commission has allocated the total power available from TPC-G in proportion to Coincident

Peak Demand of the three Distribution Licensees. In case of REL-D, the peak demand of REL is met partly from REL-G Dahanu Generating Station and partly through supply of power by TPC-G and other sources. Therefore, the Commission has considered the share of average coincident peak demand of the three Distribution Licensees, i.e., TPC-D, REL-D and BEST met by TPC during FY 2005-06, for allocating the power generated by TPC-G to the distribution licensees.

*This interim arrangement for allocation of net energy available and fixed charges for TPC-G amongst the Distribution Licensees will be applicable only for the first year of the Control Period, i.e., FY 2007-08. For FY 2008-09 and FY 2009-10, the Commission will approve the allocation of net energy available and fixed charges for TPC-G based on approved Power Purchase Agreements (PPAs) between TPC-G and three Distribution Licensees."(*emphasis added*)*

In the Annual Performance Review (APR) Order for the erstwhile Reliance Energy Limited (REL) dated June 4, 2008 in Case No. 66 of 2007, the Commission observed as under:

"Considering the fact that the ATE Judgment dated May 6, 2008 on appeals filed against the Commission's Orders on approval of PPA between TPC-G and BEST and internal arrangement between TPC-G and TPC-D, has been stayed by the Hon'ble Supreme Court, the Commission has considered the allocation of power from the existing capacity and Unit-8 of TPC-G based on the approved PPA between TPC-G and BEST and the internal capacity allocation from the generation division of TPC to its own distribution division, for FY 2008-09, with effect from April 1, 2008. Accordingly, from the existing capacity of TPC-G, the Commission has considered the power availability of 500 MW for REL-D for FY 2008-09 with effect from April 1, 2008. However, considering TPC's submissions dated March 25, 2008, the Commission has not considered any power available from Unit 8 of TPC-G for REL-D."

As seen from the above extracts, the Commission has repeatedly given directions to all distribution licensees, particularly RInfra-D, to enter into long-term Power Purchase Agreements (PPA), in accordance with the Commission's Tariff Regulations. In compliance, BEST entered into a PPA

with TPC-G for 800 MW, while TPC-D entered into a Power Purchase Arrangement with TPC-G for 477 MW, to meet the respective energy requirement. However, despite repeated directives, RInfra-D did not enter into any long-term PPA to meet its energy requirement, and only recently, entered into a Power Purchase Arrangement with its own RInfra-G for 500 MW. All the above PPAs have been approved by the Commission.

However, RInfra-D's demand is much higher, at around 1400 to 1500 MW during peak hours. Apart from 500 MW from RInfra-G, TPC-G capacity of 500 MW is being given to RInfra-D in FY 2009-10 (though there is no PPA), and the remaining energy is sourced through the Bilateral Sources and Traders and Imbalance Pool at marginal rates, exceeding Rs. 7 to 8 per kWh. Part of the procurement from traders by RInfra-D is being done through a Power Management Group (PMG) formed by the three Mumbai Distribution Licensees, viz., BEST, RInfra-D and TPC-D, with the objective of getting a better price and avoiding competition between the distribution licensees, as well as procuring power on Round the Clock basis, since each licensee's peak demand timing is different.

RInfra-D has been maintaining before the Commission that it has not signed any PPA with TPC-G because TPC-G was willing to offer only 500 MW, while RInfra-D is of the view that it is entitled to a share of 762 MW of TPC-G capacity. In this regard, the Commission had issued its Order in Case No. 86 of 2006, Case No. 87 of 2006 and Case No. 30 of 2007 on November 6, 2007 in the matter of BEST's Petition for Approval of Revised Power Purchase Agreement between BEST and TPC; TPC's Petition seeking approval of Power Purchase Arrangement between TPC-G and TPC-D; and dispute raised by RInfra-D (earlier named as REL) for adjudication under the provisions of Section 86(1) (f) of the Electricity Act, 2003. The Commission, in its Order, approved the PPA between BEST and TPC and the internal capacity allocation from the generation division of TPC to its own distribution division, with effect from April 1, 2008.

Subsequently, the Appellate Tribunal for Electricity passed its Judgment in the matter of Appeal No. 41 of 2007, Appeal No. 51 of 2007, Appeal No. 143 of 2007, Appeal No. 145 of 2007, Appeal No. 159 of 2007 and Appeal No. 14 of

2008, filed by the Mumbai licensees, on May 6, 2008. The relevant extract of the said Judgment has been reproduced below:

> *"104. It is not in dispute that the claims of REL have not been considered by the Commission while approving the PPA between the TPC(G) and BEST and arrangement between TPC(G) and TPC(D). It is also not in dispute that the approval of PPA and the arrangement has affected the allocation of power to REL. The interests of REL have been adversely affected by the Commission in violation of the principle of natural justice. The Commission ought to have considered the claim of REL for allocation of power while considering the approval of PPAs between TPC (G) and BEST and arrangement between TPC(G) and TPC(D).*
>
> *105. In the circumstances, appeal No. 143 of 2007 is allowed and order dated November 06, 2007 of the MERC approving the PPA of TPC and BEST and arrangement between TPC and TPC(D) with reference to allocation of power to BEST and TPC(D) is set aside. The Commission is directed to consider the question of approval of PPA and the arrangement afresh after taking into consideration the claims of BEST, REL and TPC (D). While considering the case of the parties the Commission shall have regard to the fact that the consumers of respective areas have been bearing the Depreciation and Interest on Loan elements of the Fixed Cost of tariff and also consider all other submissions of the parties which are permissible in the law."*

Thus, the ATE set aside the Commission's Order approving the PPA between TPC-G and BEST and the Power Purchase Arrangement between TPC-G and TPC-D. However, subsequent to the ATE Judgment on the said issue, TPC and BEST filed appeals with the Hon'ble Supreme Court against the ATE Judgment. The Hon'ble Supreme Court in its Interim Judgment dated May 14, 2008 stayed the above ATE Judgment. Subsequently on May 6, 2009, the Hon'ble Supreme Court upheld the Appeals of TPC and BEST in this regard and accordingly, upheld the Order of the Commission regarding approval of the Power Purchase Agreement between TPC and BEST. The summary of the Judgment of the Hon'ble Supreme Court in this regard is as under:

1. *"Activities of a generating company are beyond the purview of the licensing provisions.*

2. *The Parliament therefore did not think it necessary to provide for any regulation or issuance of directions except that which have expressly been stated in the Act.*

3. *Section 21 occurs in the chapter of "licensing" under which the generating companies would not be governed.*

4. *As almost all the sections preceding Section 23 as also Section 24 talk about licensee and licensee alone, the word "supply" if given its statutorily defined meaning as contained in Section 2(70) of the Act would lead to an anomalous situation as by reason thereof supply of electrical energy by the generating company to the consumers directly in terms of Section 12(2) of the Act as also by the transmission companies to the consumers would also come within its purview.*

5. *In a case of this nature the principle of exclusion of the definition of Section by resorting to "unless the context otherwise requires" should be resorted to.*

6. *Section 86(1)(a) of the 2003 Act clearly shows the parameters of supply for the purpose of Regulation, viz. supply of electricity by the distribution company to the consumer.*

7. *If regulatory clause is sought to be applied in relation to allocation of power, the same would defeat the de-licensing provisions. Generating companies have the freedom to enter into contract and in particular long term contracts with a distribution company subject to the regulatory provisions contained in the 2003 Act.*

8. *PPA for a long term is essential for increasing and decreasing the capacity of generation of electricity by the generating company, which purpose by the 2003 Act must be allowed to be achieved.*

9. *Duration of the contract in regard to supply of electricity by and between TPC (G) and RInfra prior to coming into force of the contract is of no consequence, particularly when no written long term or short term contract had been entered into by and between them.*

10. *Fairness or otherwise of the supply of electricity to different distribution companies being outside the jurisdiction of the Commission, the same by itself cannot be a ground for bringing back the licence raj, which is not contemplated by the Act.*

11. *For true and correct construction of the Act, the principle of harmonious construction is required to be resorted to.*

12. *Recourse to the principle of purposive construction does not militate against the conclusion reached by us and as indicated hereinbefore in fact in terms of the said doctrine the purpose and object of the Parliament must prevail over a narrow and/or literal interpretation, which would defeat the purpose and object of the Act."*

Since the Hon'ble Supreme Court's Judgment has upheld the TPC's and BEST's appeals, the Commission's Order dated November 6, 2007, is still in force, and the issue of share of RInfra-D in TPC-G's generation capacity has attained finality.

It should be noted that if the Supreme Court decision had gone in favour of RInfra-D, then the share of BEST and TPC-D would have reduced correspondingly, and their cost of power purchase would have increased correspondingly. This would have resulted in increasing the tariff of consumers of BEST and TPC-D.

As regards the new Unit 8 of TPC-G of 250 MW, TPC has submitted that in order to meet the environmental norms, once Unit 8 has achieved Commercial Operation Date (COD) on March 31, 2009, the old Unit 4 of 150 MW has been shut down. Thus, a 150 MW Station has been replaced by a 250 MW Station. Of the new 250 MW, as per the approved PPA, 100 MW has been allocated to BEST and 50 MW has been allocated to TPC-D. TPC submitted that it has tied up the balance capacity from Unit-8 with Tata Power Trading Comany Ltd. (TPTCL) and thus, the same is not available for sale to RInfra.

The Ministry of Power, Government of India notified the Competitive Bidding Guidelines (CBG) on January 9, 2005, which has been subsequently amended from time to time, on March 30, 2006, August 18, 2006, September 27, 2007, and March 27, 2009. The Standard Bidding Documents (SBD) for Case II type competitive bidding process (location and fuel specific) was notified on August 21, 2006, and subsequently amended on September 21, 2007. The SBD for Case I type competitive bidding process (location and fuel independent) was notified on March 27, 2009. However, RInfra-D has lost the opportunity of contracting for power on long-term basis at cheaper rates that

were on offer around two years ago, given that the Tariff Policy, which mandated procurement of power through competitive bidding process, was notified in January 2006, and the CBG and SBD have also been notified quite some time ago. However, RInfra-D has not done anything in this regard till recently, and has been pursuing legal remedies to secure what it considered its rightful share of TPC-G generation capacity, but has not tied up even for the remaining capacity.

It should be noted that recently, RInfra-D has recently submitted two proposals for procurement of 350 to 700 MW power on medium term and 1000 MW long-term basis, which are being processed by the Commission. RInfra-D hopes to be able to contract for its necessary power purchase requirement for the period from FY 2010-11 and beyond through medium and long-term contracts at rates discovered through the competitive bidding process.

In this context, in the Tariff Order dated June 15, 2009 for RInfra-D, the Commission has recorded the objections of several stakeholders, who had objected to the steep increase in power purchase expenses and had suggested that power purchase expense should be considered as a 'controllable' and a portion of the power purchase expenses of RInfra-D should be disallowed, since the same had been incurred due to the negligence of RInfra-D in entering into long-term PPAs. In this regard, the Commission has observed as under:

> *"2.34 Power Purchase Expenses*
>
> *…*
>
> *Commission's Ruling*
>
> *As regards the contentions raised by many objectors over the increase in power purchase cost due to costly power purchase from external sources, and suggestions that such expenditure should be treated as controllable expenditure, and certain portion of the cost of purchase from other sources on short-term basis should be borne by the Distribution Licensee, rather than being entirely passed through to the consumers, in a manner similar to that adopted for other controllable expenses such as Operation & Maintenance (O&M) expenses, etc., the Commission is of the view that there is merit in the suggestions of the objectors, given that the Commission has given repeated*

directives to all the distribution licensees to enter into long-term contracts for their power purchase requirement, at reasonable rates, rather than relying on costly short-term sources. However, the Commission has to consider the power purchase expenses in accordance with the provisions of the MERC Tariff Regulations, which categorise the power purchase expenses under uncontrollable factors and any variation in the power purchase cost is to be allowed as pass through in the ARR. Therefore, at this stage, under the first Control Period under the MYT framework, the Commission has not considered any sharing of the increase in cost on account of purchase from other sources on short-term basis. However, the Commission has noted the point made by the objectors in this regard and would consider this suggestion of treating power purchase expenses as a controllable expense, and sharing of increase in power purchase expenses between the Distribution Licensee and the consumers under the second Control Period of the MYT framework, after making suitable modifications to the MERC Tariff Regulations…"

Thus, the Commission has clearly indicated its intent to ensure that the regulatory framework vis-à-vis power purchase activity is tightened further.

Power Trading Activity, Power Exchange and Trading Margin

The preamble to EA 2003 states inter alia that the said enactment is for taking measures conducive to development of electricity industry and for promoting competition therein. Section 66 of the EA 2003 specifically requires the Electricity Regulatory Commissions ("ERCs") to promote the development of a market (including trading) in power in a manner to be specified by notifying Regulations. Consequently, the Central Electricity Regulatory Commission and quite a few State Electricity Regulatory Commissions have issued Inter-State and Intra-State Trading Licences to various entities based on their meeting the specified criteria for issue of trading licence. The CERC has also notified the trading margin of 4 paise / kWh for power trading activity.

The National Electricity Policy inter alia lays down at paragraph 5.7.1, the need to promote market development by allowing generating stations to participate in competitive power markets in order to increase the depth of the power markets and to provide alternatives for both generators and licensees / consumers which in the long run would lead to reduction in tariff.

For achieving this, the National Electricity Policy specifically requires the Electricity Regulatory Commissions to formulate and notify Regulations on Power Exchange. Power Exchanges are meant for the development of a market in power, by providing a common platform for trading in power.

Structured clearing and settlement systems would be ensured through Power Exchanges, which are transparent and delivery based automated technology-enabled on-line electronic electricity trading platforms. Power Exchanges have Members who would either trade on their own account, or clear the same through the Clearing House as a Clearing Member or trade on behalf of its Clients such as Distribution Licensees, Generators and Open Access Users who are Grid-connected or Licensed Traders eligible to trade in electricity under the EA 2003. It should be understood that buyers and sellers are not known to each other while bidding for quantum and cost on the Power Exchange, since this is a totally faceless and computerised platform, which matches the buy and sell quantum and rates, to arrive at the most optimum solution.

As compared to power purchase contracts for long-term (ranging from ten to twenty-five years), medium-term (upto 7 years) and short-term (typically three months), the Power Exchanges provide a platform for buying and selling power on 'day ahead' basis in accordance with the 'CERC (Open Access in inter-State Transmission) Regulations, 2008' as amended from time to time, its Bye-Laws, Rules and Business Rules of the Exchange, and the Procedure for scheduling of collective transactions' issued by the Central Transmission Utility (PGCIL). In future, it is likely that week ahead, month ahead and yearly contracts would be permitted to be carried out by Power Exchanges besides day ahead contracts.

Though, the regulatory regime under the EA 2003 is to ensure that futures market in electricity functions in a transparent, objective and efficient manner and to perform the two basic functions of price discovery and risk management, due to the above regulatory measures and market systems, the trading margin regulated by the ERCs becomes redundant as they are not applicable to Power Exchanges.

There is a disjoint between the underlying assumptions behind the EA 2003, which has been drafted assuming a comfortable supply position – and that further market needs to be created to incentivise competition and hence, bring down costs – the Regulator has to create an enabling mechanism- thru trading, Power Exchange

However, ground reality is that there is a severe shortage in supply in most parts of the country, while States with surplus generation capacity are trying to maximise their profit by selling through the Power Exchange. As a consequence, buyers having purchasing power are buying the costly power, and others buyers are having to shed load in their respective licence areas. There are also some States that are over-drawing under the UI mechanism, to meet their supply shortfall. Under the present scenario, the bulk power rates have been set free to market forces, while the retail markets and rates are still regulated.

The main problem facing the power sector in the country currently is the significant supply shortages, as a consequence of which, the prices of power discovered in the exchange as well as procured bilaterally through traders has increased steeply. At the same time, the exchange has also ensured that power is sometimes available for less than 1 Re/kWh during night off-peak hours. The situation is akin to a Hobson ′s choice, i.e., there is no real choice, as the only alternative to procuring the high costly power is to undertake load shedding. The Mumbai licensees have been procuring the high cost power, rather than undertaking load shedding.

Power Purchase – Forward Path

RInfra-D has been periodically claiming that MSEDCL′s share of generation capacity of Central Generating Stations (CGS) should be allocated to Mumbai licensees. However, historically, CGS Stations′ share has been allocated to MSEDCL only, even under the erstwhile MSEB days, and neither BSES Ltd. nor RInfra-D has never had any allocation from the same. Moreover, allocation of CGS share to RInfra-D and other Mumbai licensees would amount to these consumers being subsidised by other consumers in the rest of Maharashtra served by MSEDCL, since MSEDCL′s share of CGS would have to be correspondingly reduced, and MSEDCL′s power purchase cost would increase.

The solution to the problem is either contracting for the required quantum of power through long-term contracts at rates discovered through competitive bidding or setting up generation capacity by the distribution licensee itself. In the past, neither TPC nor RInfra have set up additional generation capacity citing various reasons (except 250 MW of TPC-G), despite knowing fully well that the existing generation capacity would not be able to meet the growing demand for electricity in the city of Mumbai. In case the intended locations were not available, then the generating stations could have been set up at alternative locations.

It is for RInfra-D to make adequate and optimum long-term PPA through competitive bidding route to ensure that its consumers are not unduly burdened on account of costly power purchase from traders on short-term basis.

6. Performance of RInfra-D

The performance of any distribution licensee has to be generally measured in terms of the following parameters:

- § Distribution loss
- § Collection Efficiency
- § Reliability Indices

Distribution Loss Levels

The Commission determines the Energy Input requirement, and hence, the power purchase requirement, by grossing up the projected sales with the approved level of distribution losses. The Commission has approved a distribution loss reduction trajectory for all distribution licensees as shown in the Table below:

Table 14: Distribution Loss Trajectory in the State of Maharashtra

Distribution Licensee	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
MSEDCL	30.20%	26.20%	22.20%	18.20%
RInfra-D	12.10%	11.00%	10.75%	10.50%
TPC-D	2.93%	2.21%	2.93%	0.66%
BEST	11.90%	10.27%	10.50%	10.00%

As seen from the above Table, RInfra-D is required to reduce its distribution losses over the years, and RInfra-D has almost achieved the loss reduction target in FY 2007-08, and is likely to have achieved the loss reduction target for FY 2008-09, if the actual loss levels achieved in the first half of the year are considered. As regards the comparison with the other distribution licensees in the State, RInfra-D's licence area is closest to that of BEST in terms of nature of area covered (city area, underground network, densely populated regions, largely LT consumers). As seen from the above comparison, the distribution losses of BEST and RInfra-D are almost comparable, though there is still room for improvement, as mandated by the Commission.

Collection Efficiency

As regards collection efficiency, RInfra-D's performance is good, but can be improved further, as RInfra-D has reported average collection efficiency of

97%, based on its audited accounts. Earlier, RInfra-D's collection efficiency was around 99%. In comparison, BEST and MSEDCL have also reported average collection efficiency of 97% in FY 2007-08, whereas TPC-D has reported 99% average collection efficiency in FY 2007-08.

Reliability Indices

The Reliability Indices are indicators of the distribution licensee's performance at the ground level, as they record the frequency of interruptions at the system level (SAIFI), duration of such system interruptions (SAIDI), and duration of interruptions at the customer level (CAIDI). A comparison of the three Mumbai distribution licensees in this regard is given in the Table below:

Table 15: Reliability Indices of Mumbai Licensees

Sl	Licensee	No. of Consumers (Approx)	Annual Indices - for past 3 yrs								
			SAIFI (Number)			SAIDI (Minutes)			CAIDI (Minutes)		
			FY 07	FY 08	FY 09	FY 07	FY 08	FY 09	FY 07	FY 08	FY 09
1	TPC-D	25000	1.6	2.28	2.01	50.37	65.6	54.4	31.56	28.78	26.98
2	RInfra-D	25 lakh	7.82	7.8	5.38	360.11	358.3	238.6	46.08	45.93	44.32
3	BEST	9 lakh	4.74	4.75	4.05	197.2	190.1	149.6	41.61	40.01	36.94

Note:

SAIFI = System Average Interruption Frequency Index,

SAIDI = System Average Interruption Duration Index,

CAIDI = Customer Average Interruption Duration Index

Based on the records available and data submitted by the distribution licensees

As seen from the above Table, RInfra-D's reliability at the system level is significantly poorer than that of BEST, which is a comparable distribution licensee, as explained earlier in this Report.

7. RInfra-D is not a monopoly distribution licensee in its licenced area

RInfra-D has the distribution licence in the suburban part of Mumbai city, from Sion to Kanjurmarg in the Central suburbs, and from Mahim to Dahisar in the Western Suburbs. Similarly, BEST has the distribution licence in the island city of Mumbai, i.e. from Colaba to Sion and Mahim.

The Honourable Supreme Court of India in Civil Appeal No.2898 of 2006 with Civil Appeal Nos. 3466 and 3467 of 2006 in the matter of Tata Power Company Limited vs. Reliance Energy Limited & Ors upheld TPC's distribution licence. The relevant extracts of the Supreme Court's Judgment are as under:

71. *"In the opening paragraphs of this judgment we have indicated that the principal question which fell for the decision of MERC was whether Tata Power was entitled under the licences granted to it to effect distribution of electricity directly to consumers within BSES' (Now REL's) area of supply. While MERC answered the said question in favour of Tata Power upon holding that there was nothing in the licences granted to Tata Power to prevent it from doing so and that it could effect supply of electricity to any consumer, it also held that the terms and conditions in the said licences gave it an advantage over BSES in regard to fixation and charge of tariff which necessitated the establishment of a level playing field in order to encourage competition. Apparently, while dealing with the grievances projected by BSES, MERC lost sight of the reliefs prayed for BSES which was based on the contention that according to the terms and conditions of the licences granted to it Tata Power was not entitled to supply energy in retail to domestic customers, at least not to consumers whose demand was less than a maximum demand of 1000 KVA. Having once held on the principal issue that Tata Power was entitled to supply electrical energy to all consumers under the licences granted to it, MERC should have restrained itself from unilaterally making out a third case regarding the establishment of a level playing field when such a case had neither been made out nor any relief in that regard had been prayed for by BSES.*
72. *MERC also appears to have lost sight of the fact that the first three licences had been granted to Tata Power long before a separate licence was*

granted in favour of BSES. There is sufficient material on record to establish that Tata Power had been supplying energy to domestic consumers on retail basis within areas which subsequently came to be included in BSES' (and subsequently REL's) area of supply and no objection was raised in that regard till TPC submitted its proposed tariff for domestic retail consumers for approval in September, 1998. MERC appears to have confused the two issues while dealing with BSES' petition under section 22(2)(e) and (n) of the Electricity Regulatory Commissions Act, 1998. In fact, it appears that based on the third case made out by it, MERC restrained Tata Power from supplying electrical energy to consumers whose demand was less than 1000 KVA (maximum demand) despite holding that under the licences granted to it Tata Power was entitled to do so.

73. *In dealing with the appeals filed both by REL and Tata Power, the Appellate Tribunal for Electricity misinterpreted the provisions of the licences granted to TPC for supply and distribution of electrical energy. The arguments advanced on behalf of REL before the learned Tribunal, which were also advanced before us by Mr. Venugopal, found favour with the Tribunal which arrived at the conclusion that the terms and conditions of the licences granted to TPC did not entitle it to supply electrical energy directly to consumers whose demand was below 1000 KVA (maximum). In reaching such conclusion the Tribunal not only ignored the situation prior to 1926 when BSES was granted its licence, but also the subsequent amendments to the licences held by TPC whereby clause 5 of the 1919 and 1921 licences were altered to permit Tata Power to supply electrical energy for lighting and general purposes, other than power and including the supply of energy in bulk to other licensees for distribution by them. The Appellate Tribunal also overlooked the order passed by the Industries Energy and Labour Department of the Government of Maharashtra on 7.12.1978, whereby from 1.7.1980 Tata Power was required to transfer to the Maharashtra State Electricity Board its distribution rights under the 1907 licence and assets pertaining thereto as set out in part 2 of the Annexure to the said licence. The Tribunal also overlooked the fact that by virtue of the aforesaid arrangements, clause 6 of the 1907 licence relating to "purpose of supply" was also amended to bring it in parity with the amendments to the First Annexure to the 1919 and 1921 licences. Although, Mr. Venugopal tried to convince us that the changes effected in clause 6 of the 1907 licence and clause 5 of the remaining three licences held by TPC was*

only to compensate TPC for giving up its rights to supply in favour of the Maharashtra State Electricity Board and to help it to utilise its surplus generation of power, we are unable to accept Mr. Venugopal's contentions, since from the materials on record it stands amply proved that Tata Power had all along been supplying electrical energy directly even to retail customers whose maximum demand was less than 1000 KVA and no objection thereof was raised by either BSES or REL till the year 1998 when Tata Power submitted its proposal for domestic tariff for approval to the Board. It was only thereafter that REL raised its objection in the form of its petition to MERC under Section 22(2)(e) and (n) of the ERC Act 1998. The list of consumers to whom retail supply was being effected by TPC in the island city of Bombay and its suburbs, discloses that at least 51 such consumers were within REL's area of supply. In fact, Mr. Venugopal by way of an alternative submission also indicated that Tata Power under the terms and conditions of the licences held by it, could supply energy to any consumer whose demand was above 1000 KVA within the area of supply covered by the said licences.

74. *We are also unable to accept Mr. Venugopal's interpretation of clause 6 of the 1907 licences and clause 5 of the other licences to the effect that Sub-clause (II) thereof would be rendered tautologous, if the same was read independently of Sub-clause (I). His submission that if Sub-clause (II) is to be read in a manner which allowed Tata Power to supply energy for general purposes to all consumers, no restrictions would have been placed on the supply of power to factories and the Railways, appears to us to be without substance.*

Clause 5 of the 1919, 1921 and 1953 Licences held by Tata Power indicates the purpose of supply and is divided into two parts – (i) for power and (ii) for lighting and general purposes, other than power. Simply stated, Sub-clause (I) deals with supply to licensees for their own purposes and in bulk. The restriction indicated by Mr. Venugopal is in respect of such bulk supply where the consumer required less than 5,00,000 units per annum which was also stipulated to be the bona fide average computed annual consumption of a Factory or Railway. On the other hand, Sub-clause (II) provides for supply of electricity for lighting and general purposes, other than power, including the supply of energy in bulk to other licensees for distribution by them. Sub-clause (II) is followed by an Explanation to both Sub-clause (I) and Sub-clause (II) of Clause 5. It has been clarified that the energy supply to any consumer for power, that is under Sub-clause (I), could be used by such consumer for

lighting his premises to a maximum amount of 20% of the total energy supplied to such consumer, and it has also been stipulated that Tata Power would not supply energy for lighting purposes referred to in Sub-clause (II) except by agreement with Bombay Electric Supply and Tramways Company Limited.

75. *Regarding Mr. Venugopal's other submission relating to Section 42 of the 2003 Act, we are unable to appreciate how the same is relevant for interpreting the provisions of the licences held by TPC. It is no doubt true that Section 42 empowers the State Commission to introduce a system of open access within one year of the appointed date fixed by it and in specifying the extent of open access in successive phases and in determining the charges for wheeling having due regard to the relevant factors, but the introduction of the very concept of wheeling is against Mr. Venugopal's submission that not having a distribution line in place, disentitles T.P.C. to supply electricity in retail directly to consumers even if their maximum demand was below 1000 KVA. The concept of wheeling has been introduced in the 2003 Act to enable distribution licensees who are yet to instal their distribution line to supply electricity directly to retail consumers, subject to payment of surcharge in addition to the charges for wheeling as the State Commission may determine. We, therefore, see no substance in the said submissions advanced by Mr. Venugopal.*

76. *Mr. Venugopal's last submission relating to market domination has to be considered by the appropriate Commission separately in terms of Section 60 of the 2003 Act and cannot be pressed into service for interpreting the terms and conditions of the licences held by TPC.*

    On the other hand, in our view, the provisions of both the 1903 and 1910 Electricity Acts encourage competition in the electricity trade and the same is also incorporated in the licences issued in favour of the distribution licensees, which also include licencees generating power for supply. The element of competition has been included in the Preamble to the 2003 Act and permeates the same in its various provisions. As submitted by Mr. Chagla, the Act is meant to be consumer-friendly and one of the objectives it sets out to achieve is to give the consumer an option to choose the distribution licensee from whom it wishes to receive supply of electrical energy. The intervention of MIDC, Marol Industries Association and the appeals filed by it, has obviously been made in that context.

77. *Having regard to the above and the terms and conditions of the licences held by Tata Power, we have no hesitation in holding that the Appellate Tribunal for Electricity erred in coming to a finding that under its licences Tata Power was entitled to supply energy only in bulk and not for general purposes and in retail to all consumers, irrespective of their demand, except for those consumers indicated in Sub-clause (I) of clause 5 of the several licenses held by Tata Power.*
78. *Having earlier held that MERC had overstepped its jurisdiction in making out a third case which had not been made out by BSES and had on the basis thereof issued orders which had not even been prayed for by BSES, we quash the orders passed both by MERC and the Appellate Tribunal for Electricity and allow all these three appeals upon holding that under the terms and conditions of the licences held by it, Tata Power Company Ltd. is entitled to effect supply of electrical energy in retail directly to consumers, whose maximum demand is less than 1000 KVA, apart from its entitlement to supply energy to other licensees for their own purposes and in bulk, within its area of supply as stipulated in its licences and also subject to the constraints indicated in relation to Sub-Clause (I) of Clause 5 in relation to factories and the Railways.*
79. *The parties shall bear their own costs."* (emphasis added)

On August 20, 2008, the Commission notified the MERC (Specific Conditions of Distribution Licence applicable to The Tata Power Company Limited) Regulations, 2008, effectively confirming TPC-D as a distribution licensee in the entire city of Mumbai covering the licence areas of both BEST and RInfra-D. TPC-D's distribution licence is valid upto August 15, 2014. This is possibly one of the first instances of a parallel distribution licensee being in existence anywhere in the country. Thus, RInfra-D does not have a monopoly distribution licence in its licence area.

Since TPC-D is a parallel licensee in RInfra-D's licence area, all consumers of RInfra-D have the option to move from RInfra-D to TPC-D, by making an application to TPC-D for the same, under Section 43 of the EA 2003. In this regard, the Commission has made certain observations in the Tariff Order

for TPC-D dated June 15, 2009 in Case No. 113 of 2008, and given certain directions to TPC-D, as under:

a. TPC-D should ensure wide publicity periodically to communicate to all categories of consumers in its entire licence area that they can approach TPC-D for availing supply, detailing the procedure and contact addresses, ward-wise, etc., for going about the process of submitting applications, etc.
b. TPC-D should not discriminate between various consumer categories while providing connections to new consumers, and ensure that the Universal Service Obligations are met.
c. TPC-D should submit quarterly status report of category-wise applications received for new connections and new connections released by TPC-D, to the Commission.
d. TPC-D will have to meet its licence obligations in its entire licence area, and cannot pick and choose the Wards wherein it will supply electricity.
e. Incurring heavy capital expenditure for the network roll-out is not the only option available to TPC-D in its efforts to supply electricity to different consumers in its licence area, and the provisions of the EA 2003 relating to Open Access and the provisions of the MERC (General Conditions of Distribution Licence) Regulations, 2006 relating to use of the distribution network of another distribution licensee, need to be explored by TPC-D, so that the cost is optimised.

The MERC (General Conditions of Distribution Licence) Regulations, 2006, specify as under:

> *"8.3.5 The Distribution Licensee shall provide "Non discriminatory Open Access" to the Distribution System (for wheeling of electricity) for use by any Licensee, Generating Companies including Captive Generating Plants or Consumers in accordance with the Regulations made by the Commission for the purpose.*
>
> *8.3.6 The Distribution Licensee shall provide to other licensees the intervening distribution facilities to the extent of surplus capacity available, in his Distribution System in accordance with the Regulations made by the Commission for the purpose or as directed by*

the Commission and in the event of any dispute as to the availability of the surplus capacity the same shall be determined by the Commission. The charges, terms and conditions for the use of the intervening facilities may be mutually agreed between the Licensees subject to any order made by the Commission for the purpose."

All consumers in RInfra-D's licence area, irrespective of load and consumption, are entitled to apply for supply from TPC-D.

The Commission is of the view that there can be a significant saving to be achieved by shifting from RInfra-D to TPC-D, even for residential category consumers, where the difference in tariff is not so high. For other consumer categories, given the higher difference in tariffs, the scope for savings by shifting from RInfra-D to TPC-D will be even higher.

At the same time, it should be appreciated that such a system of parallel licensee and supply being provided by the parallel licensee by utilizing the existing licensee's distribution network, though permitted under the EA 2003 and the Commission's Regulations, is being attempted for the first time anywhere in the country. Consequently, there are bound to be some initial hurdles and difficulties in implementing this concept. However, these difficulties will have to be overcome through a consultative process. The Commission will facilitate bringing in competition in this area.

Today, the problem is arising because the wire business and supply business are operating in an integrated manner, with the same entity having the distribution and supply licence. It is envisaged under the EA 2003 that the wire business, both at the transmission and distribution level, should be segregated and regulated, whereas the supply business could be de-regulated, once effective competition is introduced. Eventually, in order to have full scale retail competition, the Wires Business will have to be separated from the Supply Business, and the operation of the Wire Business de-linked from the operation of the Supply Business. Once this is done, one can have multiple supply licensees, who can procure the required quantum of power and supply to consumers using the common wire network. Such kind of competition will enable the tariffs to go down, as

well as enable further improvement in the quality of service and supply, since the supply licensees will have to create differentiation and brand identity by ensuring quality supply.

8. Audit of RInfra-D's Operations

The Commission undertakes a detailed scrutiny of the APR Petitions filed by the Utilities. The Commission's ARR and Tariff Order for all Utilities is based on the audited accounts. However, both RInfra and TPC operate their business in an integrated manner, i.e., RInfra's and TPC's audited accounts do not give the break-up between the expenses and revenue of their Generation, Transmission and Distribution business in Mumbai, as well as other business operations in Kerala, Andhra Pradesh, Karnataka, etc. As a result, there are no audited accounts for each individual business regulated by the Commission. Even the segment-wise Accounts required to be prepared in accordance with the Companies Act, 1956, do not provide much insight into the business operations of these integrated entities, since the definition of the Segment is left to the discretion of the Management. As a result, the Power Business has been classified as one segment, without any break-up either region-wise or individual business wise.

However, the MERC (Terms and Conditions of Tariff) Regulations, 2005, require the distribution licensee to submit certain information. The Commission had asked RInfra-D (as well as TPC-D) to submit the same information under Regulation 2.1 (a)(c) and Regulation 55 of MERC Tariff Regulations, and Regulation 8.4.2 of MERC (General Conditions of Distribution Licence) Regulations, 2006, before the Technical Validation Session (TVS) on RInfra-D's APR Petition for FY 2008-09. In response, RInfra-D submitted that presently RInfra-D does not maintain separate accounting statements for the licensed distribution business, as the same is not required under Part-1, Schedule-VI of the Companies Act, 1956, and such Accounting Statements are prepared for the entire Company and not for one particular business of that Company. TPC-D has also not submitted the desired information, stating that the accounting data is not being maintained in this manner.

The Commission has therefore, obtained the Allocation Statements and Reconciliation Statements towards reconciliation of expenses and revenue submitted in the APR Petitions with the expenses and revenue allocated to its various businesses as per the Audited Accounts, duly certified by their

Auditors. Further, the Audited Accounts of the Petitioner as well as the Allocation Statements for allocating the expenses and revenue to its various businesses are submitted by the Petitioner on affidavit and are duly certified by auditor. It should be appreciated that this is still the transitional period as far as business-wise accounting is concerned, since till the year 2006, the Commission was issuing a combined Order for the integrated Utility. Only since the MYT Order issued in April 2007, are separate Orders being issued for the Generation, Transmission and Distribution business. In order to capture more specific information at the individual business-level, the Commission has recently notified the MERC (Uniform Recording, Maintenance and Reporting of Information) Regulations, 2009 on April 20, 2009 which is designed to show more clear segment-wise information for each of the Businesses regulated by the Commission.

Further, as elaborated in Section 5 of this Report, despite repeated directions from the Commission to enter into long-term PPAs for their entire supply requirement, RInfra-D has still not entered into any PPA for bulk of its energy requirement, resulting in a situation where RInfra-D is procuring this energy requirement through short-term sources at very high rates, in turn resulting in increasing the tariffs of its consumers for no fault of theirs. It is the duty of the distribution licensee to contract for the required quantum of power at reasonable rates in accordance with the EA 2003 and the Commission's Tariff Regulations.

The Commission has reasons to believe that there is a need to further order an investigation into the books of accounts and power purchase transactions, accuracy of the electronic meters installed by RInfra-D, and the steep increase in capital expenditure being undertaken by RInfra-D, as elaborated in Sections 3 and 4 of this Report.

In this context, the Commission has powers under Section 128 of the EA 2003 to conduct an investigation into the functioning of the licensee and Generating Company. Section 128 of the EA 2003 provides as under:

Investigation of certain matters

"128. (1) The Appropriate Commission may, on being satisfied that a licensee has failed to comply with any of the conditions of licence or a generating company or a licensee has failed to comply with any of the provisions of this Act or rules or regulations made thereunder, at any time, by order in writing, direct any person (hereafter in this section referred to as " Investigating Authority") specified in the order to investigate the affairs of any generating company or licensee and to report to that Commission on any investigation made by such Investigating Authority:

Provided that the Investigating Authority may, wherever necessary, employ any auditor or any other person for the purpose of assisting him in any investigation under this section.

(2) Notwithstanding anything to the contrary contained in section 235 of the Companies Act, 1956, the Investigating Authority may, at any time, and shall, on being directed so to do by the Appropriate Commission, cause an inspection to be made, by one or more of his officers, of any licensee or generating company and his books of account; and the Investigating Authority shall supply to the licensee or generating company, as the case may be, a copy of his report on such inspection.

(3) It shall be the duty of every manager, managing director or other officer of the licensee or generating company, as the case may be, to produce before the Investigating Authority directed to make the investigation under subsection (1), or inspection under sub-section (2), all such books of account, registers and other documents in his custody or power and to furnish him with any statement and information relating to the affairs of the licensee or generating company, as the case may be, as the said Investigating Authority may require of him within such time as the said Investigating Authority may specify.

(4) Any Investigating Authority, directed to make an investigation under sub-section (1), or inspection under sub-section (2), may examine on oath any manager, managing director or other officer of the licensee or generating company, as the case may be, in relation to his business and may administer oaths accordingly.

(5) The Investigating Authority, shall, if it has been directed by the Appropriate Commission to cause an inspection to be made, and may, in any other case, report to the Appropriate Commission on any inspection made under this section.

(6) On receipt of any report under sub-section (1) or sub-section (5), the Appropriate Commission may, after giving such opportunity to the licensee or generating company, as the case may be, to make a representation in connection with the report as in the opinion of the Appropriate Commission, seems reasonable, by order in writing –

(a) require the licensee or the generating company to take such action in respect of any matter arising out of the report as the Appropriate Commission may think fit; or

(b) cancel the licence; or

(c) direct the generating company to cease to carry on the business of generation of electricity."

The completely uncontrollable nature of power purchase costs of RInfra-D making the retail tariffs unsustainable for several consumer categories is a failure on the part of the licensee to protect the interest of its consumers. In this regard, the Commission is satisfied that RInfra (D) has been noticeably operating in a manner that fails to meet with the objectives stated in the preamble to the EA 2003, as stated below:-

"An Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto."
[Emphasis added in bold]

In view of the foregoing and also taking into account the directions of the GOM vide its letter ref: REL2009/CR 227/NRG-1, dated June 25, 2009, the Commission is prima-facie convinced of the need to appoint an "Investigating Authority" in accordance with Section 128 of the EA 2003 to investigate RInfra-D. The scope of such investigation will need to inter-alia be power Purchase expenses and transactions undertaken by RInfra-D, including traded, which will require investigation of related records including books of accounts, and capital expenditure schemes vis-à-vis benefits received. As regards Metering, the National Electricity Policy stipulates that *"The SERCs*

should also put in place independent third-party meter testing arrangements". The Commission will facilitate putting in place the necessary meter-testing arrangements as well as undertake other measures to ensure that the electronic meters are well-calibrated and the consumption is recorded correctly and unjustified bills are not charged to the consumers.

It is reasonably estimated that the process of the abovesaid investigation and audit and its completion will require dedicated resources and time. Based on the findings of the abovesaid detailed investigation, the Commission will take appropriate action. Such an investigation will be undertaken in accordance with the due process of law.

Accordingly, as directed and called upon by the GOM and considering the special circumstances, and the direction to the Commission to undertake a detailed investigation on metering, power purchase expenses and transactions undertaken by RInfra-D, as well as capital expenditure schemes, the Commission has decided that the tariff increase as approved by the Commission in the Order for RInfra-D for FY 2009-10 for the following consumer categories and sub-categories needs to be stayed till the Commission issues further orders:

- LT I Residential
- LT II Commercial (A) and (B)
- LT III Industry below 20 kW
- LT V Advertisement & Hoardings
- LT VII Temporary Others
- HT I Industry

For these categories, the tariff as determined in the previous Tariff Order, i.e., Order dated June 4, 2008 in Case No. 66 of 2007 will be applicable. The tariff for the other consumer categories and sub-categories, where the tariffs have been reduced vis-à-vis the tariff prevalent in the previous year (after including FAC and Additional FAC), will continue to be charged as determined in the Order dated June 15, 2009 in Case No. 121 of 2009.

The Commission will issue a separate Order in this regard to effect the above stay.

9. Advice to Government of Maharashtra

The advice to the Government of Maharashtra under Section 86(2) of the EA 2003 is as under:

1. Given the gap between demand and supply of electricity and the high cost of traded power, which is purchased to meet the gap, there is an urgent need to inculcate the habit of energy conservation and efficient use of electricity, so that the demand for electricity is reduced. The Commission has taken several steps in this regard and had even run a joint publicity campaign with the Mumbai distribution licensees, viz., RInfra-D, BEST and TPC-D, to spread the message of energy conservation. However, the Commission is of the view that much more needs to be done in this regard, and the State Government is best placed to propagate the message of energy conservation in co-ordination with the distribution licensees, through appropriate media.

2. RInfra-D may appoint Distribution Franchisees through competitive bidding process in suitable areas within its Distribution licence area, with a view to reduce its O&M expenses and reduce distribution losses in areas where commercial losses are higher. RInfra may specify stiff targets for loss reduction in such cases, which will result in additional revenue to RInfra-D, and enable RInfra-D to reduce the tariff for its consumers.

3. The Commission has observed that a significant portion of the capital expenditure undertaken by the distribution licensees, including RInfra-D, comprises 'road reinstatement' (RRI) charges of around Rs. 6000 per running metre levied by Brihan-Mumbai Municipal Corporation (BMC) on the Mumbai licensees. These charges contribute around 35% of capital cost on an average, with the contribution being as high as 66% in some cases, as shown in the Table below:

Table 16: Contribution of Road Reinstatement Charges in Total Capital Cost

Sr. No.	Name of the Scheme	Estimated Cost (E.C.)	APPROX RRI COST *	% RRI Cost of E.C.	Remark
		Rs. (Cr)	Rs. (Cr)		
	FY – 06				
1	11KV Mains & Distribution Transformer	63.43	16.23	25.58	#
	FY – 07				
2	11KV Mains & Distribution Transformers	57.95	14.70	25.37	#
3	33kV feeder reorientation from GIS Chembur	47.00	19.86	42.26	
4	L.T.Mains	15.46	10.23	66.17	#
5	Services	40.15	15.62	38.90	#
	MYT (3 year Control Period)				
6	Services	112.04	48.41	43.21	#
7	L.T.Mains	124.96	82.23	65.81	
8	11kV Network Strengthening (MYT Period)	394.19	86.68	21.99	
	Total	855.18	293.96	34.37	
	* approximate RRI cost contains installation, Jointing and Auxiliary material for cables as Mentioned in DPR				
	# Only RRI Charges as mentioned in DPR				
	NM = Not Mentioned in DPR				

The Rate of Road Reinstatement Charges per Metre for Mumbai Area is shown as below:

Table 17: Re-instatement Charges (Rs per running metre)

Sr. No.	Existing Surface	Finished to	Old Charges	Revision-1 26.07.2007	Revision-2 per 02.06.2008
1	Mastic Asphalt	Mastic Asphalt	3915.00	5525.00	6077.50
2	Asphalt (60/70 grade)	Asphalt (60/70 grade)	2263.00	4139.00	4552.90
3	Asphalt (30/40 grade)	Asphalt (30/40 grade)	-	4210.00	4631.00
4	Paver Block (80 mm)	Paver Block (80 mm)	2217.00	3364.00	3700.40
5	Paver Block (100 mm)	Paver Block (100 mm)		3430.00	3773.00
	Average Rate		2798.00	4134.00	4546.96

(Source: Rinfra-D Tariff petition for FY2009-10)

It may be observed that average reinstatement charges have substantially gone up from Rs 2798 per Running Metre to Rs 4547 per Running Metre (i.e. by 63%), and from Rs 3915 per running metre to Rs. 6077 per running metre, for mastic asphalt surfaces. Other distribution licensees, viz., BEST, TPC-D and MSEDCL are also paying similar charges to BMC within Municipal Corporation limits.

The major changes carried out by MCGM in the policy of charging road reinstatement charges are:

- The roller width is considered (i.e. 2.1 Meter) irrespective of the actual trench width.
- Charges are based on running length in meter instead of area basis.
- Rate slab changed from 50 metre to 30 metre.
- Multiplying Factor is applied on basic rates for the concrete roads and new roads depending upon the number of years.

These RRI charges may be reduced, which will help to reduce the capital expenditure and hence, the related heads of interest, depreciation and Return on Equity. Such a step will enable corresponding reduction in the tariffs payable by the consumers.

The issue of reduction of RRI charges will need to be taken up by the Urban Development Department of the State Government with the BMC. RRI charges should not become a source of revenue for BMC, but should reflect only the actual cost of reinstatement.

4. As elaborated in Section 3 of this Report, Electricity Duty (ED) comprises a significant portion of the bill of the consumers, ranging from 6% of the energy charges for industrial consumers to 12% for residential consumers and 13% for commercial consumers, while Tax on Sale of Electricity (TOSE) comprises another 5% to 10% of the energy charges, depending on the tariff applicable for the consumer category. Thus, put together, these duties and taxes comprise around 10 % to 20% of the energy bill of the residential category and industrial category consumers. If the GoM desires to reduce the impact of the burden of electricity tariffs on the consumers, the GoM may decide to reduce/waive the ED and TOSE for

specified consumer categories, as considered appropriate by the GoM. This would ensure that there is a reduction in the bills of the consumers. Further, as elaborated earlier,

a. GOM may exempt the sale of energy by any class of power utility or to consumers from the payment of the whole or any part of the tax payable under TOSE.
b. Refund whole or part of the TOSE to the power utility.
c. GOM can direct that the funds in the State Electricity Fund, be utilised for:-
    - § development and improvement of power supply
    - § giving subsidies or loans or ways and means of advances to power utilities.

It should be noted that since the Electricity Duty is levied on ad-valorem basis, the revenue collected by the GoM will increase if the energy charges are increased. Also, due to the normal increase in sales every year, the absolute amount of ED and TOSE collected by the GoM increases every year. Thus, the GoM will be able to collect the same amount of revenue from ED and TOSE in the current year, even if the rates of ED and TOSE are reduced, on account of the increase in units sold and increase in tariffs.

5. Section 65 of the EA 2003, reproduced earlier in this Report, provides that the State Government may subsidise selected consumer categories, in case it is of the opinion that the tariff determined for the specific consumer category/ies should be reduced. The State Government is already providing subsidy under Section 65 of the EA 2003 to the Maharashtra State Electricity Distribution Company Limited (MSEDCL) to compensate for the revenue loss on account of its decision to subsidise tariffs for agricultural and power loom category. The total subsidy given by GoM to MSEDCL has ranged around Rs. 1800 crore over the past two years.

6. One of the ways to reduce tariffs is to introduce competition between the suppliers. The EA 2003 has provided a thrust for introducing competition at the generation level, by de-licensing generation activity. The EA 2003

has also provided for introducing competition at the retail supply level through the Open Access route and the parallel licensee route. While Open Access at the retail consumer level is yet to occur in a big way due to the high cost of power purchase, which makes the transaction uneconomical, in Mumbai region, TPC-D holds the parallel licence in the licence areas of RInfra-D and BEST. The Commission has already determined the wheeling charges and wheeling losses separately for RInfra-D licence area and TPC-D licence area, for both HT and LT networks.

Since TPC-D is the parallel licensee in RInfra-D's licence area, all consumers of RInfra-D have the option to move from RInfra-D to TPC-D, by making an application to TPC-D for the same. In this regard, the Commission has made certain observations in the Tariff Order for TPC-D dated June 15, 2009 in Case No. 113 of 2008, and given certain directions to TPC-D, as under:

(a) TPC-D should ensure wide publicity periodically to communicate to all categories of consumers in its entire licence area that they can approach TPC-D for availing supply, detailing the procedure and contact addresses, ward-wise, etc., for going about the process of submitting applications, etc.

(b) TPC-D should not discriminate between various consumer categories while providing connections to new consumers, and ensure that the Universal Service Obligations are met.

(c) TPC-D should submit quarterly status report of category-wise applications received for new connections and new connections released by TPC-D, to the Commission.

(d) TPC-D will have to meet its licence obligations in its entire licence area, and cannot pick and choose the Wards wherein it will supply electricity.

(e) Incurring heavy capital expenditure for the network roll-out is not the only option available to TPC-D in its efforts to supply electricity to different consumers in its licence area, and the provisions of the EA 2003 relating to Open Access and the provisions of the MERC (General Conditions of Distribution Licence) Regulations, 2006 relating to use of the distribution network of another distribution

licensee, need to be explored by TPC-D, so that the cost is optimised.

All consumers in RInfra-D's licence area, irrespective of load and consumption, are entitled to apply for supply from TPC-D.

There is expected to be a significant saving to be achieved by shifting from RInfra-D to TPC-D, even for residential category consumers, where the difference in tariff is not so high. For other consumer categories, given the higher difference in tariffs, the scope for savings by shifting from RInfra-D to TPC-D will be even higher.

7. The Commission approves the expenses of RInfra-D in accordance with the EA 2003 and MERC (Terms and Conditions of Tariff) Regulations, 2005 at the beginning of the year. After the end of the financial year, RInfra-D approaches the Commission for 'truing up' its expenses, both Operation and Maintenance expenses as well as capital expenditure related expenses, and the actual expenses are invariably higher than the approved levels.

   In order to ensure that the burden on the consumers is limited to reasonable levels, RInfra-D should manage its operations within the Commission approved O&M expenses and capex expenses.

8. In the past, RInfra-D has voluntarily taken measures to reduce the burden on consumers, as elaborated below:
   (a) In its latest APR Petition in Case No. 121 of 2008, RInfra-D proposed to charge lower normative interest rate at 9% on normative long-term loan, as a support to the consumer and goodwill gesture.
   (b) In the context of the rebates given by RInfra-D (erstwhile BSES) to selected consumer categories, the Commission had earlier disallowed recovery of the revenue loss of Rs. 350 crore through tariffs. However, subsequent to the Judgment of the ATE in this regard, which held that RInfra-D was entitled to recover this amount through tariffs, the Commission allowed recovery of Rs. 350 crore over a period of six months through levy of Additional

Energy Charges of 97 paise/kWh, in accordance with ATE Order. The relevant extract of the Commission's Order in Case No. 25 of 2005 and 53 of 2005 is reproduced below:

"7.16 Impact of ATE Order on Rebates given by REL in previous years

In its Order dated 20th February 2004 in Case No. 1 of 2003, in the matter of rebates given by REL to selective consumers, the Commission had ruled that the rebates were illegal and a departure from the pre-existing tariff of BSES without the Commission's approval. The Commission ruled that "the burden of past rebates and those, if any, extending until fresh determination of tariff by the Commission will have to be borne entirely by BSES Limited."

Accordingly, in the previous Tariff Order for REL issued on July 1, 2004, the Commission stated,

> *"BSES has been offering rebates to selected consumer categories and consumers. TPC had filed a Petition before the Commission claiming that these rebates were illegal. The Commission issued its Order on February 20, 2004 in Case No. 1 of 2003. The Commission held that the loss in revenue due to these rebates would have to be borne by BSES as they had not been approved by the Commission. BSES has submitted details of the revenue lost due to the rebates offered to the consumers. Accordingly, the Commission has restated the revenue billed by BSES to its consumers, to account for the loss in revenue due to the selective rebates offered by BSES."*

Subsequently, REL filed an appeal before the Honourable Appellate Tribunal for Electricity (ATE) on the Commission's Order dated 20th February 2004 in Case No. 1 of 2003. The ATE has given its Order in this matter on May 22, 2006, which was forwarded by REL to the Commission, with the remark that as the ATE's Order has been issued after submission of the ARR and Tariff Petition by REL, the effect of the ATE Order could not have been considered in the ARR for FY 2006-07. As the ATE's Order impacts the revenue requirement of

REL, the Commission has incorporated the impact of the ATE's ruling on this matter.

In its ruling dated May 22, 2006, ATE inter-alia, identified the following points for its consideration:

i) *"Whether grant of rebate by REL to its consumers is illegal and violative of statutory provisions of The Central Acts 54 of 1948, 9 of 1910 and 14 of 1998 and Tariff Notification?*
ii) *Whether the directions issued by MERC in para 51 of its order is sustainable or liable to be set aside?*
iii) *Whether the order of MERC in Case No. 1 of 2003 dated 20.02.2004 is liable to be interfered?"*

The ATE has ruled that:

> *"In the light of the above pronouncement and discussions, we hold that the view taken by the Commission that no rebate is permissible by a DISCOM and that the total amount of rebate given has to be borne by the DISCOM does not reflect the correct legal position and hence the order challenged is set aside. Accordingly there will be a direction to the Regulatory Commission to follow the dicta laid by Hon'ble Supreme Court and allow the amount as reserve for the years in question and in terms of Schedule VI of Electricity (Supply) Act 1948. In the circumstances the appeal is allowed and there will be a direction in the above terms."*

Further, while deciding on the item 3 as mentioned above, ATE in Clause 29 of the Order has stated

> *"As regard the third point, while following the judgment of Supreme Court in Workmen Vs Management of Sijua (Jherriah) Electric Supply Co. Ltd. reported in (1974) 3 SCC 473 the directions issued by MERC is set aside as legally not sustainable and not called for".*

TPC has filed an appeal before the Hon'ble Supreme Court on the ATE Order. However, the Hon'ble Supreme Court has neither given any ruling on the matter, nor granted a stay with status-quo ante on the ATE Order. Hence, the Commission has to implement the prevailing ATE Order in the matter of rebates given by REL to selected consumers. The total amount involved is Rs. 350 crore, which has to be collected from REL's consumers through the tariff mechanism, which amounts to an average tariff increase of 24% on this count alone. In order to comply with the Honourable ATE's Order, the Commission has decided that the revenue gap of Rs. 350 crore on this account alone will be recovered through the levy of an 'additional energy charge' of Rs. 0.97 per kWh, which will be payable by all consumer categories (except BPL category), for a period of six months only, i.e., for the period October 1, 2006 to March 31, 2007."

In the above instance, though the Commission had permitted RInfra-D to recover certain charges through tariffs, RInfra-D voluntarily has not levied the Additional Energy Charges.

Hence, as a goodwill gesture, RInfra-D may voluntarily waive carrying cost on past arrears (unmet revenue gap of past years), and may consider withdrawing the Appeal pending before ATE seeking allowance of higher interest rate for computing carrying cost. However, in such a case, the carrying cost should not be sought to be recovered through truing up or in the ARR, as this will only amount to deferment of the cost.

9. Due to competitive pressures, RInfra-D may choose to charge a lower tariff from its consumers vis-à-vis the tariff determined by the Commission, as stipulated under the Tariff Policy. However, in such a situation, RInfra-D will not have any claim on additional revenue requirement on this account, as stipulated in the Tariff Policy, as reproduced below:

Clause 8.1 (4) of the Tariff Policy stipulates as under: *"Licensees may have the flexibility of charging lower tariffs than approved by the State Commission if*

competitive conditions require so without having a claim on additional revenue requirement on this account in accordance with Section 62 of the Act."

10. The Commission passed an Order dated June 15, 2009 in respect of ARR and Tariffs of RInfra-D. Subsequently, the GOM vide its Letter dated 25.6.2009 has sought certain advise from the Commission under Section 86(2) of the EA 2003 and also issued certain directions under Section 108. The underlying concern as pointed out in the aforesaid letter is the rise in electricity tariffs in the area of supply of RInfra-D. Though, the Commission has, in this Report, carried out a status check on various aspects of RInfra-D for submission to the GOM, it is pertinent to point out the legal position that this exercise cannot under law be taken directly or indirectly to review the Order dated June 15, 2009 that has already been passed. The scope of review under law is limited and is contained in the MERC (Conduct of Business) Regulations, 2004 besides various Judgments passed by the Apex Court from time to time. Accordingly, the Commission is advised to state that this is a post tariff fixation exercise under the provisions of Section 86(2) read with Section 108 of the EA 2003 as referred to by the GOM in the aforesaid letter. The said statutory provisions cannot under law be the basis of carrying out any review of the aforesaid Order dated June 15, 2009. However, the Commission does feel that that this post tariff fixation exercise will throw light on several aspects in the area of supply of RInfra-D, which would be useful to the Commission to take a view as to the future course of action including but not limited to ordering investigation into the affairs of RInfra-D.

    Having said that, the Orders issued by the Commission are open to Appeal before the Appellate Tribunal for Electricity (ATE) and thereafter before the Supreme Court of India. Concerned stakeholders, including the GoM, may appeal against the Tariff Orders, before the ATE, which is the appropriate forum for the purpose.

11. It has been observed that the Licensees, by virtue of having greater and easier access to funds, are able to file Appeals and fight their cases before higher Courts with the help of well known lawyers, and are largely successful in their Appeals. Moreover, these Licensees are also able to

recover the legal expenses through the ARR and tariffs. It may not be appropriate for the Commission, being a quasi-judicial body, to appeal against the Judgments of the ATE before the Supreme Court. On the other hand, the Consumer Organisations/Representatives, who should be fighting these cases in higher Courts are hampered by the lack of funds and are hence, unable to have access to the best lawyers. This is not a level-playing field. It is suggested that the Government, through the Consumer Affairs Ministry or equivalent Department in the State Government, should empower the Consumer Organisations in this regard, and thus, ensure that consumer interest is duly protected in matters of vital interest to the general public, rather than have instances of cases being lost merely due to lack of any or adequate representation by the affected stakeholders.