

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 143 of 2008

In the matter of
Petition filed by Maharashtra State Electricity Distribution Company Limited for
implementing Zero Load Shedding model for the area covered under Pen Circle and for
approval of Reliability charges to be recovered thereof.

Shri V. P. Raja, Chairman
Shri A. Velayutham, Member
Shri S. B. Kulkarni, Member

ORDER

Dated: June 15, 2009

The Maharashtra State Electricity Distribution Company Limited (MSEDCL) submitted a Petition under affidavit before the Commission on February 24, 2008, under Section 14 read with Section 2(27) of the Electricity Act, 2003 (EA 2003), for implementing the Zero Load Shedding (ZLS) model for the area covered under Pen Circle and for approval of Reliability Charges to be recovered thereof. MSEDCL submitted that the Petition was being filed in accordance with the Commission's directions issued under its Order dated March 13, 2008 in the matter of MSEDCL's Petition for recovery of additional cost as a reliability charge for mitigating load shedding in Pune city (Case Nos. 51 of 2007 and 90 of 2007), reproduced as under:

“33.

(ii) Section 2(27) read with the seventh proviso to Section 14 of the EA 2003 empowers MSEDCL to authorise any person to distribute electricity on its behalf in a particular area within its area of supply. The proposal that a franchisee will identify and procure power from diverse sources is not prohibited under the EA 2003 as it is in the first place the distribution licensee's own function to identify and procure



power to supply to its consumers...All aspects of electricity purchase and procurement process shall be laid down clearly by MSEDCL so that the Commission is able to regulate the same under the said Section 86(1)(b)... In view thereof, it is the distribution licensee who shall be responsible for justifying the need for power, its price, its contractual arrangement under power purchase agreements, for scrutiny and approval of the Commission under Part D Regulation 21 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 read with S. 86(1)(b).

(iii)The Commission is of the view that if distribution licensees suitably appoint distributed generation based franchisees for electricity distribution; this could result in better service to consumers who are prepared to pay cost reflective tariffs. This will help in times of severe demand-supply gap, as well as enable consumers to get relief from load-shedding. Distributed Generation based Electricity Distribution Franchisee (“DGBDF”) could provide a good medium-term solution to mitigate the problem of supply shortages and by adding peaking generation capacity at load centres, to get MW support to mitigate load shedding. The DGBDF model would strike the right balance between the requirements of service obligations of the distribution licensee (MSEDCL) and consumer interests...

(iv)The process of appointing a Franchisee through a competitive bidding process will take time. Moreover, after appointment of the Franchisee, further time will be required for setting up generation facilities near the load centre. The generation capacity should be set up to provide peaking support so that the Scheme offers MW support to MSEDCL during peak hours, in addition to MU support. However, in the meanwhile, the consumers in selected areas, who are willing to pay additional Reliability Charges for reduction/elimination of load shedding, as under the CII-Pune Model, should not be deprived of this facility. To overcome the problem of additional time required for appointing the franchisee after following due process, till such time as the Franchisee is identified and appointed, as suggested during the Public Hearing, MSEDCL may consider appointing any entity as an interim measure, which shall act as the Franchisee. MSEDCL may consider contracting these functions with entities such as MIDC or others, or any other agency, with the objective of facilitating the power purchase activity for identified regions that are desirous of reducing their load shedding.



(v) As the Franchisee is not a trader but can only identify the additional sources of power purchase and the rate for the same, it is MSEDCL that would have to enter into Power Purchase Agreements (PPAs) with contracted parties for power purchase. MSEDCL can explore the option of entering into tri-partite PPAs with the Franchisee as one of the Parties to the PPA. Such electricity purchase (including price) and power procurement process of MSEDCL would be regulated by the Commission under the provisions of Section 86(1)(b) of the EA 2003. The required quantum of additional power could be allocated to the franchisee area...”

2. MSEDCL, in its Petition, submitted as under:

- a) The Humanist Consumers Council (HCC), Alibag, a consumer organization approached MSEDCL vide its letter dated February 17, 2009 expressing its interest in being appointed as an Interim Franchisee to mitigate the load shedding in Pen Circle. HCC submitted an offer from M/s Tata Power Trading Company Limited (TPTCL) to supply additional power for mitigating load shedding of Pen Circle. Further, HCC submitted the MOU signed with TPTCL for purchase of required power. HCC proposed that the additional cost that would be incurred in procurement of power shall be recovered from all the consumers situated in the beneficiary area, except residential consumers with consumption upto 100 units per month.
- b) Based on the interest expressed by HCC, MSEDCL has filed the Petition proposing implementation of ZLS model for the area covered under Pen Circle, and for approval of Reliability Charges to be recovered thereof for compensating the expenditure that would be incurred for procurement of power necessary to mitigate load shedding in Pen Circle.
- c) MSEDCL submitted the assumptions used for computation of the Reliability Charges. MSEDCL further submitted that TPTCL has offered a rate of Rs. 7.04 per unit for RTC power. The additional sale of power to consumers located in Pen Circle is considered to be realized at a variable rate of Rs. 4.21 per unit.
- d) Any revision in the existing load shedding protocol during the period of implementation of zero load shedding would have an impact on the arrangement. If the load shedding hours are increased, proportionate load shedding will have to be carried out by MSEDCL. Alternatively, the Interim Franchisee may arrange for such additional requirement of power and corresponding effect of Reliability Charge



would be carried out in subsequent quarterly reconciliation. Further, it is inappropriate to provide grid support in ZLS area.

- e) MSEDCL would be revenue neutral in the entire process and any cost incurred for procurement of additional power would be fully recovered from the consumers of the specified area, which would also include the taxes and Government duties. Thus, the offer should be considered on all inclusive basis.

3. MSEDCL, in its Petition, prayed as under:

“

- a. *For implementation of ZLS model in area of Pen Circle, HCC (Humanist Consumers Council) may please be appointed interim franchisee with the responsibility of procurement of power as may be required and HCC may be permitted to execute triparte agreement with MSEDCL and TPTCL;*
- b. *Hon'ble Commission may approve the proposal for determination of Reliability Charge for Pen Circle as proposed by MSEDCL;*
- c. *Hon'ble Commission may approve implementation of such model for the period March 2009-February 2009; to be extended if mutually agreed by HCC & MSEDCL;*
- d. *Hon'ble Commission may permit a detailed reconciliation of all costs and recovery on a quarterly basis;*
- e. *Hon'ble Commission may permit adjustment for any under / (over) recovery on such reconciliation in subsequent months in the Reliability Charge itself.*
- f. *The Hon'ble Commission may consider the above proposal for a favorable dispensation.*
- g. *The Hon'ble Commission may condone errors/omission, if any, and may please give an opportunity to rectify the same and to file additional data, information as may be required.”*

4. At the Technical Validation Session (TVS) held in the matter on February 26, 2009, MSEDCL made a presentation of its proposed ZLS model for Pen Circle to the Commission, during which, the Commission sought additional data in the matter.



5. Subsequently, MSEDCL submitted its revised Petition to the Commission on March 2, 2009 and further submitted an Addendum Petition on March 16, 2009, which are summarized as under:

- a) HCC, a Non-Governmental Organisation (NGO) working for the protection of consumer's rights was formed in the year 2000, and represents consumers in Raigad District in the Raigad District Consumer's Protection Council, formed under Consumer Protection Act. They have the consensus of other co-associates, viz., Maharashtra Industrial Estates, Akhil Bhartiya Grahak Panchayat, Janajagruti Grahak Manch, and Raigad District Vyapari Federation, for being appointed as the Interim Franchisee for ZLS model.
- b) HCC has proposed that the additional cost that would be incurred in procurement of power shall be recovered from all the consumers situated in the beneficiary area, except residential consumers with consumption upto 100 units per month, and agriculture consumers.
- c) MSEDCL has computed the Reliability Charges on the following assumptions:

Load shedding protocol:

The existing load shedding protocol effective from January 14, 2009, is as under:

Region	Other regions	Agricultural dominated regions
Groups	Hours	Hours
A	2.45	10.00
B	3.30	10.30
C	4.15	11.00
D	5.00	11.30



December 2008 load profile of Pen Circle:

Dec-08 Load Profile Pen Circle								
DIVISION	Non Sheddable load	Sheddable Load		Total load	DCL Oct 07 to Sept 08	DCL Group	LS Hours	
		MIDC/ Industries having One Day Staggering	Average load of Urban feeder				Load shedding Hours	Staggering 16 Hrs/week*
Pen Circle								*Effective LS hours /day = 16/7=2.29 Hrs.
Goregoan	60.35	6.70	40.51	107.56	21	A	2 3/4	2.29
Panvel R	479.80	28.35	53.09	561.24	18	A	2 3/4	2.29
Total load	540.15	35.05	93.60	668.80				

The sheddable load of Pen circle on the basis of the above PPLS:

Name of the Division	Sheddable load	Load Shedding hours per day	MWh support per day
	MW		MWh
Pen	93.60	2.75	257.40
MIDC/ Industries having One Day Staggering	35.05	2.29	80.11
Total	128.65		337.51
MW for 12 hrs			28.00

Considering 12 hour support to be provided, the MW requirement to mitigate load shedding in Pen Circle works out to 28 MW.

For the purpose of load shedding protocol, the Average load is defined as the load, which is common in general for maximum hours for the day and not arithmetical average, i.e., (Total) / 24. Thus the average load on a 24 hour basis is not taken, but the load which is common in general for maximum hours for the day is considered.

d) Assumption for the ZLS Model:

§ *Consideration for 80% of average Consumption in the model:*



During the load shedding, the actual load relief obtained from the feeder is different than the load relief expected from that feeder. In practice, it is observed that only 80% of the average load relief can be obtained.

§ *Distribution losses for the ZLS area:*

The distribution losses are considered for the period FY 2008-09 (upto December 2008).

Division/ Circle	Division wise Distribution Losses for the year FY 2008-09 (Upto December 2008)					
	Input (MU)	Metered Sale (MU)	Unmetered Sale (MU)	Total Sale (MU)	Loss (MU)	% Loss
Goregaon	516.368	470.671	0.308	470.979	45.388	8.79%
Panvel (R)	2384.943	2275.737	0.051	2275.787	109.155	4.58%
Pen Circle	2901.310	2746.408	0.359	2746.767	154.544	5.33%

§ *Average billing and average consumption for the ZLS area:*

The calculation for Average Billing Rate is based on the revenue from January 2008 to December 2008. The average monthly consumption is also considered from January 2008 to December 2008.

§ *Growth rate:*

The growth rate is revised to 4.23% based on the Compounded Annual Growth rate (CAGR) over the period 2006 to 2008 as shown below:

Growth Rate Assumption (CAGR)		
Year	Conn. Load (KW)	CAGR
2006	267322	
2007	280161	
2008	290431	4.23%

§ *Average rate of power purchase for the State as a whole:*

The Commission in its Order in Case No. 72 of 2007 (APR of MSEDCL for FY 2007-08 and tariff determination for FY 2008-09) has considered the average power purchase rate of Rs. 2.35 per kWh. The same has been considered for calculation by MSEDCL.



§ *Distribution loss of the State:*

The distribution losses of the State is considered as 22.2%, on the basis of the energy balance considered by the Commission for FY 2008-09 in its Order in Case No. 72 of 2007.

§ *Average Billing Rate for the State:*

The Average Billing Rate (ABR) for the State has been considered by MSEDCL at Rs.3.71/kWh. The ABR has been arrived based on MSEDCL's I.T. Report for January 2009 considering figures for the period from May 2008 to November 2008. ABR has been computed as 7 months billed revenue plus proportionate recovery of Rs. 427 Crore for 7 months divided by 7 months consumption. (Rs.11658 Crore + proportionate recovery for 7 months = Rs.249 Crore) / (32081 MU)

Average billing rate for the State

Month	Sales (Rs. Crore)	Demand (MU)
May-09	4384.20	1621.18
Jun-09	5775.85	1821.75
Jul-09	4304.48	1529.63
Aug-09	4222.02	1656.54
Sep-09	5310.73	1840.45
Oct-09	4123.94	1639.32
Nov-09	3959.46	1549.15
		249.08
Total	32080.68	11907.10
Average billing rate		
	Rs/ kWh	3.71

- e) The Reliability Charges for consumers of Pen Circle works out to Rs. 0.18/kWh for a period of one year.
- f) The present proposal envisages that HCC, as the Interim Franchisee, shall arrange for additional power as indicated and the proposal of ZLS for Pen Circle will be implemented only after the power from the said identified sources is received by MSEDCL on the basis of tri-partite agreement that would be executed between MSEDCL, HCC (Interim Franchisee) and respective power producer/trader.



- g) ZLS model requires power for a certain period of time only and not RTC power. The generator is not in a position to tie up with individual licensees for his entire capacity. Hence, the arrangement is done through the trader.
- h) MW support required to mitigate load shedding in the beneficiary area would change with a change in the demand supply gap. The snapshot of the MWh and MW requirement under the various scenarios is as under:

MW Requirement in different Load Shedding Scenarios for Pen					
	DCL Group	Load Shedding Hours	Staggering 16 Hrs/week	MWH Requirement	MW Requirement for 12 hrs
Scenario 1	A	1.25	2.29	197.11	16
Scenario 2	A	1.75	2.29	243.9142857	20
Scenario 3	A	2.00	2.29	267.3142857	22
Scenario 4	A	2.75	2.29	337.5142857	28
Scenario 5	A	3.25	3.43	424.4215	35
Scenario 6	A	3.75	3.43	471.2215	39

6. The Commission scheduled a Public Hearing in the matter on May 21, 2009 at 11.30 hours, at Rajasva Sabagraha, Zilla Adhikari Karyalaya, Alibag and directed MSEDCL to publish the Public Notice in English and Marathi in the newspapers with wide circulation in Pen area for inviting objections, comments and suggestions on its proposal. MSEDCL was further directed to host the Executive Summary of its Petition and the Petition submitted to the Commission on its website and to make available the hard copies of the same along with Annexures at its specified offices.

7. The Commission received written objections, comments and suggestions from approximately 21 consumers/consumer associations. The list of individuals/organizations who participated in the public process, either through written submissions or during the Public Hearing, is provided at **Annexure 1** to this Order.

8. During the Public Hearing held in the matter, several individuals and Associations from Pen Circle, viz., (a) Shri Nasim Bookbinder, Jama Masjid, Alibag, (b) Shri Pyarelal Jain, Alibag Kirana Vyapari Association, (c) Shri Imtiaz Palkar, District Association of Islamic Societies, Raigad, (d) Shri Abdul Latif Ghatte, (e) Shri Mohanlal Jain, Raigad Zilla Vyapari Mahasangh, (f) Shri Ballaleshwar Devasthan, Pali, (g) Smt Avanti Hattangadi,



(h) Shri Ravindra Ghodke, and (i) Shri Laxman Karkera welcomed the Petition filed by MSEDCL, and indicated that they are agreeable to pay reasonable Reliability Charges (Rs. 0.18 per unit as proposed by MSEDCL in its Petition), in order to mitigate the load shedding in their area.

9. Shri Anil Kathe, Alibag Krushi Paryatan Vikas Sanstha, Shri Vasant Apte, and Shri Amish Shirgaonkar objected to MSEDCL's ZLS proposal and submitted that the consumers are already subjected to unplanned load shedding in the form of regular service line breakdowns due to poor maintenance practices carried out by MSEDCL.

10. Shri Mario Fortes, Shri N. Thampan, Shri N. Ponrathnam, Dr. V. Thanumoorthy and Shri P. N. Sridharan also objected to MSEDCL's ZLS proposal on account of following reasons:

- a) MSEDCL had already filed APR Petition for FY 2007-08 under MYT framework, truing up for FY 2006-07 and determination of ARR and tariff for FY 2008-09, on which, the Commission passed an Order on June 20, 2008 (Case No. 72 of 2007), which is effective till date. The tariff determination process is to be carried out once in the Control Period. Hence, any matter related to tariff determination can be entertained only after completion of the Control Period.
- b) The concept of Reliability Charges is found neither in the Electricity Act, 2003 (EA 2003) nor in the MERC Tariff Regulations nor the Electricity Rules, 1956. The Commission would have to amend the Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Other Conditions of Supply) Regulations, 2005 before including concept of Reliability Charge in the electricity bills of the consumers. Further, Section 62(3) of EA 2003 would also require amendment before levy of Reliability Charges. The Commission does not have powers to discriminate between the consumers apart from the factors mentioned in Section 62(3) of the EA 2003. Consumer's capacity to pay or willingness to pay cannot be taken for levy of higher tariff by the way of Reliability Charges.
- c) Selection of only Pen Circle for uninterrupted power supply is violation of Section 62 of EA 2003 as well as Article 14 of the Constitution of India.
- d) The Commission's approval is not required for appointing any agent/franchisee/contractor. Further, there is no need to appoint Interim Franchisee as it would benefit the private companies at the expense of MSEDCL consumers.



- e) It is the combined duty of Government of Maharashtra (GoM) and all three State owned companies, viz., MSPGCL, MSETCL and MSEDCL to supply uninterrupted power to the consumers. MSPGCL, MSETCL and MSEDCL have adequate work force, which can be motivated through incentive schemes to generate more power to meet the shortfall situation.
- f) With reference to Tariff Policy, the concept of franchisee is applicable only for rural area.
- g) The concept of Distributed Generation Based Electricity Distribution Franchisee (DGBDF) should be made applicable to places where transmission facility is not available in remote rural areas as the cost of supply of the distributed generation is obviously high.
- h) With reference to Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Other Conditions of Supply) Regulations, 2005, it is the responsibility of MSEDCL to supply uninterrupted power to its consumers.
- i) As per Section 24 of EA 2003, the Commission has the powers to suspend the licence of any distribution company if it has persistently failed to maintain uninterrupted supply of electricity conforming to standards regarding quality of electricity to the consumers.
- j) The Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2005 (SOP Regulations) refers to outages with due public notice and not to scheduled load shedding. The Commission would have to define load shedding in its SOP Regulations. Further, the Commission should also specify the compensation in case of failure to supply on a continuous basis.
- k) Instead of adopting franchisee route, MSEDCL can procure power from any generator or from National Grid or through open access.
- l) M/s The Tata Power Company Limited (TPC) and M/s Reliance Infrastructure Limited (RIInfra) supply electricity to the city of Mumbai wherein they are charging Reliability Charges for procuring costly power due to shortage/ demand supply gap in their distribution area. Power procurement from trader is costlier than purchase from the generator.

11. Vidarbha industries Association (VIA) vide its affidavit dated May 18, 2009 objected to the Petition filed by MSEDCL and submitted as under:



- a) The calculation of 28 MW support for mitigating load shedding is totally incorrect since the load requirement of MIDC industries having single staggering day is 35.05 MW and the average sheddable load of Urban feeder is 93.6 MW. Thus, the total sheddable load is 128.65 MW.
- b) From the prevailing load shedding protocol, it is not clear that how much load shedding is carried out in each hour of 12 hours. MSEDCL has proposed to buy only 28 MW power to mitigate load shedding of Pen Circle, which is inadequate and grid support will be necessary to mitigate load shedding, and the same is not permitted by the Commission. In actual, the power purchase would be much higher, i.e., 59 MW for 6 days and 94 MW for staggering day of industries. The Reliability Charges should be revised by considering actual power purchase.
- c) The distribution losses have been wrongly projected as 5.33% for ZLS purpose in Pen Circle. The losses considered are inclusive of non-sheddable load of 540 MW, whereas the actual losses of sheddable area (Urban feeder) would be around 26%. MSEDCL has not provided any loss figures of these areas. Accordingly, the Reliability Charges would also vary/increase.
- d) ABR of Rs. 4.49/kWh is computed based on total sales in Pen Circle that includes sheddable and non-sheddable load. The ABR should be computed only for those feeders on which the load shedding is being observed. Actual ABR would be much less compared to ABR calculated in the Petition. MSEDCL should submit the details of units billed and amount billed to the Urban areas where the load shedding is done on daily basis for 7 days a week and for 1 day staggered feeders.

12. Shri Rakshpal Abrol objected to the ZLS proposal and enquired whether the Commission has granted distribution licence to MSEDCL or not. Shri Abrol further opposed the concept of interim franchisee.

13. MSEDCL, vide its letter dated May 19, 2009 replied to the queries/objections, as under:

- a) *The Commission's authority to entertain such Petition:*

The Commission has the authority to entertain the Petition as per Section 94(2) of EA 2003, which stipulates that, "*The Appropriate Commission shall have the powers to pass such interim order in any proceeding, hearing or matter before the Appropriate Commission, as that Commission may consider appropriate.*"



The Commission has already discussed the ZLS issue at length in its Order in dated March 13, 2008 in Case No. 51 of 2007 and Case No. 90 of 2007 wherein the Commission has stated that, “34.*Even the National Tariff Policy under paragraph 8.2.1(1) stipulates that consumers, particularly those who are ready to pay a tariff which reflects efficient costs have the right to get uninterrupted 24 hours supply of quality power. Therefore, if in case a retail tariff once determined for a financial year needs to be amended within the financial year in order for the reliability charges to be recovered, the distribution licensee would need to follow the procedures under Section 64 by making the necessary application, publication of application, inviting suggestions and objections from the public in writing as well as during the public hearing. Once the statutory procedures under Section 64 are complete and if the requisite amendment to the tariff is justified and approved by the Commission, the amendment may be effected. Therefore, if the tariff once determined is required to be amended during the financial year the same may be amended if it is justified. Other than these amendments, under Section 62(4), tariff may be amended more than once in any case in respect of any changes expressly permitted under the terms of the fuel surcharge formula specified by the Commission.*”

b) *Concept of Reliability Charge:*

This issue has also been addressed by the Commission at length in its Order dated March 13, 2008 in Case No. 51 of 2007 and Case No. 90 of 2007, wherein the Commission has stated as under:

“33(i) On the issue as to whether the concept of Reliability Charges is in accordance with the EA 2003, it would be apt to quote the judgment in "B. S. E. S. Ltd. v. M/s. Tata Power Co. Ltd." AIR 2004 SUPREME COURT 760, where the Hon'ble Supreme Court held as under:

“The word "tariff" has not been defined in the Act "Tariff" is a cartel of commerce and normally it is a book of rates. It will mean a schedule of standard prices or charges provided to the category or categories of customers specified in the tariff. The tariff can be enhanced only after approval of the Commission and charging of an enhanced tariff which has not been approved by the Commission will amount to commission of an offence.”



There is no doubt that Reliability Charges is also a tariff within the meaning of the legal and regulatory regime....”

c) *Concept of Reliability Charge not specified in Section 62(3) of EA 2003:*

Section 62(3) of EA 2003 provides sufficient scope for consideration of the revised proposal and determination of Reliability Charge by differentiating and using various factors, and there is no undue preference to any consumer as the recovery is intended from the same set of consumers who will benefit from the reduced load shedding and who are willing to pay the additional charges.

MSEDCL has not identified Pen Circle for any such preferential treatment. It is the Humanist Consumer Council that has approached MSEDCL expressing their desire to act as Interim Franchisee and make arrangement for procurement of power. They have approached MSEDCL in a similar manner like the existing ZLS models of Pune, Thane and Vashi and MSEDCL has considered the proposal in a similar manner as per the previous Orders of the Commission.

d) *Whether MSEDCL has the necessary permission for Appointment of franchisee/agent:*

The Commission in its Order dated March 13, 2008 has specified that, “33(ii) Section 2(27) read with the seventh proviso to Section 14 of the EA 2003 empowers MSEDCL to authorise any person to distribute electricity on its behalf in a particular area within its area of supply. The proposal that a franchisee will identify and procure power from diverse sources is not prohibited under the EA 2003 as it is in the first place the distribution licensee’s own function to identify and procure power to supply to its consumers. However, as Section 86(1)(b) of the EA 2003 makes it mandatory for the Commission to regulate the electricity purchase and procurement process of distribution licensees, the agreements for purchase of power shall have to be executed by MSEDCL as the principal Party. All aspects of electricity purchase and procurement process shall be laid down clearly by MSEDCL so that the Commission is able to regulate the same under the said Section 86(1)(b). Therefore, MSEDCL will have to subject itself to Section 86(1)(b) by making necessary applications to the Commission for scrutiny and approval even if the power is procured specifically for the Franchisee area. In view thereof, it is the distribution licensee who shall be responsible for justifying the need for power, its price, its contractual arrangement



under power purchase agreements, for scrutiny and approval of the Commission under Part D Regulation 21 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 read with S. 86(1)(b).”

Thus, as the Commission has to regulate the power procurement process under Section 86(1)(b), even for the additional power purchased for a beneficiary area, the Commission has a role to play.

Further, the Commission in its Order dated March 31, 2008 in Case No. 101 of 2007 has clarified that, “8(d) *It is entirely MSEDCL’s discretion to appoint a Franchisee/Interim Franchisee, and the Commission cannot issue any directions to MSEDCL in this regard.*” Thus, the Commission has already clarified that MSEDCL does not require any approval to appoint a franchisee. The instant proposal is more particularly for determination and approval of reliability charges to be levied and recovered from the beneficiary consumers.

e) *Concept of franchisee is for rural area:*

Clause 8.2.1 of the Tariff Policy stipulates that certain aspects would need to be considered while determining tariffs. These are indicators to the fact that consumers, particularly those who are ready to pay a tariff which reflects efficient costs, have the right to get uninterrupted 24 hours supply of quality power. This is the basic premise for ZLS model.

Further, the Commission in its Order dated March 13, 2008 in Case No. 51 of 2007 and Case No. 90 of 2007 has clarified that, “33(ii) *Section 2(27) read with the seventh proviso to Section 14 of the EA 2003 empowers MSEDCL to authorise any person to distribute electricity on its behalf in a particular area within its area of supply. The proposal that a franchisee will identify and procure power from diverse sources is not prohibited under the EA 2003 as it is in the first place the distribution licensee’s own function to identify and procure power to supply to its consumers.*” Thus the contention of the objector is incorrect.



f) *Concept of DGBDF:*

The Commission has at length dealt with the concept of DGBDF under Clause 33(iii) of its Order dated March 13, 2008. However, there is no relevance of this matter with the present petition.

g) *Right of Uninterrupted power supply/ continuous quality supply:*

There is no relevance of this matter with the present petition. This matter cannot be considered in the present petition as it has already been considered by the Commission in various other Orders relating to this particular provision.

h) *MW support of 28 MW for 12 hours:*

As per the Commission's directives, the area is divided into AG dominated and non-AG dominated area. The load shedding in the non-AG dominated area is carried out as per the load shedding protocol for 'Other Region' area.

The divisions in the Pen Circle come under Non-Ag dominated area. The average sheddable load of Pen circle (93.6 MW) includes the load of urban and Ag. dominated area of Pen circle, and the load shedding is carried out as per load shedding protocol for 'Other Region' area.

Power requirement to mitigate load shedding:

- Ø The feeders in the divisions are divided into 4 parts having approximately 25% of the load. For each part, four different time schedules are given and the time schedule is rotated weekly or as per the local preference.
- Ø Load shedding in each part of 25% load is carried out at a stretch in a day or in two blocks as per the local preference. Hence, it is difficult to provide MW support in different time blocks in a day as it varies hour to hour in a day.
- Ø MW support to mitigate load shedding is calculated on average basis for 12 hours in a day. Similarly staggering to industries is carried out for 16 hours in a week, and to have uniform MW support, the effective staggering for a week is considered as 2.29 hours per day.



i) *Calculation of Distribution Loss and Average Billing Rate (ABR):*

Distribution Loss and ABR are computed on the basis of the actual circle-wise sales in MU, collection and distribution loss for the past year. The Commission has standardized the methodology after studying MSEDCL's proposals in Case No. 5 of 2008 for Pune Model as well as in Case No. 10 of 2008 (Thane-Vashi Model) and has passed specific Orders dated June 20, 2008 and May 30, 2008 respectively. The methodology considered by the Commission in the said Order for determination of Reliability Charges needs to be considered as a standard methodology, and accordingly MSEDCL has adopted the same for all future proposals including the present proposal.

14. Subsequently, Shri N. Ponrathnam, vide letter dated May 27, 2009 submitted his rejoinder to the aforesaid reply received from MSEDCL, as under:

- a) Section 62(4) of EA 2003 quoted by MSEDCL clearly specifies that the tariff cannot be amended more than once in any financial year except fuel surcharge. The reliability charges claimed have no relation with any fuel surcharge formula as prescribed in EA 2003. The Tariff Policy also directs MYT principles, which are deliberately violated by MSEDCL.
- b) The Commission in its Order dated March 13, 2008 in Case Nos 51 of 2007 and 90 of 2007 has quoted the Judgment wherein the Supreme Court has elaborated the definition of Tariff in AIR 2004 Court 760, which is erroneously interpreted by the Commission that it also includes Reliability Charges, which is not true. There is no provision in law for billing of Reliability Charges.
- c) None of the factors mentioned in Section 62(3) supports the levy of reliability charges against the contention made by MSEDCL. Further, the Commission has to review its previous Orders, viz., (a) Case Nos 51 of 2007 and 90 of 2007 dated March 13, 2008, (b) Case Nos 1 of 2008 and 2 of 2008 dated May 8, 2008, (c) Case No. 5 of 2008 dated June 20, 2008, and (d) Case No. 10 of 2008 dated May 30, 2008, to comply with EA 2003.
- d) HCC cannot enter into any power purchase agreement with any generating company or trader or other licensee, as the same is illegal. Any generating company, trader or licensee can enter into an agreement with MSEDCL, with the Commission's consent. HCC has put up the instant proposal without following due process of law, further,



MSEDCL has involved HCC without complying with any provision of law, and hence, is unwarranted.

- e) The concept of franchisee and distributed generation based electricity distribution franchisee is costlier than the conventional electricity generation and these concepts are suited only for remote (rural) areas, where the State grid is not available. A franchisee that can take up the work of licensee with generation of electricity could be appointed.
- f) Though the entire Petition filed by MSEDCL is based on the reliability issue, MSEDCL has stated that the right of uninterrupted/continuous power supply has no relevance with the present Petition, which clearly demonstrates MSEDCL's intention of evading its prime duty as a distribution licensee.

15. Having heard the parties and after considering the material placed on record, the Commission is of the view as under:

- a. The contentions raised by Shri Mario Fortes, Shri N. Thampan, Shri N. Ponrathnam, Dr. V. Thanumoorthy and Shri P. N. Sridharan on the ZLS scheme have already been settled by the Commission in its Order dated March 13, 2008 in Case No. 51 of 2007 and Case No. 90 of 2007, and Order dated March 31, 2008 in Case No. 101 of 2007, and are hence, not repeated here. Moreover, the above-mentioned findings of the Commission cannot be objected to for representing in the present proceedings and neither can the objector seek a review of the above-said Orders under the present proceedings.
- b. The contentions raised by Shri. Abrol on MSEDCL's distribution licence are in the nature of a general observation and cannot be addressed under this Petition.
- c. The objections raised by Shri. Goenka of VIA have been kept in mind and addressed while considering the assumptions for determining the Reliability Charges, as detailed subsequently in this Order.
- d. A number of local consumers, who attended the hearing, expressed the view that the load shedding needed to be mitigated, and the Reliability Charges proposed by MSEDCL was reasonable. At the same time, some local consumers voiced dissatisfaction regarding supply interruptions, which makes the reliability of supply an important issue.



- e. In view of the justification given and views expressed during the Public Hearing, the Commission approves the concept of Zero Load Shedding as proposed by MSEDCL for Pen Circle, and the Reliability Charges have been determined as elaborated below. However, MSEDCL should ensure that unplanned load shedding due to service line breakdowns, if any, are minimised, to ensure that the benefits of the Zero Load Shedding scheme are actually realised by the consumers.
- i) The additional power procurement and the Reliability Charges will be applicable for the period from June 16, 2009 to March 31, 2010.
 - ii) The Reliability Charges are a part of the tariff, and will be payable in addition to the regular tariff components such as energy charge, fixed/demand charge, FAC, etc., as applicable.
 - iii) The Reliability Charges are being made applicable for recovery of power procurement within reasonable cost from all consumers of Pen Circle, excluding residential consumers consuming below 100 units per month and agriculture consumers, as proposed by MSEDCL.
 - iv) MSEDCL should undertake reconciliation between actuals and the basis on which the above Reliability Charges have been determined, on a quarterly basis, and ensure that the recovery of Reliability Charges on actual basis matches the expenditure on additional power procurement. The same should be got audited by a Certified third-party Chartered Accountant (certified by the Institute of Chartered Accountants of India - ICAI) from outside the local area to be appointed by MSEDCL. The Scope of Work (SOW) for appointment of the Chartered Accountant should be in accordance with the SoW approved by the Commission for ZLS models in Pune, Thane, Vashi, etc. The difference between the cost and recovery under this Scheme should be passed through to the consumers of the areas as mentioned above, after the above reconciliation and third-party audit, on a quarterly basis, as Variation in Reliability Charges. The Audit Report submitted by the third-party auditor should be submitted on a quarterly basis, along with the details of the variation in Reliability Charges passed through to the consumers, on a post-facto basis. It is clarified that the variation can be positive or negative, and should be



passed through to consumers on a quarterly basis, irrespective of whether it is positive or negative.

- v) All other directions given as a part of the Commission's Order in Case No. 5 of 2008 for Pune Urban Circle, which established the framework for such Zero Load Shedding models, are also applicable in case of the Zero Load Shedding approved herein for Pen Circle.
- vi) Under this scheme, the Commission rules that in case of interruption in the power supply by the Interim Franchisee for a long time, such as annual maintenance shutdowns/outages, etc. of the generation source, load shedding will have to be undertaken, and grid support cannot be provided by MSEDCL at the expense of consumers in other regions. For temporary interruption during the specified hours of supply due to breakdowns, etc., (not exceeding 4 hours) grid support could be provided by MSEDCL to Pen Circle to mitigate the situation, and would be charged at Weighted Average System Marginal Price (WASMP) prevailing during the respective hours. MSEDCL would have to ensure that accurate records of such instances are maintained and correlated with the prevailing WASMP.
- vii) Basis used for computation of Reliability Charges:
 - (a) The detailed computation of Reliability Charges is given in **Annexure 2** to this Order.
 - (b) The Reliability Charges have been computed in accordance with the methodology standardised in the Commission's Order in Case No. 5 of 2008, as applicable to Pen Circle.
 - (c) The computation of energy requirement, power purchase expenses, additional sales, and Reliability Charges have been done for each month separately, and aggregated over the period under consideration.
 - (d) MSEDCL's computation of 28 MW support required to mitigate load shedding in Pen Circle has been accepted, since the load shedding is done in rotation in such a manner that 28 MW support for 12 hours will enable MSEDCL to mitigate the load shedding requirement for the sheddable load of 128 MW, though it is accepted that on the day of planned staggering, the load requirement will be higher, which will have to be offset by the



lower load requirement on the days where planned staggering is not scheduled.

- (e) MW support of 28 MW has been assumed on Round the Clock (RTC) basis, in accordance with the proposal made by MSEDCL, since apparently, MW support for only 12 hours of the day is not available. However, MSEDCL should strive to ensure that additional MW support is tied up for only 12 hours to the extent possible, since the procurement of additional power on RTC basis, results in increasing the burden on the consumers in the ZLS area.
- (f) The actual number of days in every month have been considered, as against MSEDCL's assumption of 31 days every month on an average, which amounts to 372 days in the year
- (g) MSEDCL's contention that only 80% of load relief is obtained has not been considered, since MSEDCL has not submitted any detailed rationale for the same. Further, this contention of MSEDCL is the subject matter of an Appeal filed by MSEDCL against the Commission's Order in Case No. 77 and 78 of 2008, which is pending before the Honourable Appellate Tribunal for Electricity (ATE). Hence, for the purpose of this Order, the Commission has considered that 100% of the load relief will be obtained by undertaking load shedding as per the load shedding protocol.
- (h) The distribution loss in Pen Circle has been considered as 5.33%, as submitted by MSEDCL, for the purpose of computation of energy input requirement, in accordance with the methodology adopted for determination of Reliability Charges for the ZLS models adopted in Pune, Thane, Navi Mumbai, etc.
- (i) The intra-State transmission loss has been considered as 4.85% for determining the energy input requirement at the transmission level
- (j) The unit rate of additional power at MSETCL bus has been considered as Rs. 7.04 per kWh, as submitted by MSEDCL subject to the condition that MSEDCL should take all efforts to



minimise the cost of additional power procurement through discussions with the Interim Franchisee/Trader (TPCTL, in this case), so that the burden of Reliability Charges is minimised.

- (k) The ABR has been considered as Rs. 4.38 per kWh for computing revenue from additional sales as submitted by MSEDCL, in accordance with the methodology adopted for determination of Reliability Charges for the ZLS models adopted in Pune, Thane, Navi Mumbai, etc.
- (l) The effective days of load shedding has been considered as 71% of the days per month, in accordance with MSEDCL's submission in its Addendum Petition.
- (m) The growth in sales over past year's sales has been considered as 10% for the purposes of projections, in accordance with the approach adopted in other ZLS models, against MSEDCL's method of considering a growth of 4.23% on the basis of growth in connected load, since connected load as a concept has been done away with by the Commission, and moreover, growth in connected load cannot be taken as a proxy for growth in consumption
- (n) The average rate of power purchase at MSETCL bus has been considered as Rs. 2.38 per kWh in accordance with the rate determined by the Commission in its APR Order for MSEDCL in Case No. 72 of 2007, which is the prevailing Tariff Order for MSEDCL
- (o) For determining the units available for sale in the rest of the State, due to procurement of additional power on RTC basis, the distribution loss for the MSEDCL licence area as a whole has been considered as 18.2%, in accordance with the trajectory approved by the Commission for the third year of the Control Period, i.e, FY 2009-10, during which this ZLS model is in operation.
- (p) The revenue from sale of this additional power in the rest of the State has been computed by considering the ABR as Rs. 3.70 per kWh, based on MSEDCL's submissions in this regard.



The effective Reliability Charges for eliminating load shedding in Pen Circle on a stand-alone basis works out to 7 paise/kWh, whereas the additional burden due to procurement of additional power on RTC basis works out to 12 paise/kWh. Thus, **the total Reliability Charges payable by all consumers in Pen Circle, except agricultural consumers and residential consumers with monthly consumption lower than 100 units per month, is 19 paise/kWh** (as against MSEDCL's proposal of 18 paise/kWh).

- f. As there is no requirement under law for MSEDCL to seek any approval from the Commission for appointment of the Franchisee, which has been clarified by the Commission in its Order dated March 31, 2008 in Case No. 101 of 2007, as reproduced below:

“8 (d) It is entirely MSEDCL's discretion to appoint a Franchisee/Interim Franchisee, and the Commission cannot issue any directions to MSEDCL in this regard”

the Commission is not opining on the selection of the proposed Interim Franchisee.

With the above, the Petition filed by MSEDCL in Case No. 143 of 2008 stands disposed of.

Sd/-
(S. B. Kulkarni)
Member

Sd/-
(A. Velayutham)
Member

Sd/-
(V.P. Raja)
Chairman



(P.B. Patil)
Secretary, MERC

Annexure-1

**List of stakeholders participated during public process including Public Hearing on
21.05.2009 at 11:30 hours**

Sr. No.	Name	Institution/Organisation
1	Shri R.B. Goenka	Vidarbha Industries Association
2	Shri Anil C. Kate	Alibag Krishi Paryatak Vikas Sanstha
3	Shri Vasant Govind Apte	
4	Shri Amish Ashok Shirgaonkar	
5	Shri Mario Fortes	
6	Shri N. Thampan	
7	Shri N. Ponrathnam	
8	Dr. V. Thanumoorthy	
9	Shri P.N. Sridharan	
10	Shri Laxman Karkera	
11	Shri Ravindra Ghodke	
12	Smt. Avanti N. Hattangadi	
13	Shri Ballaleshwar Devasthan	
14	Shri Mohanlal S. Jain	Pen Taluka Vyapari Mahasangh
15	Shri Abdul Latif Ghade	
16	Shri Imtiaz A. Palkar	District Association of Islamic Societies, Raigad
17	Shri Pyarelal Premchand Jain	Alibag Kirana Vyapari Association
18	Shri Nasim D. Bookbinder	Jama Masjid, Chawadi Mohalla, Alibag
19	Shri Mushtak Ghatte	HCC
20	Shri Rakshpal Abrol	
21	Shri Ravindra V. Sansare	



Annexure-2: Computation of Reliability Charges for Pen Circle

Sr	Particulars - PART - A	Units	Calculations	Commission											
				June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	
1	Availability of Tata Power	MW	a	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
2	Hours of Availability of power per day	Hrs	b	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
3	Availability in Mus per day	MU	$c=a*b/1000$	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.67
4	Period of availability	Days	d	15	31	31	30	31	30	31	31	28	31	31	350.00
5	Mus available for the period as per Sr. No.4	MU	$e=c*d$	10.08	20.83	20.83	20.16	20.83	20.16	20.83	20.83	18.82	20.83	20.83	235.20
6	MUs required to mitigate load shedding per day (shedtable) considering 100% consumption on average basis	MU	$f=a*12/1000*1$	0.336	0.336	0.336	0.336	0.336	0.336	0.336	0.336	0.336	0.336	0.336	0.266
7	MU required per day with Dist. Loss @ 5.33%	MU	$g=f/(1-5.33\%)$	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.281
8	MU required per day with Trans. Loss @ 4.85%	MU	$h=g/(1-4.85\%)$	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.295
9	Effective days of load shedding as per year 2007-08	Days	$i = 71\%$	11	22	22	21	22	21	22	22	20	22	22	206
10	Mus required at MSETCL bus for the period (month) as per Sr. No.9	MU	$j=h*i$	3.994	8.254	8.254	7.988	8.254	7.988	8.254	8.254	7.455	8.254	8.254	60.92
11	Excess Mus available at MSETCL bus	MU	$k=e-j$	6.09	12.58	12.58	12.17	12.58	12.17	12.58	12.58	11.36	12.58	12.58	174.28
12	Unit rate per KWH at MSETCL bus	Rs	l	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
13	Cost of power for required units to mitigate load shedding	Rs in Cr.	$m=(j*l)/10$	2.81	5.81	5.81	5.62	5.81	5.62	5.81	5.81	5.25	5.81	5.81	42.89
14	Additional sales in the period	MU	$n=f*i$	3.60	7.44	7.44	7.20	7.44	7.20	7.44	7.44	6.72	7.44	7.44	54.87
15	Average Realisation rate per unit	Rs	o	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
16	Amount realized from sale of additional units for above period	Rs in Cr.	$p=o*n/10$	1.58	3.26	3.26	3.15	3.26	3.15	3.26	3.26	2.94	3.26	3.26	24.02
17	Additional burden of power purchase to mitigate load shedding	Rs in Cr.	$q=m-p$	1.24	2.56	2.56	2.47	2.56	2.47	2.56	2.56	2.31	2.56	2.56	18.86



Sr	Particulars - PART - A	Units	Calculations	Commission											
				June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	
18	Avg monthly consumption of units by Pen consumers excluding consumption of residential consumers upto 100 units and consumption of agricultural consumers	MU	r	250.17	250.17	250.17	250.17	250.17	250.17	250.17	250.17	250.17	250.17	2376.65	
19	Average Assessed monthly consumption considering 10% growth	MU	s=r*(1+10%)	275.19	275.19	275.19	275.19	275.19	275.19	275.19	275.19	275.19	275.19	2614.31	
20	Assessed consumption for the month before mitigating load shedding (output)	MU	= s	275.19	275.19	275.19	275.19	275.19	275.19	275.19	275.19	275.19	275.19	2614.31	
20	Assessed consumption after zero load shedding for above period (output)	MU	t=n+s	278.79	282.63	282.63	282.39	282.63	282.39	282.63	282.63	281.91	282.63	2669.19	
21	Reliability charge per unit	Rs	u=q/t*10	0.04	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.09	0.07	
Sr	Particulars - PART - B	Units	Calculations	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual	
22	MSEDCL's average unit rate for power purchase at MSETCL bus	Rs	v	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	
23	Excess expenditure for power per unit for excess power	Rs	w=l-v	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	
24	Excess Mus available at MSETCL bus	MU	x=k	6.09	12.58	12.58	12.17	12.58	12.17	12.58	12.58	11.36	12.58	174.3	
25	Addl.expenditure required for excess power purchase	Rs in Cr.	y=w*x/10	2.836	5.861	5.861	5.672	5.861	5.672	5.861	5.861	5.294	5.861	81.2	
26	Mus available after Transmission loss @ 4.85 %	MU	z=x*(1-4.85%)	5.79	11.97	11.97	11.58	11.97	11.58	11.97	11.97	10.81	11.97	165.8	
27	Mus available after Distribution loss @ 18.2%(State average)	MU	aa=z*(1-18.2%)	4.74	9.79	9.79	9.47	9.79	9.47	9.79	9.79	8.84	9.79	135.65	
28	Realization rate of revenue per unit	Rs	ab	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	
29	Additional revenue earned by sale of excess units	Rs in Cr.	ac=ab*aa/10	1.75	3.62	3.62	3.51	3.62	3.51	3.62	3.62	3.27	3.62	50.19	
30	Expenditure for excess units	Rs in Cr.	ad=y-ac	1.08	2.24	2.24	2.17	2.24	2.17	2.24	2.24	2.02	2.24	31.03	



Sr	Particulars - PART - A	Units	Calculations	Commission											
				June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	
31	Additional reliability charges for excess power	Rs	$ae=ad/t*10$	0.04	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.12
32	Total reliability charge	Rs	$af=ae+u$	0.08	0.17	0.17	0.16	0.17	0.16	0.17	0.17	0.15	0.17	0.19	

