

**Before the**  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
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**Case No. 9 of 2006**

**In the matter of**  
**Methodology for computation of Cross-Subsidy Surcharge for Open Access transactions**

**Dr. Pramod Deo, Chairman**  
**Shri A. Velayutham, Member**  
**Shri S. B. Kulkarni, Member**

**Dated: September 5, 2006**

**ORDER**

The Maharashtra Electricity Regulatory Commission (hereinafter referred to as Commission), in exercise of the power vested in it under Sections 39, 40, 42, 61 and 86 of the Electricity Act 2003 (hereinafter referred to as EA 2003) and all other powers enabling it in this behalf, determines the framework for computation and implementation of cross subsidy surcharge for open access transactions within the State of Maharashtra.

**Background**

2. The Electricity Act 2003 (EA 2003) enables eligible consumers to have non-discriminatory Open Access (OA) to the network of a Licensee (except that of a local authority engaged in the business of distribution of electricity before the appointed date) on payment of applicable charges. The EA 2003 and National Electricity Policy (NEP) formulated therein mandate the State Electricity Regulatory Commissions to frame the terms and conditions and timeframe for introduction of OA in the State.

3. The Commission notified the MERC (Distribution Open Access) Regulations, 2005 as well as the MERC (Terms and Conditions of Tariff) Regulations, 2005 for Utilities in the State of Maharashtra. However, in order to make Open Access provisions operational in the State, it is essential to specify the following charges to be paid by the OA consumers:

- a. Transmission charges;
- b. Wheeling charges;
- c. Cross-subsidy surcharge;
- d. Additional surcharge.

4. The Commission in the matter of Case No. 55 of 2005 has defined the methodology for determination of transmission charges for use of the intra-State transmission network within the State. Further, the Commission will determine the wheeling charges during the tariff determination process currently underway for all Utilities in the State.



5. In this Order, the Commission has ruled on the issue of methodology to be followed for determination of cross-subsidy surcharge and additional surcharge. It is envisaged that based on this methodology, cross-subsidy surcharge would be calculated during the tariff determination exercise currently underway.

### **Relevant provisions of the Electricity Act 2003 and Tariff Policy**

6. Section 2 (47) of the Electricity Act 2003 defines Open Access, while Section 42 of the Electricity Act, 2003 mandates the Distribution Licensees to provide open access to eligible consumers subject to payment of cross-subsidy surcharge, additional surcharge and other applicable charges. Section 86 (1) of the EA, 2003 mandates the Commission to determine the cross-subsidy surcharge.

7. The Government of India has notified the Tariff Policy (TP) under Section 3 (1) of the Electricity Act, 2003. Paragraph 8.5 (reproduced below) of the said Tariff Policy specifies the methodology for calculation of cross-subsidy surcharge, additional surcharge and wheeling charges for open access consumers.

#### **“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.*



*Surcharge formula:*

$$S = T - [C (1 + L / 100) + D]$$

*Where*

*S is the surcharge*

*T is the Tariff payable by the relevant category of consumers;*

*C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power*

*D is the Wheeling charge*

*L is the system Losses for the applicable voltage level, expressed as a percentage*

*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.*

*8.5.2 No surcharge would be required to be paid in terms of sub-section (2) of Section 42 of the Act on the electricity being sold by the generating companies with consent of the competent government under Section 43(A)(1)(c) of the Electricity Act, 1948 (now repealed) and on the electricity being supplied by the distribution licensee on the authorization by the State Government under Section 27 of the Indian Electricity Act, 1910 (now repealed), till the current validity of such consent or authorizations.*

*8.5.3 The surcharge may be collected either by the distribution licensee, the transmission licensee, the STU or the CTU, depending on whose facilities are used by the consumer for availing electricity supplies. In all cases the amounts collected from a particular consumer should be given to the distribution licensee in whose area the consumer is located. In case of two licensees supplying in the same area the licensee from whom the consumer was availing supply shall be paid the amounts collected.*

*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.”*

### **Relevant provisions under MERC (Distribution Open Access) Regulations, 2005**

8. The Commission has notified the MERC (Distribution Open Access) Regulations, 2005 on 21<sup>st</sup> June, 2005 permitting consumers with contract demand of more than 5 MVA to avail open access. The eligibility conditions specified by the Commission for Open Access under Regulation 3.1 are:



<b>Contract Demand of consumer</b>	<b>Date on which open access will be allowed under sub-section (2) of Section 42 of the EA 2003</b>
Not less than 5 MVA	Publication of Regulation in Gazette
Not less than 2 MVA but less than 5 MVA	April 1, 2006
Not less than 1 MVA	April 1, 2007

9. Regulation 2.1 (k) of the MERC (Distribution Open Access) Regulations define the 'current level of cross-subsidy' as:

*“(k) “Current level of cross subsidy” means, for each financial year, for each approved tariff category and/or tariff sub-category of the Distribution Licensee, and/or for each tariff slab within each such tariff category/ sub-category, the difference between the approved revenue from the sale of electricity, for such financial year, for each such tariff category/sub-category/ tariff slab and the approved cost of supply of electricity to such tariff category/sub-category/ tariff slab, where such difference is a positive value:*

*Provided that the cost of supply shall be calculated using such methodology as may be approved by the Commission from time to time, taking into consideration data availability, data quality and other relevant factors:*

*Provided further that the Commission may approve different methodologies for calculation of cost of supply for different Distribution Licensees in the State or may approve a uniform methodology for all Distribution Licensees Provided also that the current level of cross subsidy shall be adjusted to the extent of any variation, as may be approved by the Commission, as attributable to uncontrollable factors, in accordance with the Tariff Regulations, as may be specified;”*

10. Further, Regulation 13 of MERC (Distribution Open Access) Regulations stipulates the methodology for calculation and payment of cross-subsidy surcharge in the State of Maharashtra. Under this Regulation, distribution licensees were required to submit the methodology for calculation of cross-subsidy surcharge within three months of notification of the Regulations. Relevant paragraphs of the said Regulation are reproduced below:

**“13. Cross -Subsidy Surcharge**

*13.1 Every consumer and person requiring supply of electricity who has been granted open access in accordance with these Regulations shall be liable to pay a cross-subsidy surcharge, as may be stipulated, as a condition for availing of open access:*

*Provided that such cross-subsidy surcharge shall be based on the current level of cross-subsidy of the tariff category / tariff slab and/ or voltage level to which such consumer or person belong or are connected to, as the case may be, and shall not be leviable if such tariff category / tariff slab or voltage level of connection does not bear any current level of cross-subsidy:*

*13.2 Every Distribution Licensee shall, within three (3) months from the date of notification of these Regulations, submit to the Commission the methodology that he proposes to adopt to calculate the current level of cross subsidy within his area of supply:*



*Provided that the Distribution Licensee shall provide to the Commission, full details of all relevant aspects relating to such calculation, including:*

- *sources of information proposed to be used;*
- *proposed sample size; and*
- *agency, if any, through whom the Distribution Licensee proposes to undertake the calculation*

*13.4 The Commission may, based on the methodologies proposed by the Distribution Licensees, stipulate by order, a uniform methodology for calculation of the cross-subsidy surcharge by any class or classes of licensees or by all licensees in the State.”*

## **Regulatory Process**

11. REL submitted the proposed methodology for computation of cross-subsidy surcharge, vide their letter dated 10<sup>th</sup> September 2004. Similarly, TPC submitted “Cost to serve methodology” vide their letter dated 12<sup>th</sup> October 2005. However, MSEDCL submitted neither the methodology for ‘Cost to serve’ nor ‘computation of cross-subsidy surcharge’. Further, submission made by REL was under MERC (Distribution Open Access) Regulations, 2004 and not under revised Regulations of the Commission. Therefore, the Commission had no proposal on record under MERC (Distribution Open Access) Regulations, 2005. In view of this, the Commission directed the distribution licensees to submit their proposals for calculation of cross-subsidy surcharge vide its letter dated 10<sup>th</sup> January 2006. None of the distribution licensees submitted their proposals in this regard within the time period stipulated in the Commission’s letter. However, REL resubmitted its proposal on 26<sup>th</sup> June 2006, after the public hearing.

12. Meanwhile, the Government of India notified the Tariff Policy (TP) on 6<sup>th</sup> January 2006, which prescribes the formula for determination of cross subsidy surcharge for open access transactions. The Commission felt that the same could be adopted after taking into account any State specific issues.

13. In this context, the Commission appointed ‘ABPS Infrastructure Advisory’ (ABPS Infra) as its Consultant to prepare an ‘Approach Paper on Methodology for computation of Cross-Subsidy Surcharge for Open Access transactions’ within the State, for initiating deliberations amongst various stakeholders.

14. The Commission, vide its public notice dated 29<sup>th</sup> May 2006 published the Approach Paper prepared by the Consultant to the Commission and invited comments/suggestions from all stakeholders. The Public Hearing was held on Tuesday, 20<sup>th</sup> June, 2006 at 11.00 hours at Centrum Hall, 1<sup>st</sup> Floor, Centre No.1, World Trade Centre, Cuffe Parade, Mumbai 400 005.

15. Upon detailed scrutiny of various objections, comments, and suggestions made by licensees and other key stakeholders as part of their written submissions as well as during the Public Hearing, the Commission hereby issues this Order covering principles for ‘implementation of cross subsidy surcharge for open access transactions’ as elaborated under subsequent paragraphs. This Order shall be applicable for all distribution licensees and open access users.



### **Applicability of Distribution Open Access Regulations of the Commission**

16. REL in their submission before the Public Hearing as well as during Public Hearing, proposed that the Commission should adopt the methodology proposed in the MERC (Distribution Open Access) Regulations, 2005, for computation of the cross-subsidy surcharge. However, in its submission dated 26<sup>th</sup> June 2006, REL proposed that calculation of 'C' and 'D' in the cross-subsidy surcharge formula prescribed in the Tariff Policy should be carried out on average cost basis.

17. TPC, in their submission, endorsed the recommendation in the Approach Paper that uniform and consistent approach should be adopted for determination of cross-subsidy surcharge.

18. In view of this, the Commission has decided to adopt the methodology prescribed under Tariff Policy (TP) for calculation of cross-subsidy surcharge in the State of Maharashtra. Based on the formula prescribed in TP with assumptions as specified in this Order, the actual values for cross-subsidy surcharge will be calculated during the retail supply tariff determination exercise for the respective Utilities, currently underway. The Commission also directs that till such time "Balancing and Settlement Code" is approved by the Commission, energy accounting shall be done on monthly basis and quantum of cross-subsidy surcharge shall be computed accordingly.

### **Applicability of surcharge to consumers availing Open Access**

19. Mumbai Grahak Panchayat (MGP), in their submission, opined that zero surcharge should be adopted for three categories of consumers, viz., new consumers, additional demand by existing consumers and unfulfilled demand of existing consumers, and the existing open access transactions. MGP also suggested that persons exempted under paragraph 8 of Section 14 of EA 2003 should be exempted.

20. MSEDCL, in their submission, strongly objected to the idea of exempting new consumers from payment of cross-subsidy surcharge on the grounds that it would amount to discrimination between the consumers. On the same grounds, TPC and REL also objected to the idea of exempting new consumers from payment of cross-subsidy surcharge.

21. On the other hand, Maharashtra Elektrosnelt Limited (MEL) suggested that in view of significant shortage of electricity in the State, all existing bulk consumers opting for open access should be exempted from payment of both cross-subsidy surcharge and additional surcharge.

22. Prayas, while opposing the exemption to new consumers on the grounds of discrimination; suggested that since new generation sources need to be added in view of the prevailing supply shortage, all open access consumers should be exempted from payment of cross-subsidy surcharge for two years, provided power is being procured from new sources or from outside the State. Further, Prayas suggested that all OA Consumers procuring power through renewable energy (RE) sources should be exempted from payment of cross-subsidy surcharge.

23. The Approach Paper had suggested that Open Access transactions being undertaken using high cost generation such as liquid fuel based thermal generation as well as renewable energy generation should be exempted from levy of cross-subsidy surcharge.



24. MSEDCL submitted that cross subsidy surcharge should be recovered from all consumers availing Open Access, irrespective of the source of power. Prayas submitted that OA transactions being undertaken using renewable sources of energy should be exempted from the levy of cross-subsidy surcharge.

25. Further, the Approach Paper had suggested that consumers eligible for OA should be permitted to procure power through OA market to the extent the power is not being supplied by the Utility. MSEDCL, in their submission, stated that though the suggestion of permitting consumers to purchase power from other sources is welcome, it should be allowed in accordance with MERC (Distribution Open Access) Regulations, 2005, and therefore cross-subsidy surcharge should be payable for such procurement of power. MSEDCL also opined that it would be difficult to implement the provision of exempting consumers from payment of cross-subsidy surcharge for only part of the power procurement. REL suggested that it would be difficult to implement this provision unless all OA consumers are provided with express feeders.

26. While appreciating the difficulties in implementation of this provision, the Commission finds no rationale in applying cross-subsidy surcharge for that quantum of power purchase which Utility is not in a position to supply. Therefore, the Commission rules that consumers eligible for OA and purchasing power from sources other than the Distribution Licensee will not have to pay cross-subsidy surcharge for that quantum of power which is not being supplied by the Utility. In case of MSEDCL, currently load restriction of 10% and 20% is being imposed on continuous and non-continuous process industries, respectively. Therefore, eligible OA consumers procuring upto that quantum of power will not be subjected to levy of cross-subsidy surcharge. In future, if load restriction changes, the applicability of levy of cross-subsidy surcharge would change accordingly.

27. As regards exemption of OA purchasing power from renewable sources of energy, various Sections of the EA 2003 entrust the Commission with the responsibility of developing policies for promotion of renewable sources of energy. Section 86(1)(e) specifically mandates the Commission to develop policies for sale of renewable energy to any person. In view of the above, the Commission exempts OA consumers purchasing power from renewable sources of energy, from the payment of cross-subsidy surcharge.

28. The Commission had noted in the Approach Paper that OA transactions in the form of 'third party sales' existed in the State on the date of effectiveness of the EA 2003. The Tariff Policy stipulates that transactions which were permitted under Section 43(A)(1)(c) of the Electricity (Supply) Act, 1948, and under Section 27 of the Indian Electricity Act, 1910 will be exempted from levy of cross-subsidy surcharge.

29. However, the TP does not clarify applicability of cross-subsidy surcharge to transactions under Section 28 of the Indian Electricity Act, 1910. Several third party sale transactions were permitted by the State Governments for conventional captive power plants as well as renewable energy technologies such as wind. Currently, these consumers are not paying any cross-subsidy surcharge to the Utilities. If cross-subsidy surcharge is now levied on these transactions, these transactions may become unviable. Further, the Commission is of the opinion that all contracts in existence as on the date of enactment of the EA, 2003 should be honoured. This will ensure sanctity of the contract.

30. Therefore, the Commission rules that all OA transactions as on the date of effectiveness of the EA, 2003 shall be exempted from levy of cross-subsidy surcharge.



31. As regards applicability of cross-subsidy surcharge to new consumers, the Commission has taken a considered view of the objections, and rules that new consumers will not be exempted from levy of cross-subsidy surcharge, in order to avoid discrimination between consumers within the same category.

32. The Commission is of the opinion that OA transactions undertaken using liquid-fuel based thermal generation cannot be exempted, as the objective of cross-subsidy surcharge is to compensate the licensee for the loss of revenue due to the loss of cross-subsidy that will not be available in case the consumer opts for OA. It is upto the OA consumer to assess the competitiveness of the OA transaction keeping all the factors and tariff components in mind.

**Constitution of 'C'**  
**Sources of Power**

33. The Approach Paper had suggested adoption of formula prescribed in the Tariff Policy, wherein weighted average power generation/purchase cost of top 5% power at the margin is considered. The Approach Paper had also discussed whether power purchase under UI arrangement should be considered while calculating cross-subsidy surcharge.

34. MGP supported the approach of adopting the formula stipulated in the Tariff Policy of considering the top 5% of power purchase cost at the margin, rather than considering the average cost of supply. Further, MGP submitted that it may be economical to buy UI power rather than from a power trader. However, MGP expressed concern that in view of the recent UP experience, Utility should draw it only in case of emergency.

35. During the Public Hearing, MSEDCL submitted that it is difficult to estimate purchases under Unscheduled Interchange (UI). Further, MSEDCL opined that UI is just a balancing mechanism and is not a source of high cost power. During the Public Hearing, MSEDCL stated that they were not clear whether the Calculation of "C" needs to be done at the Generator Terminal Boundary or Distribution Licensee Boundary.

36. TPC submitted that 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 Commission adjusted for average loss compensation at the relevant voltage level may be greater than tariff and therefore cross-subsidy surcharge may become zero.

37. On the other hand, REL submitted that calculation of 'C' should be done using average cost of supply.

38. The Tariff Policy (TP) notified by the Government of India had suggested that liquid fuel generation should be excluded while calculating the cross-subsidy surcharge. However, the Approach Paper had suggested that since liquid fuel constitutes significant capacity in case of Mumbai license areas, liquid fuel power generation should be considered while computing cross-subsidy surcharge.

39. MGP submitted that TPC is the major supplier for Mumbai and 33% of their power generation is based on liquid fuel and constitutes 72% of the cost. Hence, MGP requested the Commission to include the cost of liquid fuel based generation while calculating the cost of power.



40. MSEDCL submitted that though the Tariff Policy has excluded liquid fuel based plants, in the case of Mumbai it should be taken into consideration. On the other hand, TPC contended that the Tariff Policy has not considered any exclusion for its application except for what is stated in the TP. Hence, Mumbai's Utilities should not be discriminated on the basis of high quantum of oil based generation.

41. The Commission is of the opinion that exclusion of liquid fuel based generation was to ensure that small liquid fuel generation should not distort the calculation of the cross-subsidy surcharge. The TP could not have and would not have taken into account peculiar situations existing in any particular State. Further, TPC's argument that the Tariff Policy has not considered any exclusions apart from the exclusions explicitly stated, and such exclusion would tantamount to discrimination against Mumbai's Utilities is entirely misplaced as the purpose behind this entire exercise has been to identify such deviations from the TP and bring about consensus on such issues. The Commission is of the opinion that it is the underlying spirit of the TP to consider all sources of electricity which significantly contribute to power procurement of the distribution licensee. The Commission hence, rules that liquid fuel generation should be taken into consideration while calculating cross-subsidy surcharge payable by OA consumers in the license areas of Mumbai licensees.

42. The Commission notes that the intention of the Electricity Act, 2003 and subsequent policy pronouncements is to promote open access in the electricity sector. Further, given that existing capacity has not been released in the open access market, it is expected that new capacity will be added to take advantage of the open access related provisions within the EA 2003.

43. In view of this, it is necessary to look at the composition of 'C' with respect to utilities in Maharashtra. There has not been significant capacity addition in the State of Maharashtra in the recent past. As a result, all generating plants in the State are very old and their fixed cost is likely to be significantly lower than that of new generating stations expected to cater to open access consumers. Therefore, if 'C' is calculated based on the average costs, Utilities would get significant benefit of lower generation cost of old generating stations. This would also result in high cross-subsidy surcharge, which in turn would make open access transactions unviable.

44. Considering all the objections received, the Commission rejects the submission of the Utilities that calculation of 'C' should be carried out on average cost basis. However, UI is not a source of high cost power and therefore, should not be considered for calculation of cross-subsidy surcharge even if Utilities have estimated certain purchases through UI route.

#### ***Accounting of transmission losses and charges in calculation of C***

45. MEL submitted that total transmission charges including losses should not be more than 5% as per the Commission's Order in Case 56 & 57 of 2005 on fossil fuel based Captive power plants, and the Order dated 16<sup>th</sup> August, 2002.

46. REL submitted that it agreed with the formula suggested in the Approach Paper that the transmission losses should be considered, provided the cost of power purchase "C" is determined at generator bus bar and transmission charges are included in wheeling charges "D".

47. TPC submitted that transmission loss compensation should be included in the formula. Further, for intra-State transactions, loss compensation should be on the basis of transmission loss approved by the Commission, while for inter-State transactions, weekly average loss applicable to that particular transaction should be adopted.



48. In this regard, the Commission is of the opinion that transmission losses should be incorporated in the calculation of cross-subsidy surcharge. For intra-State transactions, transmission loss prescribed by the Commission for the STU should be considered, while for inter-State transactions, additional loss compensation as provided by CERC in its Open Access Regulations should be considered.

**Cross-subsidy surcharge as absolute number or as a percentage of cost of supply**

49. The Approach Paper had recommended that the cross-subsidy should be calculated for the base year and trajectory for reduction in cross-subsidy surcharge should be set in such a manner that the surcharge reduces to 20% of the base value by 2010-11.

50. REL expressed concern over the suggestion that cross subsidy surcharge is to be computed only once, while it is clear from the definition of current level of cross subsidy that it is required to be computed in each financial year depending upon the prevailing cost of supply and tariff rates from each category/sub category. In view of the above, REL submitted that cross subsidy surcharge will vary from year to year depending upon the cost of supply and prevailing tariffs until the subsidy is eliminated as envisaged under S 42(2) of the EA 2003. MSEDCL submitted that the cost of service is dependent on State specific characteristics such as power purchase portfolio, consumer mix, revenue profile, and load characteristics. MSEDCL commented that it is assumed in the Approach Paper that highest cost power is being sold to the 'subsidizing' consumers. MSEDCL submitted that most of the subsidizing consumers having shiftable loads, and have the ability to consume power in non-peak hours.

51. MSEDCL submitted that the reduction in the cross subsidy surcharge is possible only with the reduction in the existing cross subsidy between the consumer categories. MSEDCL further submitted that it would not be practical to fix the cross subsidy surcharge as a number once and reduce the same in a predetermined trajectory. MSEDCL opined that under the MYT scenario, it would be relatively easy to determine the movement of Cost of Supply (COS) of the Utility, and hence a trajectory of reduction of the cross-subsidy surcharge as a proportion of COS can easily be specified.

52. In this regard, MSEDCL submitted that the approach of taking current level of cross subsidy as a percentage of current average cost of supply is more suitable than reduction in cross-subsidy in absolute terms. MSEDCL contended that initial level of cross-subsidy should be calculated as a percentage of average cost of supply and this percentage should be reduced to 20% of the original value.

53. REL submitted that cross-subsidy surcharge should be calculated every year and the trajectory for reduction in cross-subsidy surcharge would depend on the Commission's decision on balancing the tariffs against the cost of supply.

54. Prayas submitted that it is difficult to reconcile some of the provisions of the Tariff Policy. Prayas submitted that cross-subsidy, tariff determination and cross-subsidy surcharge are interlinked. Section 8.5.1 essentially relies on cost to serve for particular consumer class for computing cross-subsidy, but in Section 8.3.2 it requires SERC to fix tariff within +/- 20% of the average cost of supply. In view of the above, Prayas suggested that the Commission should adopt balanced approach and should link cross-subsidy surcharge to tariffs, rather than specify an absolute number.

55. The Approach Paper has suggested that the period prescribed under the Tariff Policy for reduction of cross-subsidy surcharge should be adopted by the Commission.



56. MGP submitted that in view of Clauses 8.5 and 8.3.2 of the Tariff Policy, the cross subsidy surcharge has to be decided upfront today and also the trajectory of reduction has to be specified. MGP further stressed that there is no provision in the Tariff Policy that requires cross-subsidy surcharge to be calculated every year. MGP therefore stressed that the cross-subsidy surcharge should be decided for the next 5 years.

57. REL submitted that cross-subsidy surcharge should be computed based upon the prevailing numbers so as to determine current level of cross subsidy surcharge in each financial year. REL further submitted that the consumer needs to know the trajectory of reduction in cross subsidy surcharge, which would depend on the Commission's decision on balancing the tariff against the cost of supply.

58. MSEDCL submitted that it did not support the proposed approach of fixing the cross-subsidy surcharge for base year with specification of trajectory for reduction in subsequent years. MSEDCL further suggested that the cross subsidy surcharge should be decided as a proportion of the average cost of supply.

59. The Commission notes that for consumers to enter into OA transactions, it would be necessary to ensure certainty of cross-subsidy surcharge that the consumers will have to pay. If the cross-subsidy surcharge is to be decided on 'year-on-year' basis, the surcharge will not only be a function of the power purchase cost of the distribution licensee but also the consumer mix (which in turn would depend on the number of consumers opting for OA) and efficiency of the distribution licensees. This would create significant uncertainty for the open access consumers in the State. For instance, if a consumer seeks OA over the Utility's network for a period of 5 years and enters into a power purchase contract for the same period, on the basis of the cross-subsidy surcharge indicated for FY 2006-07, the transaction would have certain cost economics. Similarly, if there are ten large consumers who opt for open access during say, FY 2007-08, the sales mix of the Utility would change and the cost structure of the Utility would also change resulting in a different cross-subsidy surcharge, which could make the OA transaction unviable and unfeasible.

60. In this regard, the Commission also notes that Prayas has suggested that no cross-subsidy surcharge should be levied on open access transactions in the State for a period of two years, if power is being sourced from a new source or from outside the State.

61. The Commission holds that to avoid the complications of cross-subsidy as a percentage of tariffs every year and smoother implementation, the formula prescribed by the Government of India under the Tariff Policy be adopted. This formula essentially de-links computation of cross-subsidy surcharge from the cost of supply calculations by provision of proxy in the form of cost of power for station at margin with associated costs of transmission and distribution. Any attempt to link cross-subsidy surcharge to tariffs would result in negation of this important benefit of the formula prescribed in TP. If the cross-subsidy surcharge is linked to prevailing tariffs and computation is undertaken every year, it would result in dynamic formula in which increase/decrease in OA consumers would impact surcharge applicable to all OA consumers. This would lead to significant uncertainty to consumers availing OA. Further, it would result in uncertainty to Utilities as it would be difficult to compute the income arising out of cross-subsidy surcharge. Therefore, the Commission rules that cross-subsidy surcharge should not be linked to tariffs and calculation of cross-subsidy surcharge should not be undertaken every year. Thus, the Commission rules that cross-subsidy surcharge should be calculated for the base year and this surcharge should be reduced to 20% of the opening level of cross-subsidy surcharge by 2010-11.



### **Reference date for calculation of cross-subsidy**

62. The Approach Paper had suggested that the base year for computation of cross-subsidy should be FY 2006-07.

63. MGP submitted that the calculation of cross subsidy surcharge should be done with respect to the year in which the Electricity Act, 2003 was notified, i.e., FY 2003-04. MGP added during the Hearing that as per Section 66 of the EA 2003, the Commission shall endeavour to promote the development of a market as provided in the National Electricity Policy. Therefore, the cross-subsidy surcharge should be calculated from the date of enactment of the EA, 2003 i.e., from FY 2003-04.

64. However, all Utilities, i.e., MSEDCL, REL and TPC supported the proposal of the Commission to determine the cross-subsidy surcharge for the year 2006-07.

65. The Commission notes that though the Electricity Act was enacted in 2003, the Tariff Policy which prescribed the formula was notified in 2006. Further, the Commission has always adopted the regulatory principle wherein the decisions have been implemented prospectively. In view of this, the Commission rules that cross-subsidy surcharge should be calculated during the tariff determination exercise for the year 2006-07.

### **Payment for Back-up Supply**

66. MGP submitted that when the arrangement of the OA consumer with generator fails, for scheduled interruption, the consumer should be permitted to identify another source, while for unscheduled interruption, the generators should be charged UI charges. MGP further requested the Commission to provide guidelines in respect of back-up supply arrangement without permitting Utilities to delay implementation of OA any further.

67. In this regard, the Commission is of the opinion that the distribution licensee should be suitably compensated if licensee is required to provide back-up supply. However, the licensee may have to provide metering and other consumer related facilities to the consumer, costs of which will have to be taken into account while deciding the charges for provision of back-up supply.

### **Applicability of Additional Surcharge and its Computation**

68. As regards 'Additional Surcharge', the Tariff Policy stipulates,

*"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"*

69. REL suggested that since the distribution licensee is the default service provider for the Open Access consumer in its license area, it is entitled to recover additional surcharge towards fixed cost arising out of its obligation to supply to all the consumers in its license area.

70. The Commission is of the opinion that the applicability of Additional Surcharge in case of any OA transaction would differ from one case to another, and a standard formulation cannot be specified for determination of the Additional Surcharge. Further, considering the prevailing



supply shortages in the State, there are not expected to be any stranded costs, and hence, Additional Surcharge will typically be considered as 'zero'. The Tariff Policy clearly lays the onus on the existing distribution licensee to prove incidence of stranded costs of power purchase or other fixed costs which are to be recovered. Hence, the Commission rules that Additional Surcharge will be determined on 'case to case' basis and would be payable only if the distribution licensee is able to conclusively demonstrate the incidence of any stranded costs, as stated in the Tariff Policy. In all other cases, Additional Surcharge will be considered as 'zero'.

71. Considering all the above issues, the methodology to be adopted for computation of the cross-subsidy surcharge is given in **Annexure 3** to this Order, for ready reference.

With this Order, the Commission disposes off Case No. 6 of 2006.

Sd/-  
(S. B. Kulkarni)  
Member

Sd/-  
(A. Velayutham)  
Member

Sd/-  
(Dr. Pramod Deo)  
Chairman



(Smt. Malini Shankar)  
Secretary, MERC

**Annexure 1: List of Objectors in the matter of (Case 9 of 2006)**

<b>S.No</b>	<b>Name of the person</b>	<b>Organization</b>
1	Mr. Anil D. Palamwar	MSEDCL
2	Mr. R.R.Mehta	REL
3	Mr. S.A.Puranik	BEST
4	Mr. J.D.Kulkarani	TPC
5	Mr. R.Ashok Kumar	MEL
6	Dr. Pendse	MGP
7	Mr. Shantanu Dixit	Prayas



**Annexure 2: List of Participants who attended the Public Hearing held on 20<sup>th</sup> June 2006**

<b>S.No</b>	<b>Name of the person</b>	<b>Name of the institution</b>
1	Shri Pankaj Pandya	REL
2	Shri Siddarath	REL
3	Shri Sharad Nath	REL
4	Shri R.R.Mehta	REL
5	Shri Kapil Sharma	REL
6	S.A.Puranik	BEST
7	Shri A.G.Patil	BEST
8	Shri C.H..Sindhe	BEST
9	Shri S.N.Pawar	BEST
10	Shri M.R.Dharaskar	BEST
11	Shri S.R.Khedkar	BEST
12	Shri A.D.Palmwar	MSEDCL
13	Shri A.M.Varhobar	MSEDCL
14	Shri S.R.Patil	MSEDCL
15	Shri A.J.Deshpande	MSEDCL
16	Shri Anil D.Palamwar	MSEDCL
17	Shri J.D.Kulkarani	TPC
18	Shri V.H.Wagle	TPC
19	Shri P.K.Kukde	TPC
20	Shri N.P.Shahar	NTPC
21	Shri E.B.Kapse	MPECS
22	Shri R.V.Kulkarani	MPECS
23	Shri A.V.Kulkarani	MPECS
24	Shri S.B.Galande	Mula Pravara
25	Shri Shantanu Dixit	Prayas
26	Dr.Pendse	Mumbai Grahak Panchayat
27	Dr..S.L.Patil	Thane Belapur Industries
28	Shri R.Ashok Kumar	MEL
29	Shri Prit Pal Singh	MEL



### **Annexure 3: Formula to be adopted for computation of Cross-subsidy surcharge**

$$S = T - [C (1 + L / 100) + D],$$

Where,

- § *S is the surcharge*
- § *T is the Tariff payable by the relevant category of consumers;*
- § *C is the Weighted average cost of power purchase of top 5% at the margin excluding renewable power and purchase under UI*
- § *D is the Wheeling charge*
- § *L is the system loss for the applicable voltage level, expressed as a percentage*

L should be inclusive of transmission loss. For intra-State transactions, transmission loss prescribed by the Commission for the STU should be considered, while for inter-State transactions, additional loss compensation as provided by CERC in its Open Access Regulations should be considered

#### **Salient Features**

1. All OA transactions will have to pay the above cross-subsidy surcharge, except in the following cases:
  - § For the quantum of power which is not being supplied by the Utility as per the Orders issued by the Commission from time to time. Currently, load restriction of 10% and 20% is applicable to continuous and non-continuous industry. Therefore, consumers in these categories will be permitted to purchase this quantum of energy without payment of cross-subsidy surcharge.
  - § OA consumers purchasing power from renewable sources of energy.
  - § OA transactions as on the date of effectiveness of the EA 2003
2. Cross-subsidy surcharge should be calculated for the base year of FY 2006-07 and this surcharge should be reduced to 20% of the opening level of cross-subsidy surcharge by 2010-11.
3. New consumers will not be exempted from levy of cross-subsidy surcharge
4. OA transactions undertaken using liquid fuel based thermal generation will also have to pay the above cross-subsidy surcharge.

