

**BEFORE THE KARNATAKA ELECTRICITY REGULATORY COMMISSION**

**No.16, C-1, Miller Tank Bed Area, Vasanthanagar  
BANGALORE – 560 052**

**Dated 28<sup>th</sup> day of January, 2020.**

**Present:**

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|-----------------------------|----------|
| 1. Sri. Shambhu Dayal Meena | Chairman |
| 2. Sri H.M. Manjunatha      | Member   |
| 3. Sri M.D. Ravi            | Member   |

**In the matter of:**

**Reconsideration of Cross Subsidy Surcharge (CSS) determined by the Commission in its Tariff Orders dated 02.03.2015 and 30.03.2016, -Reg, consequent to the directions given by Hon'ble ATE in Appeal Nos.259/16 & 270/15 on Tariff Order dated 02.03.2015 and Appeal No.386/17 on Tariff Order dated 30.03.2016.**

**I. Brief Facts of the case:**

- 1) The Karnataka Electricity Regulatory Commission (hereinafter referred to as 'the Commission') had passed the Tariff Order, 2015 on 02.03.2015, carrying out the Annual Performance Review for FY14 and approving the revised Annual Revenue Requirement for FY14, besides approving the Annual Revenue Requirement for FY16 and the Retail Supply Tariff for FY16. In the above Order, the Commission had also determined the Cross-Subsidy Surcharge (CSS) applicable to FY16. Aggrieved by the CSS determined by the Commission, Fortune Five Hydel Projects Pvt. Ltd. (hereinafter referred to as 'Appellant – 1'), a company registered under the Companies Act, 1956 and having its registered office at Plot No.173, 3<sup>rd</sup> Main, 11<sup>th</sup> Cross, Dollars Colony, RMV 2<sup>nd</sup> Stage, Bangalore – 560 094, and having 100 MW Wind Power Projects in Bijapur District of Karnataka State, filed an appeal No.259/2016

before the Hon'ble Appellate Tribunal for Electricity (ATE), under Section 111 of the Electricity Act, 2003, being Appeal No.259/16.

- 2) Similarly, the Commission had issued Tariff Order, 2016 dated 30.03.2016 duly carrying out the APR for FY15 and approved the revised Annual Revenue Requirement for FY15, in addition to approving the Annual Revenue Requirement for the MYT period FY17 to FY19 and the Retail Supply Tariff for FY17, under the Multi-year Tariff (MYT) framework. The Appellant-1, again aggrieved by the determination of the CSS for FY17 in the above Order, filed an appeal before the Hon'ble Appellate Tribunal for Electricity (ATE), being Appeal No.386/17.
- 3) In both the above cases, the Commission was made the first Respondent and Bangalore Electricity Supply Company Ltd., (BESCOM), was made the second Respondent. The Commission appeared before the Hon'ble Appellate Tribunal for Electricity through its counsel and submitted its response to the issues raised by the Appellant-1. The Hon'ble ATE, considering the submissions made by the Appellant -1 and the Respondents, passed an Order on 28.08.2018, remitting back the matter to the Commission for fresh consideration, after affording reasonable opportunity to both the parties and to dispose of the matter in accordance with law, within a period of six months from the date of appearance of the parties before the Commission. The Appellant-1 and BESCOM were directed by the Hon'ble ATE to appear before the Commission on 26.09.2018 at 11 A.M., without further notice. Accordingly, the counsel for the Appellant-1, appeared before the Commission on 26.09.2018 and sought a date for hearing the matter. The Commission as per the request of the counsel for the Appellant-1, scheduled the hearing on 23.10.2018. Subsequently, the matter was heard by the Commission during the period from November, 2018 to January, 2020. (hearings were held on 20.11.2018, 17.01.2019, 21.02.2019, 26.03.2019, 25.04.2019, 20.06.2019, 11.07.2019, 08.08.2019, 17.09.2019, 03.10.2019, 05.11.2019, 21.11.2019, 26.11.2019, 12.12.2019 and 07.01.2020.)
- 4) Earlier, Renewable Energy Developers Association of Karnataka (REDAK) (hereinafter referred to as 'Appellant - 2'), a society registered under the

provisions of Karnataka Societies Registration Act, 1960, and having its office at Hitananda-II, 48, Lavelle Road, Bengaluru-560 001, also filed an appeal before the Hon'ble ATE, being the Appeal No.270/2015, challenging the Tariff Order 2015 dated 02.03.2015, passed by the Commission to a limited extent of determination of CSS. In this Appeal also the Commission and the BESCOM were made Respondents. The Commission made submissions through its counsel. The Hon'ble ATE, after considering the submissions made by the parties, passed orders on 18.09.2018, remitting back the matter to the Commission, with the direction to pass appropriate order in accordance with law, after affording reasonable opportunity of hearing to the Appellant-2 and the BESCOM and to dispose of the matter within a period of six months from the date of appearance of the parties before the Commission. The Appellant-2 and BESCOM were directed by the Hon'ble ATE to appear before the Commission on 09.10.2018, for collecting a necessary date of hearing. The BESCOM appeared on 09.10.2018 and requested for a hearing date. The Commission scheduled the hearing date on 30.10.2018. The matter came up before the Commission for hearing during the period from October, 2018 to January, 2020 (hearings were held on to 30.10.2018, 20.11.2018, 17.01.2019, 21.02.2019, 26.03.2019, 25.04.2019, 20.06.2019, 11.07.2019, 08.08.2019, 17.09.2019, 03.10.2019, 05.11.2019, 21.11.2019, 12.12.2019 and 07.01.2020.)

- 5) It is worthwhile to note that, the Commission on 15.10.2019, issued notice to REDAK to appear before the Commission on 05.11.2019 at 3 P.M, since REDAK did not appear on 03.10.2019. The notice sent through registered post, was returned by the postal authorities on 17.10.2019 with an endorsement that "No such person in this address". Therefore, the Commission issued one more notice on 25.11.2019, through e-mail, directing the Appellant-2 to appear before the Commission on 12.12.2019 at 3 P.M. Since the Appellant-2 did not appear on the above date, one more notice was issued on 24.12.2019, directing the Appellant-2 to appear before the Commission on 07.01,2020 at 3 P.M. On 07.01.2020, Sri Raghuraj Gujjar, Vice Chairman, REDAK, authorised Sri Raghavendra Prasad, Advocate to appear on behalf of REDAK and make submissions and also filed a Vakalat. The counsel for REDAK filed a memo on 07.01.2020, for adopting the same arguments filed in the Case of Fortune Five Hydel Projects Pvt. Ltd.

6) The Commission notes that the issues raised by the Appellant-1 and Appellant-2, before the Hon'ble ATE are similar in nature. Therefore, the matter referred to by the Hon'ble ATE is clubbed together in this order and a common order is being passed.

## **II. Submissions made by the Appellant-1 and the Respondent BESCO:**

### **1. Submissions made by M/s Fortune Hydel Projects Pvt. Ltd., with respect to the computations furnished by the Commission:**

- i) The Commission has furnished the working for marginal cost (5%) of power purchase excluding liquid fuel and renewable energy, but has not furnished the working for average tariff.
- ii) The average tariff is understood to have been worked out by the Commission considering both the fixed charges and the energy charges, which is higher than the energy charges notified by the Commission in the impugned Order.
- iii) The average realisation rate should be either lower or at the worst be equal to the energy charges, as the distribution company loses only the energy charges from its consumers who opt for open access or wheeling. Therefore, if demand charges are included in CSS calculations, it would lead to wrongful gain to the ESCOMs which is worked out by the Appellant as 35 paise to 71 paise for HT2(a) category, 8 paise to 48 paise for HT2(b) category and 2 to 42 paise in case of HT2(c) category. Such excess recovery is not legally permissible as CSS is compensatory in nature. In this regard, the Appellant-1 has submitted the Orders of Hon'ble Supreme Court in Sesa Sterlite Ltd. Vs Orissa Electricity Regulatory Commission (2014) 8 SCC 444, in support of its submission that CSS is compensatory in nature. The Appellant-1, referring to the above order of the Hon'ble Supreme Court, has highlighted that the CSS is meant to compensate the distribution licensee from the loss of Cross Subsidy that such distribution licensee would suffer due to consumers opting for open access. In this regard the Appellant-1 has also relied upon para 8.5.1 of the National Tariff Policy, wherein it is provided that the CSS must not be fixed in such a

manner so as to inhibit competition. The Appellant-1 referring to the formula as prescribed in the National Tariff Policy, which was amended in 2016, has stated that the CSS has to be computed as per the formula prescribed and if it exceeds the upper limit of 20%, the upper limit of 20% has to be fixed. In this context the Appellant-1 has furnished calculations to work out CSS varying between 23 paise to 108 paise, depending upon the category of consumers.

- iv) Appellant-1 has also stated that, as per the proviso to Section 42 (2) of the Electricity Act, 2003, the CSS has to be reduced progressively, whereas the CSS determined by the Commission, in its Tariff Order shows increase. Thus, the approach adopted by BESCO is in contravention to the National Tariff Policy. In view of the above the Appellant-1 has requested to reject the CSS proposal of BESCO for FY2019-20 and also review the CSS determined for the past periods.
- v) The counsel for the Petitioner, on 07.01.2020 requested the Commission to adopt the same submissions made above, in the case of READK (Appellant-II) also.

## 2. **Submissions made by BESCO, the respondent:**

- i) BESCO has requested the Commission to dismiss the appeal in-limine against the respondent, as the respondent has not violated any law or Rules or Regulations.
- ii) The appeal is time barred as it was instituted on 23.11.2015, after a lapse of 8 months and 20 days from the date of the order (02.03.2015) and not within the statutory period of 45 days prescribed in the Electricity Act, 2003.
- iii) The average realisation rate should include all the charges and not energy charges alone, as rebates given on energy charges might lead to loss of revenue to ESCOMs. Energy charge is one of the components to arrive at Average Realisation Rate (ARR) and cannot be separated from ARR. Thus, the ARR could be more than the energy charges for the particular category. The CSS is based on the average realisation rate and the cost of supply as per the formula prescribed in the Tariff

Policy. Hence, the averment of the Appellants that the CSS is inflated is baseless.

- iv) Further, considering the data as per the Tariff Order 2016, it is indicated by BESCO that, as against the fixed expenses of 235 paise per unit, it is realising only 57 paise per unit as the fixed charges through tariff. Hence, the energy charges alone cannot be considered for calculation of CSS and ARR is correct.
- v) Referring to clause 6.1.3 (proviso) of the WBA, it is submitted that the statement of the Appellant that the consumers do not pay energy charges for the units wheeled by the generating company, is misleading.
- vi) Referring to the Orders of Hon'ble Supreme Court in Sesa Sterlite Ltd. Vs Orissa Electricity Regulatory Commission (2014) 8 SCC 444, it is submitted that, the operative portion of the judgment establishes that it is the consumer's obligation to pay the CSS.
- vii) The Commission has noted that the data of sales and revenue at each voltage level is not available to ascertain voltage-wise cross subsidy levels and therefore, in the order dated 02.03.2015, the Commission has indicated the variation of anticipated category-wise ARR with respect to overall average cost of supply, as a requirement of Tariff Policy.
- viii) The Appellant-2 being a generator is not affected in any manner by revision of retail supply tariff.

### **III. Issues for consideration of the Commission:**

The Commission has examined the issues raised by the Appellant-1 and Appellant-2 before the Hon'ble ATE and the submission made by the Appellants and the Respondent BESCO in the current proceedings. Based on the submissions made, the following issues have been considered by the Commission:

The Appellant-1 has submitted that:

- i) The written comments and the oral submissions made by Greenco Energy Pvt. Ltd., holding company of the Appellant-1, have not been considered while passing the impugned orders;

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- ii) Detailed computations of CSS for various categories is not furnished; and
  - iii) The calculation of CSS as the difference between the average realisation rate and the cost of supply at 5% margin is erroneous, as the average realisation rate considered is higher than the energy charge and that it should be lower than or equal to the energy charges.

**The above issues and the decision of the Commission are discussed in the following paragraphs:**

**A. Issue (i): Non-Consideration of submissions made by Greenco Energy Pvt. Ltd.:**

- 1) The Commission notes that, the Appellant-1 being an independent company under the Companies Act, 1956, has not made any submissions and has relied upon the submissions made by its holding company. Nevertheless, the issue raised by the holding company i.e. Greenco Energy Pvt. Ltd., pertains to interpretation of the formula specified in the Regulations issued by the Commission, under its legislative function.
- 2) The Commission has issued the Regulations after following the due process of law regarding prior publications, in order to maintain transparency. All the stakeholders were given adequate opportunity of being heard before finalising these Regulations. Hence the Regulations issued by the Commission have reached finality and is binding on all parties. Further, the interpretation of the parameter "T" in the CSS formula prescribed in the Tariff Policy, has been discussed in the subsequent paragraphs of this order.

**In view of the above, the question of non-consideration of the submissions made by its holding company does not arise.**

**B. Issue (ii): Furnishing of detailed calculations for CSS:**

The counsel for the Appellant-1, on 16.09.2019 requested the Commission for furnishing the detailed calculation regarding CSS for various categories. The Commission has furnished the excel sheet indicating the

calculation along with a brief note to the Appellant-1, which was received by the counsel to the Appellant-1 on 17.09.2019.

**In view of the above, the commission has complied with the directions of the Hon'ble ATE, in its order dated 28.08.2018, to furnish the detailed calculations of the computation of CSS, for various categories of consumers.**

**C. Issue (iii): Calculation of CSS:**

- 1) The Appellant-1 in his submissions has relied on para 8.5.1 of the National Tariff Policy and the Supreme Court Order in the case of Sesa Sterlite Ltd. Vs Orissa Electricity Regulatory Commission (2014) 8 SCC 444. The para 8.5.1 **of the National Tariff Policy, 2006** is reproduced below:

**“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.---

**a) As per Tariff Policy 2016:**

**“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.

*SERCs may calculate the cost of supply of electricity by the distribution licensee to consumers of the applicable class as aggregate of (a) per unit weighted average cost of power purchase including meeting the Renewable Purchase Obligation; (b) transmission and distribution losses applicable to the relevant voltage level and commercial losses allowed by the SERC; (c) transmission, distribution and wheeling charges up to the relevant voltage level; and (d) per unit cost of carrying regulatory assets, if applicable.---*

- 2) It is noted that, the Appellant-1 has highlighted only a part of the above paras which states 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. However, the above para itself states that cross subsidy surcharge, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. Thus, while determining the CSS a balance has to be maintained so that interest of both distribution licensee as well as the person seeking open access is protected. Keeping this in view and to strike a balance between the distribution licensee and the open access consumer, the formula for working out the CSS has been specified in the Tariff Policy, so as to ensure that the CSS is reasonable.

- 3) The Tariff Policy 2006 has prescribed the following 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.'*

4) The Commission, in its KERC (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity) Regulations, 2006 and Karnataka Electricity Regulatory Commission (Terms and Conditions for Open Access) (First Amendment) Regulations, 2006, has adopted the above formula and in its Tariff Orders issued subsequently, the Commission has been computing the CSS based on the above formula, till such time the Regulations were amended consequent to the issue of the revised Tariff Policy, 2016. **The above OA Regulations came into effect from 19.02.2014. Thus, the Commission, in its Tariff Order dated 02.03.2015 and Tariff Order dated 30.03.2016, has computed the CSS based on the above formula.**

5) Subsequently, in 2016, the Tariff Policy was revised and the surcharge formula was modified as indicated below:

*“Surcharge formula:*

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

*Where S is the surcharge*

*T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation*

*C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation*

*D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level*

*L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level*

*R is the per unit cost of carrying regulatory assets.*

*Above formula may not work for all distribution licensees, particularly for those having power deficit, the State Regulatory Commissions, while keeping the overall objectives of the Electricity Act in view, may review and vary the same taking into consideration the different circumstances prevailing in the area of distribution licensee.*

Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.

Provided further that the Appropriate Commission, in consultation with the Appropriate Government, shall exempt levy of cross subsidy charge on the Railways, as defined in Indian Railways Act, 1989 being a deemed licensee, on electricity purchased for its own consumption."

- 6) The Commission, in its Regulations namely, KERC (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity) (Third Amendment) Regulations, 2017 and Karnataka Electricity Regulatory Commission (Terms and Conditions for Open Access) (Fourth Amendment) Regulations, 2017, has adopted the above formula and has been computing the CSS based on the above formula, in its Tariff Orders issued subsequently. **The above Regulations came into effect from 19.12.2017.**
- 7) Thus, the above formula determines as to how much the distribution licensee has to be compensated in terms of CSS, as highlighted by the Hon'ble Supreme Court in the case of Sesa Sterlite Ltd. Vs Orissa Electricity Regulatory Commission (2014) 8 SCC 444.
- 8) It may be noted here that as per Tariff Order 2015, the Cross Subsidy (i.e. tariff for the category minus the average cost of supply) and the CSS levied for BESCOM are as follows:

**a) 66 Kv and above level**

Category	Average cost of supply for BESCOM	Tariff (Average Realization rate for BESCOM)	Cross subsidy per unit	CSS at 66 kV and above level	CSS minus cross subsidy	Paise per unit
						Percentage of Cross subsidy recovered through CSS
	1	2	3 = 2 - 1	4	5 = 4 - 3	6 = (4 / 3) x 100
HT2(a)	559	678.46	119.46	97.91	-21.55	81.96
HT2(b)	559	788.43	229.43	194.29	-35.14	84.68
HT2©	559	713.20	154.20	128.56	-25.64	83.37

**Note:** The average realization rate considered in the Tariff Order for computing CSS is for the State as a whole, so as to arrive at a uniform CSS. However, in the above table the realization rate and average cost of supply corresponding to BESCOM is indicated, as the cross subsidy lost by BESCOM depends upon its ACS and ARR.

## b) HT level (11 kV / 33 kV)

Category	Paise per unit					
	Average cost of supply for BESCOM 1	Tariff (Average Realization rate for BESCOM) 2	Cross subsidy per unit 3 = 2 - 1	CSS at HT level 4	CSS minus cross subsidy 5 = 4 - 3	Percentage of Cross subsidy recovered through CSS 6 = (4 / 3) x 100
HT2(a)	559	678.46	119.46	62.96	-56.50	52.70
HT2(b)	559	788.43	229.43	159.35	-70.08	69.45
HT2(c)	559	713.20	154.20	93.61	-60.59	60.71

9) Thus, from the above table it is clear that, BESCOM is not realising the entire cross subsidy from the consumers opting for open access. In fact, BESCOM, depending upon the voltage level and the category of consumers, is realising CSS in the range of 52.70% to 84.68% of the cross subsidy.

10) Similar analysis as per Tariff Order dated 30.03.2016 is as indicated below:

## a) 66 Kv and above level

Category	Paise per unit					
	Average cost of supply for BESCOM 1	Tariff (Average Realization rate for BESCOM) 2	Cross subsidy per unit 3 = 2 - 1	CSS at 66 kV and above level 4	CSS minus cross subsidy 5 = 4 - 3	Percentage of Cross subsidy recovered through CSS 6 = (4 / 3) x 100
HT2(a)	596	727.73	131.73	118	-13.73	89.58
HT2(b)	596	906.34	310.34	253	-57.34	81.52
HT2(c)	596	750.54	154.54	128	-26.54	82.83

**Note:** The average realization rate considered in the Tariff Order for computing CSS is for the State as a whole, so as to arrive at a uniform CSS. However, in the above table the realization rate and average cost of supply corresponding to BESCOM is indicated, as the cross subsidy lost by BESCOM depends upon its ACS and ARR.

## b) HT level (11 kV / 33 kV)

Category	Paise per unit					
	Average cost of supply for BESCOM 1	Tariff (Average Realization rate for BESCOM) 2	Cross subsidy per unit 3 = 2 - 1	CSS at HT level 4	CSS minus cross subsidy 5 = 4 - 3	Percentage of Cross subsidy recovered through CSS 6 = (4 / 3) x 100
HT2(a)	596	727.73	131.73	86	-45.73	65.29
HT2(b)	596	906.34	310.34	222	-88.34	71.53
HT2(c)	596	750.54	154.54	96	-58.54	62.11

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- 11) The above tables indicate that, BESCO depending upon the voltage level and the category of consumers, is realizing in the range of 62.11% to 89.58% of the cross subsidy through CSS.
- 12) **Thus, the above analysis indicates that the CSS being levied is partially compensating the cross subsidy lost by BESCO and there is no undue profit earned by BESCO, as claimed by the Appellants.**
- 13) Regarding the gradual reduction of CSS, it is worthwhile here to mention that the reduction should be in terms of percentage and not in absolute terms as indicated by the Appellants. It is but natural that in absolute terms the CSS increases due to increase in the input costs and inflation. As such the contention of the Appellants that the CSS is increasing and is against the provisions of the Electricity Act, 2003, does not hold water. In fact, in the Tariff Order 2015, the Commission had considered 80% of the CSS as worked out based on the formula and in the next Tariff Order 2016, the Commission had determined the surcharge at 75% of the CSS as worked out based on the formula, indicating a reduction of 5% when compared to the previous order. **Thus, the Commission has endeavoured to reduce the CSS year on year in percentage terms and therefore, the contention of the Appellants that the CSS is increasing is without any basis and hence not sustainable.**
- 14) The issue raised by the Appellant on the interpretation of the term "T" in the surcharge formula is clarified as under:
- It is pertinent to note that, the Hon'ble Tribunal in several cases has held that:
- (a) The tariff computation has to include both fixed charges and energy charges and cannot be only on the basis of energy charges.
  - (b) The Tariff for the purposes of 'T' in the formula shall be the Average Billing Rate which shall be determined by dividing the total expected revenue from the consumer category by the total expected sale to the category.

15) In this regard, the following decisions of the Hon'ble Tribunal, which deal with the identical formula, as in the present case, are relevant:

i) **Appeal No. 181 of 2015 – Byrnihat Industries Association v Meghalaya Electricity Regulatory Commission & Anr. (Judgment dated 26.05.2016)**

“ ...

18. The Cross-Subsidy Surcharge is the difference between the tariff for category of consumer and the cost of supply. CSS is determined by using the figures of Tariff (T) for the relevant category of consumer for the year in question and cost of power purchase (C) of top 5% at margin excluding liquid fuel based and renewable power in that year.

It is observed that Appellant has made reliance on the Table 8.2 of the Impugned Order i.e. “Category of consumer wise tariffs approved by the Commission” and used approved Energy Charge of Rs 5.40/KVAH as the Tariff for computation of Cross Subsidy Surcharge.

19. In the National Tariff Policy formula, “T” is the Tariff payable by relevant category of consumers. The Tariff has two components viz. Fixed/ Demand charge and Energy charge and hence, for the purpose of calculating cross- subsidy surcharge, the State Commission has considered Average Billing Rate in Rs/ KWh for the respective category as “T” as it reflects the effective combination of fixed/demand and energy charges payable by that category of consumers. We are in agreement with the formulation of the State Commission for using Average Billing Rate for a consumer category to be used while determining Cross Subsidy Surcharge.”

ii) **Appeal No. 178 of 2011 – Reliance Infrastructure Limited (R-Infra) vs Maharashtra Electricity Regulatory Commission & Ors. (Judgment dated 02.12.2013)**

“8. We shall now take up each of the above issues one by one. Before we attempt to address each of the above issues, it would be profitable to explain the steps that are required to be taken to fix the Tariff and CSS. These are:

- Category wise expected sale to each of the category of consumer is estimated on the basis of previous year consumption and CAGR computed using historical data.

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- Sum of expected category wise sale is the total sale of power by the Distribution Licensee during the year. Let it be 'SoP'.
  - Estimated transmission and distribution losses are added to total sale of power to consumers. Let it be 'PP'
  - Cost of power purchase is calculated on the basis of tariff for each of the sources available and selected based on merit order to meet the power purchase requirement of Distribution Licensee. Let it be 'CoPP'
  - Other elements of tariff such as RoE, Interest on loan, Interest on working capital, O&M charges, Depreciation etc are also determined on the basis of norms specified in relevant regulations. Sum these charges is Wheeling Charges. Let these be 'WC'
  - Sum of power Purchase cost (CoPP) and Wheeling Charges (WC) is the ARR of the Distribution Licensee.
  - Since category wise sale of power has already estimated, expected revenue from such sale is estimated from current tariff. Let it be 'RCT' (Revenue from current tariff)
  - Difference between ARR and RCT is the gap in revenue. Let it be 'GAP'
  - The GAP so arrived at is filled up by redesigning the category wise tariff.
  - CSS is the difference between the tariff for category of consumer and the cost of supply. CSS is determined by using the figures of Tariff (T) for the year in question and cost of power purchase (C) in that year.
  - Tariff of subsidising consumers is generally in two parts i.e. fixed charges and energy charges. Therefore, the term tariff is the effective tariff for that category of consumers.
  - Since fixed charges remain constant irrespective of consumption by the consumer, the effective tariff varies and gets reduced with increase in consumption as can be seen from following illustration:
    - o Let us assume fixed charges at Rs 200 per kVA of contract demand and energy charges at Rs 5 per unit. Effective tariff for a consumer having contract demand of 100 kVA at different load factor would be as given in the table below:



Load Factor	Consumption	Fix charges	Energy Charges	Total Charges	Effective Tariff
0.1	7200	20000	36000	56000	7.78
0.2	14400	20000	72000	92000	6.39
0.3	21600	20000	108000	128000	5.93
0.4	28800	20000	144000	164000	5.69
0.5	36000	20000	180000	200000	5.56
0.6	43200	20000	216000	236000	5.46
0.7	50400	20000	252000	272000	5.40
0.8	57600	20000	288000	308000	5.35
0.9	64800	20000	324000	344000	5.31
1	72000	20000	360000	380000	5.28

• Effective tariff shown in last col. is also known as Average Billing Rate (ABR) for that particular consumer. ABR for a consumer category is determined by dividing total expected revenue from the category by total expected sale to that category (Tribunal's judgment dated 30.5.2011 in Appeal No. 102 of 2010 and Batch – Odisha case). Mathematically, it can be represented as:

$$\text{ABR of a category of consumer} = \frac{\text{Total Expected Revenue from a category}}{\text{Total Sale of power to that category}}$$

16) Thus, the interpretation of the term "T" in the surcharge formula is a settled issue and it refers the total of demand charges and the energy charges divided by the energy consumed by the consumer for the month. Therefore, the contention of the Appellants that only energy charges has to be considered in the calculation of CSS is not sustainable and hence, rejected.

17) One of the issues raised by the Appellant-1 in the current proceedings is that, the details of computation of average realisation rate is not furnished. The ARR as defined by the Hon'ble ATE in the orders referred supra, is the 'Total Expected Revenue from a category divided by Total Sale of power to that category' and is self-explanatory.

The Commission, in its Tariff Orders has worked out the ARR for the State by considering the revenue from tariff for all ESCOMs for a category of consumer and dividing it by the sales of all ESCOMs of that Category of consumer. The Computations are self-explanatory and hence the question of non-furnishing of the same does not arise. Therefore, the contentions of the Appellant do not hold any water.

However, an example of ARR is indicated below:

**Example of Calculation of 'T', the tariff for the HT2(a) for FY16**

Category	HT-2(a)(i) 1	HT-2(a)(ii) in BESCOM/HT2(a) in other ESCOMs 2	HT-2(a) Total (Col.no.1 State Total + Col.No.2 State Total)
Revenue Realisation-Rs. In Millions	BESCOM: 24512.80  <b>State Total:24512.80</b>	BESCOM:14871.10 MESCOM:5269.70 CESC:5145.20 HESCOM:6303.50 GESCOM:7050.20 <b>State Total:38639.70</b>	<b>63152.50</b>
Sales -MU	BESCOM: 3832.39  <b>State Total:3832.39</b>	BESCOM:1972.51 MESCOM:782.85 CESC:794.17 HESCOM:938.26 GESCOM:1047.88 <b>State Total:5535.67</b>	<b>9368.06</b>

Source: Annexure of Tariff Order-2015 titled PROPOSED AND APPROVED REVENUE AND REALISATION AND LEVEL OF CROSS SUBSIDY FOR FY-16 of respective ESCOMs

Thus, the Average realisation rate for HT-2a is worked out as  $63152.50/9368.06 = 674.13$  paise per unit.

18) The other issue raised by the Petitioner is that they are paying the demand charges as consumers of BESCOM and therefore once again considering the same while calculating the CSS is not correct. The issue is already answered in the previous paragraphs regarding the interpretation of 'T' in the formula of CSS.

**In view of the above, the contention of the Appellants that demand charges are being levied twice is not acceptable and is rejected.**

**IV. For the foregoing reasons, the Commission hereby passes the following Order, in the matter of CSS remitted back to it by the Hon'ble ATE in Appeal Nos. 270/2015, 259/2016 and 386/2017:**

**O R D E R**

In view of the reasons stated supra, the Commission hereby rejects all the contentions raised by the Fortune Five Hydel Projects Pvt. Ltd., and REDAK, and hereby, the Commission confirms the determination of CSS as per the Tariff Order-2015 dated 02.03.2015 and Tariff Order-2016 dated 30.03.2016.

Sd/-

(SHAMBHU DAYAL MEENA)  
CHAIRMAN

Sd/-

(H.M.MANJUNATHA)  
MEMBER

Sd/-

(M.D.RAVI)  
MEMBER