

N/91/17, N/92/17, N/93/17, N/89/17 and N/87/17.

**BEFORE THE KARNATAKA ELECTRICITY REGULATORY COMMISSION,
BENGALURU**

Dated : 14th May, 2018

Present:

Shri M.K. Shankaralinge Gowda	..	Chairman
Shri H.D. Arun Kumar	..	Member
Shri D.B. Manival Raju	..	Member

OP No. 52/2017

BETWEEN:

Bangalore Electricity Supply Company Limited, K R Circle, Bengaluru – 560 001.	..	PETITIONER
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AND:

NIL	..	RESPONDENT
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OP No.53/2017

BETWEEN:

Chamundershwari Electricity Supply Corporation Limited, No.29, Kaveri Grameena Bank Road, Hinkal, Vijayanagar, 2 nd Stage, Mysuru – 570 019.	..	PETITIONER
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AND:

NIL	..	RESPONDENT
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OP No.54/2017**BETWEEN:**

Mangalore Electricity Supply Company Limited,
MESCOM Bhavana,
Kavoor Cross Road,
Bejai,
Mangaluru – 575 004.

..

PETITIONER**AND:**

NIL

..

RESPONDENT**OP No.55/2017****BETWEEN:**

Hubli Electricity Supply Company Limited,
P.B. Road,
Navanagar
Hubballi – 580 025.

..

PETITIONER**AND:**

NIL

..

RESPONDENT**OP No.56/2017****BETWEEN:**

Gulbarga Electricity Supply Company Limited,
Station Road,
Kalaburagi-585 101.

..

PETITIONER**AND:**

NIL

..

RESPONDENT

[Petitioners are represented by Shri Shahbaaz Husain, Advocate.]

COMMON ORDER

- 1) The Petitioners in the above Petitions have sought approval of the Commission for levying an additional surcharge of Rs.1.00 per unit (except MESCOM, which has requested for Rs.0.63 per unit) on all the Open Access Consumers with effect from 1st April, 2017.
- 2) As common questions of law and facts are involved in the above Petitions, this common Order is being passed.
- 3) The facts submitted in these Petitions, in brief, are as under:
 - (a) The Petitioners are the Distribution licensees in terms of Section 14 of the Electricity Act, 2003 (hereinafter referred to as the 'Act') and are responsible for distribution of power in different parts of the State of Karnataka.
 - (b) Under the provisions of Section 64 of the Act and in accordance with the KERC (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity) Regulations, 2006, the Petitioners had filed individual applications during November, 2016 praying for:
 - (i) Review of Annual Performance for FY16;
 - (ii) Modification of ARR for FY18 thereon and approval of the modified ARR for FY18; and,
 - (iii) Revision of Retail Supply Tariff, for the FY18.

- (c) In continuation of the above tariff applications, the Petitioners have filed these Petitions praying for approval for levy of the Additional Surcharge on open access consumers.
- 4) The submissions made by the Petitioners in support of their prayer may be summed up as follows:
- (a) Levy of Additional Surcharge on Open Access consumers is permitted under Section 42(4) of the Electricity Act, 2003, Clause 8.5.4 of the Tariff Policy, 2016, Clause 5.8.3 of the National Electricity Policy and Clause 11(vii) of the KERC (Terms and Conditions for Open Access) Regulations, 2004.
- (b) The Petitioners on the one hand, have tied up considerable quantum of power after approval of the Commission by considering the overall requirement and growth in retail supply of power, and on the other, the Open Access (OA) users, who are now buying considerable quantum of power under OA, are not availing power supply from the jurisdictional Electricity Supply Company (ESCOM). As a result, the entire tied up generation capacity is not being availed of by the ESCOMs and a part of it remains idle. In this situation, the ESCOMs need to back-down the generation and also have to pay the Fixed Charges (or Capacity Charges) to the Generators, as per the terms and conditions of the Power Purchase Agreements (PPAs), irrespective of the utilization of generation. The burden of such fixed cost, affecting the consumers who buy power from the ESCOMs, needs to be mitigated. Hence, it would be appropriate

to determine an Additional Surcharge for the OA consumers, as per Section 42(4) of the Act, Clause 8.5.4 of the Tariff Policy, 2016 and Clause 5.8.3 of the National Electricity Policy. Additional surcharge is being levied in the Tariff Orders of States, like Andhra Pradesh, Gujarat, Haryana, Delhi, Maharashtra, etc.

- (c) The following methodology could be adopted for computation of Additional Surcharge for the rest of the 4th Control Period under the Multi-Year Tariff (MYT) regime, considering the OA impact in FY 2015-16 and FY 2016-17 (up to December, 2016) and adjustment of any variation at the time of truing up:
- (i) Computation of the power availability based on the contracted capacity and the power requirement based on the demand projection, approved for the consumers of the ESCOMs;
 - (ii) Estimation of back-down capacity and volume (in MW and MUs) based on the Merit Order Despatch (MOD) principle;
 - (iii) Estimation of the OA Capacity (in MW) and volume (in MUs);
 - (iv) Estimation of the Fixed Charges obligation on the ESCOMs due to the backed down capacity; and
 - (v) Calculation of the Fixed Charges obligation due to OA capacity, resulting in the assets being stranded on a pro-rata basis.
- (d) Based on the above methodology, the Petitioners, except MESCOM, have computed the Additional Surcharge required to be levied at Rs.1.00 per unit, with effect from 1st April, 2017, to all the OA Consumers, as follows:

TABLE – 1

Open access volume and capacity for the year FY 2015-16 and FY 2016 -17
(upto December, 2016)

Year	OA Volume (MU) (FY 2015-16)	OA Capacity (derived) (MW) FY 2015-16	OA Volume (MU) (Apr. 2016 to Dec. 2016)	OA Capacity (derived) (MW) (Apr. 2016 to Dec. 2016)
Particulars	1131.74	129.097	1687.19	255.35

TABLE – 2

Generation Volume and Capacity backed down compared to OA Volume and Capacity for FY 2015-16 and FY 2016-17 (April-Dec., 2016)
(by SLDC)

Year	OA Volume (MU)	OA Capacity (derived) (MW)	Backing Down/ Reserve shutdown(RSD) Volume (MU)	Backing Down/ RSD Volume (derived) (MW)	Ratio=OA Volume/B D Volume
2015-16	1131.74	129.097	4295	490.3	26.35%
2016-17 (up to Dec. 2016)	1687.19	255.35	6752	1023	24.99%

TABLE - 3

Capacity charges approved by the Commission in its Tariff Order dated 30.03.2016 for the year 2016-17.

SL. No	Generating Stations	Energy (in MU)	Capacity charges (in Crs.)	Capacity charges per Unit (in Rs/unit)
1	State Owned Thermal stations (KPCL Thermal stations)	17646.77	1570.36	0.89
2	Central Owned Thermal stations (CGS stations) (except DVC-until 1&2 and 7&8)	18375.51	1447.60	0.79
3	IPPS (M/s UPCL)	7462.68	1325.73	1.78
4	Total	43484.96	4343.69	1.00

TABLE - 4*Back down Energy in respect of M/S JSW (Short Term Power)*

Sl. No.	Year	Back down energy (in MU)	Deemed energy charges on compensation at 20% of the Cost (Amt. in Rs. Cr.) (Rs. 5.08 x20%=1.02)
1	2015-16	664.31	67.76
2	2016-17	182.17	18.58

TABLE - 5*Computation of Additional Surcharge on OA consumers for the rest of the period from FY 2017-18 to FY 2018-19*

Particulars	Reference	Unit	Value (FY 2016-17)
<i>Step-1: Establishing contribution of OA to backing down / stranded capacity.</i>			
Avg. OA volume (Apr. to Dec. -16)	(a)	MU	1687.19
Avg. Backing Down quantum (Apr to Dec-16)	(b)	MU	6752
Ratio between OA and backed down quantum	(c) = (a)/ (b)	%	24.98
<i>Step-2: Ascertaining Cost of Stranded Capacity</i>			
Particulars	Reference	Unit	Value (FY 2016-17)
Approved Fixed cost of Thermal Generating Sources for Year (FY 2016-17)	(d)	Rs. Crores	4343.69
Total Available MU from Thermal Generating stations for Year (FY 2016-17)	(e)	MU	43484.96
Wtd. Avg. Per unit FC of Thermal Generating Stations	(f)=(d)/(e) x10	Rs./kWh	1.00
Total Projected Back down/ RSD Volume for year FY 2017-18 (based on FY 17)	(g)	MU	6752
Fixed Cost pertaining to Back down/ RSD capacity	(h)=(f) x(g)/10	Rs. Crs	675.2
Cost attributable to OA as stranded capacity charge	(i)= (h) x(c)	Rs. Crs	168.66

<u>Step-3: Segregating the impact of OA Consumers.</u>			
Projected Open Access Volume for year (FY 2017-18)	(j)	MU	1687.19
Cost attributable to OA as stranded capacity cost	(k)	Crs.	168.66
<u>Step-4: Determination of Additional Surcharge</u>			
Per Unit Additional surcharge (to be applicable on Non-Captive OA)	$(l)=(k)/(j)*10$	Rs./Unit	1.00

- (e) The MESCOM in its Petition has claimed Rs.0.63 towards Additional Surcharge. Here itself we may note that, the MESCOM has relied upon the same data as relied by other ESCOMs, but has wrongly considered the total projected back-down / RSD volume for FY17-18 as 4295 MUs, instead of 6752 MUs. It is noted that, 4295 MUs pertains to back-down / Reserve Shutdown (RSD) volume for FY 2015-16. Therefore, the MESCOM should have considered 67542 MUs as the projected back-down/ RSD volume for FY 2017-18. Because of this arithmetical error, the MESCOM has arrived at the per unit Additional Surcharge at Rs.0.63 per unit, instead of Rs.1.00 per unit.
- 5) After hearing the counsel for the Petitioners, the Petitioners were directed to issue a Public Notice, inviting comments / objections from the stakeholders/interested persons and also to upload a copy of the Petitions on the Website of the respective Petitioners. Accordingly, the Petitioners published a Public Notice on 07.09.2017 in the newspapers, inviting comments / objections from the stakeholders.

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- 6) In response to the aforesaid Public Notice, the Commission received comments / objections from 36 (thirty-six) stakeholders/interested persons. The objections / suggestions may be summarized as follows:
- (a) The Regulations limit the capacity allowed to the sanctioned contract demand of OA consumers, who pay demand charges based on the contract demand, even if they do not draw power from Petitioners. Hence, there is no case to levy Additional Surcharge on the ground of stranded capacity.
 - (b) Karnataka is a power deficit State and the claim that the generation capacity is being backed down / stranded due to OA is flawed. Further, Petitioners have consistently been procuring power in short term market through tendering process which indicates that the Petitioners are aware of power shortage well in advance and hence the question of stranded cost and the need to determine Additional Surcharge does not arise.
 - (c) Whereas, the Petitioners claim that power is being backed down because the consumers procure power through OA, the real reason for backing down is that the Petitioners procure cheaper power from short term sources whose total cost is less than even the variable cost of the generators being backed down.
 - (d) The OA consumers, apart from demand charges, also pay transmission and wheeling charges, cross-subsidy surcharges, etc., which have a fixed component of tariff and, therefore, the levy of Additional Surcharge is not

justified. Further, the impact of the Additional Surcharge on the OA consumers has not been shown.

- (e) The instances of backing down of Thermal Power Plant due to excess wind generation or any notified transmission outage or overload and load shedding, in any form, should be considered to estimate the actual stranded capacity due to the OA. Further, the stranded capacity should be compared with the net import of power by the OA customers during a time-slot.
- (f) The demand of the Petitioners for the Additional Surcharge during the period April, 2016 to December, 2016 when Section 11 of the Act was imposed in the State, with restrictions for sale of power outside the State and when they resorted to purchase of power through short term to tide over power shortage, is a misconstrued one, as there was no stranded capacity.
- (g) The OA consumers were exempted from payment of surcharges for promoting renewable energy generators, who enjoyed exemption from Cross-Subsidy Surcharge for selling power through the OA. The Renewable Energy generators with '*must run status*' need not back down under the normal circumstances and therefore, the OA consumers, purchasing power from the Renewable Energy generators, do not come under the purview of the Additional Surcharge.

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- (h) The Additional surcharge is not payable by an OA consumer, who is not a consumer of the Distribution Licensee.
- (j) The RE project developers contend that imposition of additional surcharge on open access consumers, purchasing the renewable energy is against the promotional measures to be extended to RE generators as per the object of the Electricity Act, 2003.
- (k) The methodology adopted by the ESCOMs for the calculation of the Additional Surcharge is inappropriate. Power is surrendered by the ESCOMs on account of many reasons and seasonal variation of the demand is the most common reason. There are periods when the quantum of the power surrendered is less than the quantum of the power drawn under the OA. In such situations, the Fixed Charges obligation to the OA consumers is limited only to the actual quantum of power surrendered, but not on the whole quantum of the OA availed. The backed down quantity should be arrived at, considering the 15-minute time block of the backed down quantity and the OA quantity.
- 7) The replies filed by the Petitioners to the issues raised by the stakeholders, may be summarized as follows:
- (a) The Fixed Charges recovered from the OA consumers would cover only about 13 percentage point of the Fixed Charges (Demand Charges) out of the 30% of the actual Fixed Charges incurred by the ESCOMs and the balance 17 percentage point of the Fixed Charges, which should have

been recovered, has been in-built in the energy charges, while determining the Retail Supply Tariff. Whenever, the HT and EHT consumers of an ESCOM opt for OA, the in-built portion of the Fixed Charges in the energy charges, is not recovered, to the extent of the volume of energy not purchased from that ESCOM. Therefore, the Demand Charges payable by the HT and EHT consumers, who opt for OA, do not completely cover the actual Demand Charges to be incurred by the ESCOMs.

- (b) The Fixed Charges recovered by the Petitioners is less than the Fixed Charges incurred by the Petitioners to procure power owing to their universal obligation to supply power, because of which the Petitioners are saddled with the stranded cost. Whenever any consumer opts to avail intermittent supply through OA, bringing down the actual offtake of power from the contracted generating entities, the Petitioners get no respite from the reduction in demand, as they would have to pay the fixed charges for the contracted demand, without being able to recover the same completely.
- (c) Long term PPAs have been entered into with the Generators by the ESCOMs, considering the existing consumers, as well as, a certain increase in the annual consumption, to fulfill the supply obligation. But, the OA consumers, availing power from sources other than the ESCOMs, would compel the ESCOMs to surrender power to the extent of their OA obligation, which can be categorized as stranded or surrendered power, and hence, the OA consumers are bound to make good the losses sustained by the ESCOMs, in the form of Additional Surcharge, as provided

under Section 42 of the Act. The OA consumers, who have a right to schedule the energy, as per their will, cannot challenge levy of the Additional Surcharge, on the grounds, such as, the State is facing deficit of energy or the ESCOMs are opting for cheaper short term power.

- (d) The back-down of generation is for various reasons, including transmission constraints due to outages, excess generation and also due to OA. The Additional Surcharge is calculated only for the quantum of OA in proportion to the total back-down. The backed-down quantum of energy has been calculated considering the 15-minute time-block.
- (e) The Petitioners are required, under universal service obligation, to keep their entire generation and transmission capacity available, all the time, though the OA consumers, procure energy from sources other than ESCOMs themselves. Hence, in order to prevent undue burden on the other consumers, there is a need for determining and recovering the Additional Surcharge.
- (f) The Additional Surcharge is to be levied on OA consumers of all categories, without any differentiation, since the stranding of power may be caused by any of them. A person using energy through Captive Power Plant (CPP) under OA or through RE generation shall have to be dealt with equally, as all the OA consumers, who are consumers of the ESCOMs cease to draw power from the ESCOMs once the power is drawn through open access.

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- (g) The methodology adopted for calculation of the Additional Surcharge is strictly in accordance with the Electricity Act, 2003.
- 8) At the public hearing held on 29.11.2017, some of the stakeholders sought time to respond to the common reply filed by the Petitioners and accordingly, the reply of the ESCOMs was hosted on the Website of the Commission and the stakeholders were granted time upto 15.12.2017 to respond. A List of stakeholders, who have submitted their objections/ written statements is attached herewith as **ANNEXURE – I**.
- 9) The additional Objections thus filed by the stakeholders may be summed up as follows:
- (a) There is no provision in the Electricity Act, 2003 or the National Tariff Policy, 2016, permitting the ESCOMs to recover the 17% of the Fixed Charges from the Energy Charges. The Energy Charge component of the Retail Supply Tariff contributes approximately 88% to 91% of the total approved revenue in respect of HT-2A Industrial Category Consumers and the rest is recovered from the Fixed Charge component of the Retail Supply Tariff, OA Charges, losses, banking charges, charges under the UI mechanism, etc. Therefore, the claim of the ESCOMs for the recovery of the deficit 17% of the Fixed Charges by way of the Additional Surcharge is untenable.

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- (b) The ESCOMs are required to properly forecast the demand, not only by considering the embedded consumers but also the OA consumers, and enter into Power Purchase Agreements (PPAs) for supply of electricity. The ESCOMs are not necessarily required to make the power arrangements on long-term basis and they can do so on short-term and mid-term basis, and the same can be ensured by proper planning and forecasting of the demand and supply. The mere fact that the ESCOMs have deficit energy demonstrates that, there is no stranded capacity which necessitates levy of the Additional Surcharge. Hence, the ESCOMs cannot justify the levy of the Additional surcharge while there is power deficit in the State.
- (c) It is imperative for the ESCOMs to ensure, fixation of appropriate tariff for the power sold to the embedded consumers and proper forecasting of the demand by the embedded and the OA consumers. It is not permissible for the ESCOMs to burden the OA consumers with the levy of Additional Surcharge due to inefficiency on the part of the ESCOMs in fixation and/or collection of an appropriate tariff, and demand and supply forecasting or their inability to sell the stranded capacity and/or surrender the same.
- 10) We have carefully considered the averments made in the Petitions, the Objections of the stakeholders and subsequent pleadings and perused the records.

- 11) The following issues would arise for our consideration:
- (1) Whether the ESCOMs have conclusively demonstrated that, consequent upon allowing Open Access, their obligation, in terms of the existing power purchase commitments, has been, and will continue to be, stranded? Or whether there is an unavoidable obligation and incidence to bear the Fixed Costs, consequent to such power purchase commitments?
 - (2) What should be the amount of Additional Surcharge payable by the OA consumers to the ESCOMs, procuring power from sources other than the RE generators and procuring power from the Power Exchanges?
 - (3) Whether Additional Surcharge could be levied on Captive Consumers?
 - (4) Whether Additional Surcharge cannot be levied on the OA consumers procuring power from the RE generators? If not, what should be the rate of the Additional Surcharge to such OA consumers?
 - (5) Whether Additional Surcharge could be allowed from 01.04.2017, as prayed for by the ESCOMs, or from any other date?
 - (6) What Order?
- 12) After considering the submissions of the parties and material placed on record, our findings on the above Issues are as follows :

- 13) **ISSUE No.(1):** *Whether the ESCOMs have conclusively demonstrated that, consequent upon allowing the OA their obligation, in terms of the existing power purchase commitments, has been, and will continue to be, stranded? Or whether there is an unavoidable obligation and incidence to bear the Fixed Costs, consequent to such power purchase commitments?*
- ISSUE No.(2):** *What should be the amount of Additional Surcharge payable by the OA consumers to the ESCOMs, procuring power from sources other than the RE generators and procuring power from the Power Exchanges?*

As these two issues are interconnected, they are dealt together.

- (a) The Petitioners have relied upon Section 42(4) of the Electricity Act, 2003, Clause 8.5.4 of the National Tariff Policy, 2016 and Regulation 11 of the KERC (Terms and Conditions for Open Access) Regulations, 2004 and the amendments thereof, in support of their claim. The said provisions are extracted below:
- (b) Section 42(4) of the Electricity Act, 2003 reads thus :

“42. Duties of Distribution Licensee and Open Access.-

XXX

XXX

XXX

(4) *Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.*

XXX

XXX

XXX”

- (c) Clause 8.5.4 of National Tariff Policy, 2016 reads thus:

"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 the 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."

- (d) Regulation 11(vii) of KERC (Terms and Conditions for Open Access) Regulations, 2004 reads thus:

"11(vii). Additional Surcharge

According to section 42(4) of the Act, additional surcharge as may be specified by the Commission on charges of wheeling are payable by the consumer seeking open access for receiving supply from a source other than the distribution licensee of his area of supply to meet the fixed cost of the distribution licensee arising out of his obligation to supply. The open access customer shall be liable to pay such additional surcharge as may be determined by the Commission from time to time. Such additional surcharge shall be 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. However, in the case of a new open access customer (i.e. if the open access customer was not a consumer of the licensee), no such additional surcharge is payable."

- (e) Keeping the above provisions in view, we note that, as per the power supply agreement with the consumers, the Petitioners-ESCOs have an obligation to supply power to such consumers. For the power supply made by the ESCOs, the consumers have to pay a tariff having component of fixed charge and the energy charge, as determined by the Commission. Based on the total requirement of power to be supplied to the consumers, the ESCOs enter into long / medium / short term Power Purchase Agreements. During the tenure of such Agreements, the ESCOs have to pay to the generators, the energy charges based on the drawal and fixed charges, irrespective of the drawal of energy from the generators. Due to drawal of energy by the OA consumers from the sources other than the ESCOs, the ESCOs are not able to offtake the entire contracted power but have to incur the fixed charges irrespective of drawal of energy.
- (f) The Hon'ble Supreme Court in case of *SESA Sterlite Vs OERC & Ors*, reported in **(2014) 8 SCC 444**, has held as under:

"The issue of open access surcharge is very crucial and implementation of the provision of open access depends on judicious determination of surcharge by the State Commissions. There are two aspects to the concept of surcharge – one, the cross-subsidy surcharge i.e. the surcharge meant to take care of the requirements of current levels of cross-subsidy, and the other, the additional surcharge to meet the fixed cost of the distribution licensee arising out of his obligation to supply. The presumption normally is that generally the bulk consumers would avail of open access, who also pay at relatively higher rates. As such, their exit would necessarily have adverse effect on the finances of the existing licensee,

primarily on two counts – one, on its ability to cross-subsidies the vulnerable sections of society and the other, in terms of recovery of the fixed cost such licensee might have incurred as part of his obligation to supply electricity to that consumer on demand (stranded costs). The mechanism of surcharge is meant to compensate the licensee for both these aspects."

- (g) Considering the statutory provisions and the Hon'ble Supreme Court's decision, referred to above, we can come to the conclusion that there is no scope to dispute the entitlement of the ESCOMs for the Additional Surcharge, if it is demonstrated that, on account of the OA consumers availing of the power from other sources, the ESCOMs are liable to incur the stranded Fixed Charges. Even the Objectors do not seriously dispute this and only plead that they pay Fixed Charges for the electricity contracted, though they purchase the electricity through Open Access, limiting the same to the contracted demand as per the OA Regulations and, as such, there is no justification for collection of the Additional Surcharge by the ESCOMs towards stranded Fixed Charges.
- (h) The Petitioners, in support of their claim for levying the Additional Surcharge on the OA consumers, have calculated the weighted average of the capacity charges per unit at the rate of Rs.1.00 per Unit, payable to the Thermal Generating Stations having long-term PPAs with the ESCOMs. They have reckoned that the total OA volume is attributable to the back-down of the Thermal generation and, therefore, the OA consumers are liable to pay the Additional Surcharge of Rs.1.00 per Unit.

- (j) We also note that, a few other States are charging the Additional Surcharge and the rates of Additional Surcharge prevailing in these States are as under:

Sl. No.	Name of the State	Additional Surcharge (in Rs./unit)
1	Telangana	0.52
2	Maharashtra	1.11
3	Gujarat	0.49
4	Rajasthan	0.80
5	Madhya Pradesh	0.65
6	Haryana	0.99
7	Punjab	1.25
8	Himachal Pradesh	0.49

- (k) Contesting the claim of the Petitioners that they are suffering from stranded Fixed Charges, the OA consumers have, submitted that there cannot be any stranded Fixed Charges, as the ESCOMs, owing to shortage of electricity in the State, resort to load shedding, do not meet the entire demand of the State and continue to purchase RTC power, from time to time, from Generators and Power Exchange.
- (l) We have considered the material on record and the submissions made by both the sides. The data furnished by the Petitioners in Tables 1 to 5, extracted earlier, are not shown to be incorrect. We have cross-checked these data and found that they are quite acceptable.
- (m) It is undisputed that, under Section 43(4) of the Act, the Petitioners have a Universal Supply Obligation towards the consumers, be it industrial consumers or others, and the Petitioners enter into long term PPAs to fulfill their obligations. The Petitioners have to pay the agreed fixed charges as

per PPA, towards power purchase, irrespective of the fact, whether they offtake the entire contracted power or a reduced quantum of contracted power on account of a few consumers opting for power purchase under open access. The data produced by Petitioner ESCOMs reveal that, there is stranded capacity for which fixed charges under the Power Purchase Agreements have been paid. The ESCOMs claim that the same needs to be compensated.

- (n) The OA consumers contend that, the drawal of power under the OA is restricted to their contract demand and fixed charges for the same are paid to the Petitioners, which mainly cover the fixed cost of PPA, and as such, they do not suffer any stranded capacity and the levy of Additional Surcharge is not tenable.
- (p) The Hon'ble APTEL, in the Order dated 29.04.2016 in Appeal Nos. 269 of 2014 and others, filed by the Open Access Users Association and others, has upheld the levy of the Additional Surcharge, duly accepting the findings of the HERC, which are reproduced as follows (Paragraph-41.1):

“The Commission observes that the distribution licensees, based on the data provided by them for the period April 2013 to March 2014, have been able to conclusively prove, backed with calculations, that their long term power purchase commitments do get stranded most of the times when power is drawn by embedded open access consumers from other sources and the ESCOMs have to bear the fixed cost of such stranded power which ultimately get passed on to other consumers. They have worked out the cost of such stranded power and based on that has worked out the additional

surcharge as 97 paise/unit for FY 2013-14. The Commission further observes that it would not be fair if the cost incurred by distribution licensees for the power purchase commitments stranded on account of power drawn by open access consumers from other sources is passed on to other consumers as that would amount to cross subsidising of the open access consumers by other consumers. It would also be fair to assume that, as the number of open access consumers and power drawn through open access is increasing every year, the additional surcharge worked on similar basis for FY 2014-15 would not work out less than as has been worked out by UHBVNL for FY 2013-14"

- (q) The Petitioners have tied up for procurement of considerable quantum of power from various conventional sources with an installed capacity of 13,356 MW as on 31.03.2017. The State has also made significant capacity addition in generation from Renewable Energy sources available within the State and the total capacity available as on 31.03.2017 works out to be 7,222 MW. Thus, the total installed capacity of the State from all sources (conventional and renewable) works out to 20,578 MW as on 31.03.2017. As at the end of FY18, the total installed capacity available to the State from all sources is 26,458 MW (14,151 MW from conventional and 12,307 MW from RE sources).
- (r) The 1st Petitioner (BESCOM) has made the following analysis, while filing the Tariff Petition for FY19, highlighting the under-recovery of the Fixed Charges for the 1 MW and above consumers, on the basis of the data for FY17:

(i) Voltage-wise Cost of Supply:

Particulars	Unit	110 kV & 66 kV	11 kV	LT	Total
Energy Sales as per flow diagram	MU	924.50	7306.88	18007.85	26239.23
Distribution Losses	MU	0.00	551.04	3437.37	3988.41
Net IF energy	MU	924.50	7857.91	21445.23	30227.64
Transmission Loss	%	4.00%	4.00%	4.00%	
Net Energy at Gen	MU	963.05	8185.58	22339.36	31487.99
Dist. of energy input	%	3.06%	26.00%	70.94%	100.00%
PP Cost	Rs.in Cr.				13672.98
Dist. of PP Cost	Rs.in Cr.	418.39	3554.97	9699.62	13672.98
Dist. of energy sales	%	3.52%	27.85%	68.63%	100.00%
Other Cost (Transmission & Dist. network)	Rs.in Cr.				2567.49
Dist. of other Cost	Rs.in Cr.	90.38	715.05	1762.07	2567.50
Total Cost	Rs.in Cr.	508.77	4270.02	11463.05	16241.84
Voltage-wise per unit Cost of supply	Rs./unit	5.50	5.84	6.37	6.19

(ii) Power Purchase Cost consisting of both Fixed and Variable Costs, is further segregated as shown below:

Particulars	Unit	110 kV & 66 kV	11 kV	LT	Total
PP Cost	Rs.in Cr.				13672.98
Dist. of PP Cost	Rs.in Cr.	418.18	3554.41	9700.38	13672.97
% share		3.06%	26.00%	70.95%	100%
Total Fixed Charges – PP	Rs.in Cr.				1803.17
Voltage-wise FC	Rs.in Cr.	55.15	468.75	1279.27	1803.17
Total Variable Charges	Rs.in Cr.				11869.81
Voltage-wise VC	Rs.in Cr.	363.03	3085.66	8421.11	11869.80
Other Cost	Rs.in Cr.	90.38	715.05	1762.07	2567.50
Total Fixed Expenditure(FC + Other Cost)	Rs.in Cr.	145.53	1183.80	3041.34	4370.67

The total Fixed Expenditure incurred on HT consumers for FY17 is Rs.1329.33 Crores, as declared in the BESCOM's filing at page 36.

- (iii) The Fixed Charges and Energy Charges for LT and 11 kV and above consumers based on the above computations are as shown in the Table below:

(Amount in Rs. Crs.)

	11 kV and above consumers (HT)	LT consumers
FC	1329.33	3041.34
EC	3448.69	8421.11
Total	4778.02	11462.45
FC	28%	27%
EC	72%	73%

- (iv) However, as per the D21 format furnished along with tariff filing for the APR of FY17 by the 1st Petitioner (BESCOM), the actual fixed cost collected from 11kV and above voltage class consumers was Rs.881.83 crores, for a sale of energy of 8231.38 MU for the year FY17 and the Fixed Charges would work out to Rs.1.07 per Unit.
- (v) The under-recovery of fixed cost from the 11kV & above voltage class consumers for the FY17 was Rs.447.50 crores and works out to Rs.0.54 per unit. We note that, to the extent of sale of energy by the ESCOM to the consumers, the said under- recovery in fixed cost was recovered through the energy charges from the embedded consumers. However, this component of fixed cost, which is included in the energy charges, is not recovered from the OA consumers once they draw energy from outside sources.

- (s) (i) We may also compute the Additional Surcharge on the basis of the approved relevant data found in the Annual Revenue Requirement (ARR) for FY19, as per the Commission's Tariff Orders FY19, issued on the Tariff Petitions filed by all the ESCOMs. The following Table discloses the relevant particulars for the computation of the additional Surcharge that could be levied for FY19 to recover the estimated under-recovered Fixed Charges:

TABLE

Computation of Additional Surcharge for the State							
Sl.No	Particulars	BESCOM	MESCOM	HESCOM	GESCOM	CESC	Total
1	Total EHT & HT sales in MU	8852.51	1124.18	1761.83	1236.02	1401.43	14376
2	Total Fixed Charges to be collected as per ARR FY19 (Cr)	1830.45	252.13	325.26	250.92	266.34	2925.10
3	Proposed fixed charges from EHT & HT consumers in ARR FY19 (Cr)	1187.89	124.10	230.53	161.12	129.81	1833.45
4	Estimated Under recovery from Fixed Charges as per ARR FY19 (Cr)	642.13	128.03	94.73	89.80	136.53	1091.22
5	Additional Surcharge as per ARR FY19 (Rs)	0.73	1.14	0.54	0.73	0.97	0.76

The details of the computation of the relevant factors, shown in the different columns / rows of the above Table, relating to the different ESCOMs, are enclosed to this Order as **ANNEXURES – II to VI**.

(ii) The Commission adopts a uniform retail supply tariff for the various categories of consumers of all the ESCOMs across the State, as desired by the State Government. Therefore, it is proper to consider the total sale of energy of EHT and HT consumers of all the ESCOMs and the total estimated under-recovery of the Fixed Charges, out of the approved Fixed Charges component, in order to arrive at the determination of the Additional Surcharge to be levied, as per the ARR for FY19, though the Additional Surcharge, arrived at, is different for different ESCOMs, as shown in the above Table.

(iii) The total estimated EHT and HT sales of all the ESCOMs is 14376 MU and the estimated under-recovery from the Fixed Charges is Rs.1091.22 Crores. Therefore, the under recovery of the Fixed Charges would work out to Rs.0.76 per unit. We note that, to the extent of sale of energy by the ESCOMs to the consumers, the said under-recovery in fixed cost would have to be recovered through the energy charges from the embedded consumers. However, this component of fixed cost, which would be included in the energy charges, would not be recovered from the OA consumers, once they are allowed to draw energy from outside sources.

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- (iv) The Additional Surcharge would become applicable only if it is conclusively demonstrated that the obligation of the Licensee in terms of the existing power purchase commitments has been and continues to be stranded. As noted in Paragraph-13(r) above, the Additional Surcharge that could be recovered on the basis of the approved actuals for FY17 for the 1st Petitioner (BESCOM) was Rs.0.54 per unit. Similarly, the Additional Surcharge that could be recovered as per the ARR of the 1st Petitioner (BESCOM) for FY19 is Rs.0.73 per unit. The Commission is of the considered view that, Rs.0.54, arrived at on the basis of the APR for FY17, could be made applicable for levy of the Additional Surcharge, as it would sufficiently meet with the requirement of proving conclusively, at least to this extent, the obligation of the Distribution Licensee in terms of the existing power purchase commitments, has been and would continue to be stranded.
- (t) The Objectors / Open Access consumers could not deny that a substantial part of the Fixed Charges is included in the Energy Charges of the Retail Supply Tariff. As already noted, one of the Objectors / OA consumers, in his Rejoinder, has admitted this fact. Now, we are limiting the Additional Surcharge only to the extent of Rs.0.54 per Unit. Most of the objections raised by the stakeholders are not relevant to the issue involved in this case. We have already considered the payment of Demand Charges by the OA consumers, which is found to be insufficient to meet with the Fixed Charges of the quantum of energy procured under OA. The liability of the OA consumers procuring power from the RE generators is considered under Issue No.(4) below. The data provided by the Petitioners regarding

the quantum of backed-down energy and the quantum of the OA volume, would show that the quantum of the backed-down energy was much more than the quantum of the Open Access volume. If it were to be found that the volumes of OA is greater than the volume of the backed-down energy, there could have been a contention that the Additional Surcharge would work out to less than Rs.1.00 per Unit, as claimed by the Petitioners. However, it is not so in the present cases.

(v) For the above reasons, we answer Issue Nos.(1) and (2), accordingly.

14) **ISSUE No.(3):** *Whether Additional Surcharge could be levied on Captive Consumers?*

(a) It is contended by the Objectors that, the question of imposing the Additional Surcharge would arise only when the Distribution Licensee of the area has a corresponding duty to supply energy to an OA consumer. Further, it is submitted that, in the case of the Captive Consumers, there is no such duty cast upon the Distribution Licensee of the area to supply energy to the extent of captive consumption. However, in the event of an OA consumer purchasing energy from a Captive Generator, he is liable to the Additional Surcharge.

(b) For the above reasons, we answer Issue No. (3) in the negative.

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- 15) **ISSUE No.(4)**: *Whether Additional Surcharge cannot be levied on the OA consumers procuring power from the RE generators? If not, what should be the rate of the Additional Surcharge to such OA consumers?*
- (a) It is contended by the RE generators that levy of additional surcharge would be against the promotional measures to be extended to the RE generators and, therefore, the Additional Surcharge cannot be levied on their OA consumers. The Petitioners have denied the said contention.
- (b) The contention that, the Additional Surcharge cannot be levied on the OA consumers, procuring power from the RE generators, has no substance. Merely because certain promotional measures are extended to the RE generators, one cannot contend that the Additional Surcharge cannot be levied on the OA consumers. However, the Commission may examine whether any concession could be extended to the OA consumers providing power from the RE generators while levying the Additional Surcharge.
- (c) The OA consumers procuring power from the RE generators had been granted the concession / exemption of the Wheeling Charges, as per the various Orders passed by this Commission. So far as the Solar power is concerned, payment of the Wheeling Charge was exempted, and for the other RE sources of power, the Wheeling Charge was only at 5% of the energy injected. Now, the Commission has decided in its proceedings

bearing No.S/03/2017 dated 14.05.2018 that, 25% of the normal Transmission Charges and/or Wheeling Charges shall be levied on the OA consumers obtaining power from the RE sources with a few exceptions, as noted in the said proceedings. Therefore, the Commission considers that 25% of the normal Additional Surcharge of Rs.0.54 per unit could be levied on the OA consumers obtaining power from such RE sources, which have been granted 25% of the normal Wheeling Charges under the said Order.

(d) Therefore, we answer Issue No.(4), accordingly.

16) **ISSUE No.(5):** *Whether Additional Surcharge could be allowed from 01.04.2017, as prayed for by the ESCOMs, or from any other date?*

(a) We note that, the Petitioners in their Petitions have sought Additional Surcharge with effect from 01.04.2017. Any Order of the Commission, imposing certain new levies cannot normally be given effect to, retrospectively and hence, the claim for recovery of the Additional Surcharge from 01.04.2017, is not acceptable. However, the same can be allowed from 01.04.2018.

(b) Therefore, we answer Issue No.(4), accordingly.

16) **ISSUE No.(5):** *What Order?*

For the foregoing reasons, we pass the following:

ORDER

- (a) The Open Access consumers, procuring power from sources, including procuring power from the Power Exchanges, other than the RE generators, who have been granted the concessional Wheeling Charges under the above-referred proceedings, shall pay an Additional Surcharge of 54 (fifty four) paise per unit;
- (b) The Open Access consumers, procuring power from the RE generators, who have been granted the concessional Wheeling Charges under the above-referred proceedings, shall pay an Additional Surcharge of 13 (thirteen) paise per unit;
- (c) The levy of Additional Surcharge shall not be applicable to a Captive Consumer, to the extent of his captive consumption; and,
- (d) The levy of Additional Surcharge stated at (a) and (b) above shall be in force from 01.04.2018 to 31.03.2019.

The Order shall be kept in OP No.52/2017 and copies, thereof, in the other four connected cases.

Sd/-
(M.K. SHANKARALINGE GOWDA)
CHAIRMAN

Sd/-
(H.D. ARUN KUMAR)
MEMBER

Sd/-
(D.B. MANIVAL RAJU)
MEMBER

ANNEXURE – I**List of Persons who have furnished the Comments/Objections:**

Sl.No.	Name of the Firm
1	Indian Energy Exchange, New Delhi
2	Stat Kraft Markets Pvt Ltd, New Delhi
3	Bangalore Chamber of Industry and Commerce, Bengaluru
4	General Electrical India Industrial Pvt Ltd. Bengaluru
5	FKCCI, Bangalore.
6	ReNew Power Ventures Pvt Ltd, Gurugaon
7	Indian Wind Power Association, Bengaluru.
8	IPPAI, New Delhi
9	Mittal Processors Pvt Ltd, New Delhi
10	SLR Metaliks, Narayandevarakere village, H.B.Halli Taluk.Bellari District
11	Federation of Karnataka Chambers of Commerce & Industry, Bengaluru
12	HIKAL, Jigani Industrial Area, Bengaluru
13	VRKP Steel Industries Pvt Ltd, Old Madras Road, Bengaluru
14	Valdel Extent Outsourcing Pvt Ltd, Bellandur Khane Village, Bengaluru
15	Prestige Dynasty, Halasur Road, Bengaluru
16	Sahuwala Grains Pvt Ltd, Malur, Karnataka
17	VRKP Sponge & Power Plant LLP, Halkundi village, Bellari District
18	Kalyani Steels Ltd, Hospet Road, Ginigera, Koppal Taluk & District
19	Prestige Estate Projects Ltd, Industry Software, Bengaluru
20	Ashirvad Pipes, Attibele Industrial Area, Hosur Road, Bengaluru.
21	West Palm Developers Pvt Ltd, Softward Industry KC Valley, Bengaluru.
22	Chaitanya Properties Pvt Ltd, Whitefield Shanti, Bangalore
23	Exora Business Parks Pvt Ltd, Bellandur Village, Varthur Hobli, Bengaluru.
24	Triton Vales Ltd, Sunrise Chambers, Ulsoor Road, Bengaluru
25	The Banahatti Co-operative Spinning Mill Ltd, Basava nagar, Banahatti, Jamakhandi Taluk, Bagalkot District.
26	Bhuwalka Castings and Forging Pvt Ltd, Tamka Industrial Area, Kolar
27	MSPL Ltd, Baldota Road, Hosapete, Bellary District
28	Bangalore Metallurgicals, Shidlagatta Road, Hosakote, Bangalore

29	AkzoNobel Hoskote Industrial Area, Bangalore
30	SANSERA Engineering, Jigani Link Road, Bangalore
31	Open Access Users Association, New Delhi.
32	GEAROCK Forge Pvt Ltd, Bommasandra Industrial Area, Bangalore
33	Universal Air Products Pvt Ltd, Peenya Industrial Area, Bangalore
34	Khayati Steel Industries Pvt Ltd, Thandavapura, Nanjangud Taluk, Mysore District.
35	MEDREICH, Saraswathi Ammal Street, Maruthi Sevanagara, Bangalore
36	Mangalore Chemicals & Fertilizers Ltd, Panambur, Mangalore
37	Southern Ferro Ltd, Gokak Road, Industrial Area, Hubballi
38	DGEPL, Bangalore.
39	APPCPL
40	ITC, Bangalore.
41	Mr. Doreraj, Advocate, Navayana Law Office, Bangalore.
42	Greenko Energies Private Limited, Hyderabad

ANNEXURE - II**BESCOM Voltage-Wise Cost of Supply**

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
Energy Sales as per flow diagram	MU	978.53	7873.98	19434.24	28286.75
Distribution Losses	MU	0	578.12	3370.75	3948.87
Net IF energy	MU	978.53	8452.10	22804.99	32235.62
Transmission Loss	%	3.083	3.083	3.083	
Net Energy at Gen	MU	1009.66	8720.97	23530.43	33261.06
Dist of Energy input	%	3.036	26.22	70.745	
PP Cost	Rs.in Cr.				16000.78
Dist of PP Cost	Rs.in Cr.	485.71	4195.37	11319.70	16000.78
Dist of energy sales	%	3.459	27.836	68.70	
Other Cost (Transmission & Dist. Network)	Rs.in Cr.				3001.27
Dist. Of other cost	Rs.in Cr.	103.82	835.44	2062.00	3001.27
Total Cost	Rs.in Cr.	589.54	5030.81	13381.71	19002.05
Voltage wise per unit Cost	Rs./unit	6.025	6.389	6.886	6.718

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
PP Cost	Rs.in Cr.				16000.78
Dist. Of PP Cost	Rs.in Cr.	485.71	4195.37	11319.70	16000.78
% share		3.036	26.220	70.745	
Total Fixed Charges PP	Rs.in Cr.				3046.24
Voltage wise Fixed Charge	Rs.in Cr.	92.47	798.72	2155.05	3046.24
Total Variable Charges	Rs.in Cr.				12952.60
Voltage wise VC	Rs.in Cr.	393.18	3396.14	9163.28	12952.60
other Cost	Rs.in Cr.	103.82	835.44	2062.00	3001.27
Total Fixed Expenditure (FC+ Other Cost)	Rs.in Cr.	196.29	1634.16	4217.06	6047.51

	11 kV and above consumers (HT)	LT consumers
FC	1830.45	4217.06
EC	3789.32	9163.28
Total	5619.78	13380.33
FC %	32.57	31.52
Ec%	67.43	68.48

Proposed fixed charges from HT consumers= Rs.1187.89 Crores.

Total Fixed Charges to be collected = Rs.1830.02 Crores

Estimated Under recovery from Fixed Charges = Rs.642.13 Crores

Additional Surcharge = Rs.0.73 (73 Paisa)

ANNEXURE - III**MESCOM Voltage-Wise Cost of supply**

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
Energy Sales as per flow diagram	MU	110.43	1013.75	3610.94	4735.12
Distribution Losses	MU	0	65.97	516.27	582.24
Net IF energy	MU	110.43	1079.72	4127.21	5317.36
Transmission Loss	%	3.083	3.083	3.083	
Net Energy at Gen	MU	113.94	1114.07	4258.50	5486.51
Dist of Energy input	%	2.08	20.31	77.62	
PP Cost	Rs.in Cr.				1867.02
Dist of PP Cost	Rs.in Cr.	38.77	379.11	1449.14	1867.02
Dist of energy sales	%	2.33	21.41	76.26	
Other Cost (Transmission & Dist. Network)	Rs.in Cr.				824.84
Dist. Of other cost	Rs.in Cr.	19.24	176.59	629.012	824.84
Total Cost	Rs.in Cr.	58.01	555.70	2078.15	2691.86
Voltage wise per unit Cost	Rs./unit	5.25	5.48	5.76	5.68

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
PP Cost	Rs.in Cr.				1867.02
Dist. Of PP Cost	Rs.in Cr.	38.77	379.11	1449.14	
% share		2.08	20.31	77.62	
Total Fixed Charges PP	Rs.in Cr.				251.55
Voltage wise Fixed Charge	Rs.in Cr.	5.22	51.08	195.25	
Total Variable Charges	Rs.in Cr.				1615.47
Voltage wise VC	Rs.in Cr.	33.55	328.03	1253.90	
other Cost	Rs.in Cr.	19.24	176.59	629.01	
Total Fixed Expenditure (FC+ Other Cost)	Rs.in Cr.	24.46	227.67	824.26	1076.39

	11 kV and above consumers (HT)	LT consumers
FC	252.13	824.26
EC	361.58	1253.90
Total	613.71	2078.15
FC %	41.08	39.66
Ec%	58.92	60.34

Proposed fixed charges from HT consumers= Rs.124.10 Crores.

Total Fixed Charges to be collected = Rs.252.13 Crores

Estimated Under recovery from Fixed Charges = Rs.128.03 Crores

Additional Surcharge = Rs. 1.14(114 Paisa)

ANNEXURE - IV**CESC Voltage-Wise Cost of Supply**

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
Energy Sales as per flow diagram	MU	700.4	701.03	5079.2	6480.63
Distribution Losses	MU		53.73	893.30	947.03
Net IF energy	MU	700.4	754.76	5972.50	7427.66
Transmission Loss	%	3.083	3.083	3.083	
Net Energy at Gen	MU	722.68	778.77	6162.49	7663.94
Dist of Energy input	%	9.43	10.16	80.41	100.00
PP Cost	Rs.in Cr.				2781.54
Dist of PP Cost	Rs.in Cr.	262.29	282.65	2236.61	2781.54
Dist of energy sales	%	10.81	10.82	78.38	100.00
Other Cost (Transmission & Dist. Network)	Rs.in Cr.				856.32
Dist. Of other cost	Rs.in Cr.	92.55	92.63	671.14	856.32
Total Cost	Rs.in Cr.	354.84	375.28	2907.75	3637.86
Voltage wise per unit Cost	Rs./unit	5.07	5.35	5.72	5.61

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
PP Cost	Rs.in Cr.				2781.54
Dist. Of PP Cost	Rs.in Cr.	262.29	282.65	2236.61	2781.54
% share		9.43	10.16	80.41	100.00
Total Fixed Charges PP	Rs.in Cr.				414.30
Voltage wise Fixed Charge	Rs.in Cr.	39.07	42.10	333.13	414.30
Total Variable Charges	Rs.in Cr.				2367.24
Voltage wise VC	Rs.in Cr.	223.22	240.55	1903.47	2367.24
other Cost	Rs.in Cr.	92.55	92.63	671.14	856.32
Total Fixed Expenditure (FC+ Other Cost)	Rs.in Cr.	131.61	134.73	1004.28	1270.62

	11 kV and above consumers (HT)	LT consumers
FC	266.34	1004.28
EC	463.77	1903.47
Total	730.11	2907.75
FC %	36.48	34.54
Ec%	63.52	65.46

Proposed fixed charges from HT consumers= Rs.129.81Crores.

Total Fixed Charges to be collected = Rs.266.34 Crores

Estimated Under recovery from Fixed Charges = Rs.136.53 Crores

Additional Surcharge = Rs.0.97 (97 Paisa)

ANNEXURE-V**HESCOM Voltage-Wise Cost of Supply**

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
Energy Sales as per flow diagram	MU	348.31	1413.52	8940.58	10702.41
Distribution Losses	MU	0	128.38	1745.48	1873.86
Net IF energy	MU	348.31	1541.80	10686.06	12576.17
Transmission Loss	%	3.083	3.083	3.083	
Net Energy at Gen	MU	359.39	1590.85	11025.99	12976.23
Dist of Energy input	%	2.77	12.26	84.97	100.00
PP Cost	Rs.in Cr.				5379.02
Dist of PP Cost	Rs.in Cr.	148.98	659.45	4570.59	5379.02
Dist of energy sales	%	3.25	13.21	83.54	100.00
Other Cost (Transmission & Dist. Network)	Rs.in Cr.				1159.34
Dist. Of other cost	Rs.in Cr.	37.73	153.12	968.49	1159.34
Total Cost	Rs.in Cr.	186.71	812.57	5539.08	6538.36
Voltage wise per unit Cost	Rs./unit	5.36	5.75	6.20	6.11

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
PP Cost	Rs.in Cr.				5379.02
Dist. Of PP Cost	Rs.in Cr.	148.98	659.45	4570.59	5379.02
% share		2.77	12.26	84.97	100.00
Total Fixed Charges PP	Rs.in Cr.				894.30
Voltage wise Fixed Charge	Rs.in Cr.	24.77	109.64	759.89	894.30
Total Variable Charges	Rs.in Cr.				4484.72
Voltage wise VC	Rs.in Cr.	124.21	549.81	3810.70	4484.72
other Cost	Rs.in Cr.	37.73	153.12	968.49	1159.34
Total Fixed Expenditure (FC+ Other Cost)	Rs.in Cr.	62.50	262.76	1728.38	2053.64

	11 kV and above consumers (HT)	LT consumers
FC	325.26	1728.38
EC	674.02	3810.70
Total	999.28	5539.08
FC %	32.55	31.20
Ec%	67.45	68.80

Proposed fixed charges from HT consumers= Rs.230.53 Crores.

Total Fixed Charges to be collected = Rs.325.26 Crores

Estimated Under recovery from Fixed Charges = Rs.94.73 Crores

Additional Surcharge = Rs.0.54 (54 Paisa)

ANNEXURE - VI**GESCOM Voltage-Wise Cost of Supply**

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
Energy Sales as per flow diagram	MU	566	670.02	5745.09	6981.11
Distribution Losses	MU	0	61.20	1170.76	1231.96
Net IF energy	MU	566	731.22	6915.85	8213.07
Transmission Loss	%	3.083	3.083	3.083	
Net Energy at Gen	MU	584.00	754.48	7135.85	8474.33
Dist of Energy input	%	6.89	8.90	84.21	
PP Cost	Rs.in Cr.				3266.75
Dist of PP Cost	Rs.in Cr.	225.13	290.84	2750.78	3266.75
Dist of energy sales	%	8.11	9.60	82.29	
Other Cost (Transmission & Dist. Network)	Rs.in Cr.				975.27
Dist. Of other cost	Rs.in Cr.	79.07	93.60	802.60	975.27
Total Cost	Rs.in Cr.	304.20	384.45	3553.38	4242.02
Voltage wise per unit Cost	Rs./unit	5.37	5.74	6.19	6.08

Particulars	Unit	110kV & 66 kV	11 kV	LT	Total
PP Cost	Rs.in Cr.				3266.75
Dist. Of PP Cost	Rs.in Cr.	225.13	290.84	2750.78	3266.75
% share		6.89	8.90	84.21	
Total Fixed Charges PP	Rs.in Cr.				495.43
Voltage wise Fixed Charge	Rs.in Cr.	34.14	44.11	417.18	495.43
Total Variable Charges	Rs.in Cr.				2771.32
Voltage wise VC	Rs.in Cr.	190.98	246.73	2333.60	2771.32
other Cost	Rs.in Cr.	79.07	93.60	802.60	975.27
Total Fixed Expenditure (FC+ Other Cost)	Rs.in Cr.	113.21	137.71	1219.78	1470.70

	11 kV and above consumers (HT)	LT consumers
FC	250.92	1219.78
EC	437.72	2333.60
Total	688.64	3553.38
FC %	36.44	34.33
Ec%	63.56	65.67

Proposed fixed charges from HT consumers= Rs.161.12 Crores.

Total Fixed Charges to be collected = Rs. 250.92 Crores

Estimated Under recovery from Fixed Charges = Rs.89.80 Crores

Additional Surcharge = Rs.0.73 (73 Paisa)