

**ORISSA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
UNIT-VIII, BHUBANESWAR – 751012

**Present : Shri B.K. Das, Chairperson
Shri S.K. Jena, Member
Shri K. C. Badu, Member**

Case Nos.66, 67, 68 & 69 of 2006

In the matter of :

Approval of Open Access Charges (Transmission/wheeling Charges, Surcharge and Additional Surcharge applicable to open access customers for use of Intra-state transmission/ distribution system) in accordance with Section 39 and 42 of the Electricity Act, 2003 read with the provisions of Chapter II (Charges for Open Access) of OERC (Determination of Open Access Charges) Regulations, 2006,.

And

Case No.66/2006

In the matter of :

M/s. Central Electricity Supply Utility of Orissa (CESU), 2nd Floor, IDCO Towers, Janpath, BBSR . . . **Petitioner**

Vursus

1. M/s. Jayshree Chemicals Ltd., Registered office & works, PO : Jayshree-761025, Dist : Ganjam, Orissa . . . **Objector**
2. M/s. OPTCL, represented through its Chairman-cum-Managing Director . . . **Respondent**

AND

Case No.67/2006

In the matter of :

M/s. North Eastern Electricity Supply Company of Orissa Ltd. (NESCO), Januganj, Balasore . . . **Petitioner**

Vursus

1. M/s. Jayshree Chemicals Ltd., Registered office & works, PO : Jayshree-761025, Dist : Ganjam, Orissa **Objector**
2. M/s. OPTCL, represented through its Chairman-cum-Managing Director . . . **Respondent**

AND

Case No.68/2006

In the matter of :

M/s. Western Electricity Supply Company of Orissa Ltd.
(WESCO), Burla, Sambalpur **Petitioner**

Vursus

1. M/s. Jayshree Chemicals Ltd., Registered office & works,
PO : Jayshree-761025, Dist : Ganjam, Orissa . **Objector**
2. M/s. OPTCL, represented through its Chairman-cum-
Managing Director **Respondent**

AND

Case No.69/2006

In the matter of :

M/s. Southern Electricity Supply Company of Orissa Ltd.
(SOUTHCO), Courtpetta, Berhampur . . . **Petitioner**

Vursus

1. M/s. Jayshree Chemicals Ltd., Registered office & works,
PO : Jayshree-761025, Dist : Ganjam, Orissa . **Objector**
2. M/s. OPTCL, represented through its Chairman-cum-
Managing Director **Respondent**

For the Petitioners : Mr. P.C. Panda, Sr. GM(Com), CESU is present on behalf of CESU. Mr. S.C. Singha, DGM & Mr. D. Mukhopadhyay, Manager(F), NESCO are present on behalf of NESCO. Mr. P.K. Pradhan, GM (Com), WESCO is present on behalf of WESCO. Nobody from SOUTHCO is present. Mr. R.P. Mahapatra, Authorised Representative for Jayshree Chemicals Ltd. is present.

For the Objector : Mr. R.P. Mahapatra, Authorised Representative for M/s. Jayshree Chemicals Ltd., Ganjam

For the Respondent : Mr. K.C. Behera, Sr. GM (R&T), OPTCL is present on behalf of OPTCL.

Date of Hearing : 13.06.2007

Date of Order : 29.03.2008

ORDER

1. The Distribution Licensees CESU, NESCO, WESCO and SOUTHCO have filed Applications in the Commission on 15.12.2006 for Determination of Open Access Charges for Transmission/Wheeling Charges, Surcharge and Additional Surcharge applicable to open access customers for use of intra-state transmission/distribution system in view of Section 42 of the Electricity Act, 2003 for the FY 2007-08, as well as in accordance with OERC (Terms and Conditions for Determination of Open Access Charges) Regulations, 2006, which were registered as Case No. 66/2006, 67/2006, 68/2006 & 69/2006 respectively.
2. In compliance with the provision of Section 42 of the Electricity Act, 2003 read with OERC (Terms and Conditions for Determination of Open Access Charges) Regulations, 2006, all the distribution licensees were directed by the Commission to publish the matter in the English and Oriya Newspapers by 31.12.2006 inviting suggestions/objections if any from various stakeholders to be filed before the Commission on or before 15.01.2007. The Commission further directed the distribution licensees to file a consolidated rejoinders to all the suggestions / objections filed by the interested persons before the Commission on or before 22.01.2007
3. In response to the Public Notice issued by four nos. of DISTCOMs in English/ Oriya Newspapers, only M/s Jayshree Chemical Ltd. Ganjam filed an application on 15.01.2007 objecting to the computation of Wheeling charge and Cross Subsidy Surcharge of SOUTHCO and prayed before the Commission to approve 19 P/KWH towards Open Access Charges including surcharge and wheeling charges.
The Commission vide its order dtd.05.05.2007 impleaded M/s.OPTCL as respondent in this case, as an affected party. In response to the Commission's notice M/s. OPTCL filed its comprehensive reply.

4. The summary of submission of the applicants are given as under:

(i) Central Electricity Supply Utility of Orissa (CESU)

The representative of CESU submitted the views of CESU on computation of wheeling charges, Cross-Subsidy Surcharge and Additional Surcharge as per the following.

(a) Wheeling Charges:

CESU submitted that wheeling charges for both Long-Term Open Access (LTOA) and Short-Term Open Access (STOA) consumers have been calculated as 47.55 P/KWH for FY 2007-08 based on Distribution Cost of Rs. 196.35 crores and energy handled 4164 MU during FY 2006-07.

(b) Cross Subsidy Surcharge:

CESU has estimated the Cross Subsidy Surcharge in respect of HT and EHT category consumers for FY 2007-08 as mentioned hereunder:

Category of Consumers	HT	EHT
Large Industry	167	150
Mini Steel Plant	174	-
General Purpose	185	-
Bulk Domestic Supply	26	-
Public Water Works	241	-
Public Institutions	134	-
Heavy Industries	-	113
Power Intensive Industries	164	211
Railway Traction	-	234

(c) Additional Surcharge:

The representative of CESU submitted that additional surcharge if any as approved by the Commission shall be acceptable to CESU.

(ii) North Eastern Electricity Supply Company of Orissa Ltd. (NESCO)

The representative of NESCO submitted the views of NESCO on computation of wheeling charges, Cross-Subsidy Surcharge and Additional Surcharge as per the following.

(a) Wheeling Charges:

NESCO submitted that wheeling charges for both Long-Term Open Access (LTOA) and Short-Term Open Access (STOA) consumers have been calculated as 41 P/KWH for FY 2007-08.

(b) Cross Subsidy Surcharge:

NESCO has estimated that the Cross Subsidy Surcharge in respect of HT and EHT category consumers for FY 2007-08 as mentioned hereunder:

Description	HT	EHT
Specified Public purpose		179
General Purpose (>110KVA)		157
Public Water Works & Sewage Pumping		242
Emergency Supply to CPPs		203
Mini Steel Plant		44
Power Intensive Industry	119	
Railway Traction	202	
Large Industry	168	152
Special Tariff	42	30

(c) Additional Surcharge:

The representative of NESCO submitted that the Commission may determine the Additional Surcharge as and when any consumer applying for Open Access based on the submission of Licensee on case-to-case basis.

(iii) Western Electricity Supply Company of Orissa Ltd. (WESCO)

The representative of WESCO submitted the views of WESCO on computation of wheeling charges, Cross-Subsidy Surcharge and Additional Surcharge as per the following.

(a) Wheeling Charges:

WESCO submitted that wheeling charges for both Long-Term Open Access (LTOA) and Short-Term Open Access (STOA) consumers have been calculated as 35 P/KWH for FY 2007-08.

(b) Cross Subsidy Surcharge:

WESCO has estimated the Cross Subsidy Surcharge in respect of HT and EHT category consumers for FY 2007-08 as mentioned hereunder:

Description	EHT	HT
Specified Public purpose		110
HT Industrial (M) Medium Ind.		126
General Purpose (>110KVA)		134
Public Water Works		153
Large Industry	136	110
Power Intensive Industry	554	101
Mini Steel Plant	243	86
Railway Traction	211	144
Heavy Industry	148	

(c) Additional Surcharge:

The representative of WESCO submitted that the Commission may determine the Additional Surcharge as and when any consumer applying for Open Access based on the submission of Licensee on case-to-case basis.

(iv) Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO)

The representative of SOUTHCO submitted the views of SOUTHCO on computation of wheeling charges, Cross-Subsidy Surcharge and Additional Surcharge as per the following.

(a) Wheeling Charges:

SOUTHCO submitted that wheeling charges for both Long-Term Open Access (LTOA) and Short-Term Open Access (STOA) consumers have been calculated as 40 P/KWH for FY 2007-08.

(b) Cross Subsidy Surcharge:

SOUTHCO has estimated that the Cross Subsidy Surcharge in respect of HT and EHT category consumers for FY 2007-08 as mentioned hereunder:

Description	EHT	HT
Specified Public purpose		163
HT Industrial (M) Medium Ind.		167
General Purpose (>110KVA)		147
Public Water Works		125
Large Industry	207	162
Power Intensive Industry		60
Railway Traction	271	

(c) Additional Surcharge:

The representative of SOUTHCO submitted that the Commission may determine the Additional Surcharge as and when any consumer applying for Open Access based on the submission of Licensee on case-to-case basis.

- (v) WESCO/NESCO/SOUTHCO have calculated the O/A Charges as a ratio of cost of distribution at HT and the units estimated to flow in HT system. The cost of distribution as calculated by them includes expenses on O&M, depreciation, interest, bad debt, contingency and ROE etc.
- (vi) For the purpose of determination of Cross-Subsidy Surcharge they have worked out the difference between the average rate /unit for each class of consumers and cost of supply at HT by considering a loss figure of 8.0 %.

5. Mr R P Mohapatra on behalf of M/s Jayashree Chemicals Ltd., Ganjam submitted that JCL is availing power supply directly from 132/33 KV Grid substation of OPTCL at Ganjam, hence JCL is not entitled to pay any wheeling charge. He further submitted that cross-subsidy surcharge has been computed based on the formula given at para 8.5 of National Tariff Policy dtd. 06.01.2006 and as per their calculation the

cross subsidy surcharge and the wheeling charge payable by JCL is of the order of 19 P/KWH. He, therefore, prayed before the Commission not to accept the wheeling charges of 40 P/KWH and cross subsidy surcharge for 60 P/KWH mentioned in the application of SOUTHCO dtd. 22.01.2007.

- 5.1 Mr. Mohapatra further submitted that the allocation of quantum of purchase of power from different sources by the four DISTCOs should be made by the Commission so that the normative purchase of power from different sources could help in assessing the power purchase cost by the DISTCOs.
6. Mr K C Behera, Senior GM (R&T) on behalf of OPTCL submitted that the Commission vide order dtd. 22.03.2007 passed in Case no 56 of 2006 have approved the quantum of energy 16936 MU to be transmitted by OPTCL network during FY 2007-08 and at para 5.14.3.2 have fixed up the Transmission Charges for LTOA as Rs. 5200/MW/Day and for STOA consumers as Rs. 1300/MW/Day. He submitted that the cross subsidy surcharge is to be computed under Regulation 4(2)(ii), (iii) and (iv) of OERC (Determination of Open Access Charges) Regulations, 2006.
 - 6.1 He submitted that in line with the above regulatory provision, the DISTCOs have applied for cross subsidy surcharge considering HT loss @8%. However, the contention of the DISTCOs regarding determination of factor "C" (Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power) appearing in the relevant formula prescribed in the Tariff Policy notified by Ministry of Power, Govt. of India hear would mean as the Bulk Supply Price of DISTCOs charged by GRIDCO during FY 2007-08. He also submitted that the averment of M/s Jayshree Chemicals Limited, made at Para 3(ii) in their affidavit dated 10.01.2007 is contrary to the power purchase scenario existing in the State of Orissa during FY 2007-08.

- 6.2 He further submitted that due to migration of consumers requiring power exceeding 5 MW and exceeding 2 MW during FY 2007-08 from the incumbent distribution licensee to their choice will no way affect the business of OPTCL as OPTCL transmits bulk power of GRIDCO for delivery to the DISTCOs at 220/132 KV.

As the subject matter of all the above cases are similar in nature, the Commission heard the views of all the applicants, the respondent M/s. OPTCL and the objector M/s. Jayshree Chemicals Ltd. analogously and passed the following common order.

7. Surcharge is to be levied on open access customers under Section 42 (2) of the Electricity Act. While determining the surcharge, the commission has to keep in view the loss of cross subsidy from such consumers who opt to take supply from a person other than the incumbent distribution licensee. As an example, an HT consumer may be paying Rs.3.00 as charges per unit to a distribution company. The distribution company on the other hand is spending money towards the cost of power purchase, charges for transmission, losses in transmission of the OPTCL, charges for wheeling of this power in its own distribution system in addition to covering the expenses towards the cost of energy lost in distribution. The distribution utility is entitled to a return on equity on its own investment. Thus, the difference between the revenue realized from a consumer less all the aforesaid charges is the margin available to the distribution utility for supply to an HT consumer. This margin goes towards cross-subsidizing supplies to certain classes of consumers.
8. On the other hand there are some consumers who may be getting electricity from the distribution utility and paying a charge which may be less than total expenses incurred by the utility for such supply. As explained in para 7 above, the margin available from sale to an HT consumer is the cross subsidy surcharge that is available for the consumers below the cost of supply. Hence, an attempt is always

made to reach a revenue neutral position such that the margin available from subsidizing consumers is adequate to meet the gap due to the subsidized consumers. The objective of the Electricity Act, 2003 is to reduce the cross subsidy in the tariff structure so that the consumers move towards the concept of meeting the full cost of supply with gradual reduction of the cross subsidy in a phased manner.

9. It is therefore necessary first to determine what is the extent of margin available to the distribution utility from the various groups of consumers.
10. Thereafter, we have to take into account the charges for transmission and the charges for wheeling of power in the distribution system.
11. We have also to take into consideration the percentage of transmission loss in EHT transmission and the distribution loss in the distribution system.
12. In Orissa, the single-buyer model prevails, with GRIDCO as the sole supplier to the DISTCOs. Differential Bulk Supply price is fixed for four distribution utilities of the state. This has become necessary to maintain a uniform retail tariff through out the State. Power is procured by the DISTCOs at bulk supply prices as they purchase their entire requirement from GRIDCO at present. However, where GRIDCO cannot meet their demand, DISTCOs have the liberty, of purchasing power from CGPs and other sources in addition to the purchase of power from GRIDCO. Such a situation or stage is yet to take place as GRIDCO is meeting their full demand at present. Therefore, for the purpose of determination of cost of supply by the distribution utility we shall be considering the rate at which each distribution company purchases power from the GRIDCO.
13. In Orissa, power is transmitted in the system of Orissa Power Transmission Corporation Ltd (OPTCL). Hence, the DISTCOs pay to

GRIDCO for the cost of power purchase through bulk supply price and also pay for the cost of transmission to OPTCL. In addition to this, the transmission loss of 4.5% is accounted for in the power purchase price. So the delivery price of the generated power is the bulk supply price plus the OPTCL transmission cost.

14. We have been determining the transmission charges following a postage stamp method. It means that the total cost of transmission is recovered from user of the transmission utility at a per unit rate based on the quantum of energy transmitted over the system.
15. It has been prescribed in Open Access Regulation that the wheeling charges shall also be determined following the same principle as laid down for determination of transmission charge. In Orissa, we have got four distribution utilities. The cost of distribution of each utility and the amount of energy handled in the distribution system also varies from utility to utility. The total cost of distribution divided by the total energy handled in the distribution system gives the postage stamp rate for utilisation of distribution system. For our purpose, we are only considering the energy handled in the HT distribution system.
16. The transmission and wheeling charges are determined and quantified in the Transmission Tariff order and Distribution & Retail Supply Tariff order passed by the Commission. So also the Commission determines the transmission loss and distribution loss. In the tariff orders for the year 2008-09, the Commission has approved 4.5% as the approved loss in the EHT Transmission system and 8% as the loss in the HT distribution system.
17. For the year 2008-09, the Commission has approved the following Bulk Supply Price in respect of four distribution companies.

1.	WESCO	157.25 per KWH
2.	NESCO	125.00 per KWH
3.	SOUTHCO	70.00 per KWH
4.	CESU	101.50 per KWH

Besides above, Demand charge @ Rs.200/- KVA is payable if the DISTCOs exceed the approved Maximum Demand.

18. There are various consumer categories availing supply at EHT & HT from the DISTCOs but consumers only with contract demand 1 MW and above can avail the benefits of open access under the present Open Access Regime as per the phasing notified in the said BSP order. In light of this, we will only be discussing about the applicable tariff for HT & EHT group of consumers.
19. The tariff structure has been fully rationalized. Essentially, it consists of two major components i.e. the demand charge which is Rs.200 per KVA per month both for EHT & HT class of consumers (excepting few small ones) in addition to energy charge expressed in paise per KWH.
20. The energy charges as applicable to HT & EHT class of consumers w.e.f 01.04.2008 are given below:-

Table - 1

Load Factor (%)	HT	EHT
Unto 50%	300 p/u	290 p/u
> 50% = <60%	225 p/u	202 p/u
>60%	220 p/u	202 p/u

In addition to the above, a uniform customer service charge of Rs.700/- per consumer per month is payable by the consumers.

21. The above tariff structure indicates that with a uniform demand charge the rate per unit varies according to the extent of use i.e. as the load factor goes on increasing the demand charge per unit declines. Its impact is that, the overall per unit charge of a consumer goes on declining as his load factor increases more and more. This is irrespective of the category to which the consumer might belong. The comparative picture about the rates payable at different load factor assuming Maximum Demand equal to full contracted capacity is given in the tables below:-

Table – 2

LOAD FACTOR BASED SLAB RATES FOR CONSUMERS AT EHT FOR FY 2008-2009						
	Demand Charge	Normal Energy Ch.<=50%	Energy ch.>50%<=60%	Energy ch.>60%	Power Factor	
	(Rs./KVA)	(P/KWH)	(P/KWH)	(P/KWH)	0.9	
EHT	200	290	202	202		
Actual CD in KVA	Actual L.F	Max. Units per month	L.F. Limit for incentive	Av. Energy Rate	Demand Component	Total Rate
				(P/KWH)	(P/KWH)	(P/KWH)
1	100%	657	50%	246.00	30.44	276.44
1	95%	624	50%	248.32	32.04	280.36
1	90%	591	50%	250.89	33.82	284.71
1	85%	558	50%	253.76	35.81	289.58
1	80%	526	50%	257.00	38.05	295.05
1	75%	493	50%	260.67	40.59	301.26
1	70%	460	50%	264.86	43.49	308.34
1	65%	427	50%	269.69	46.83	316.53
1	60%	394	50%	275.33	50.74	326.07
1	55%	361	50%	282.00	55.35	337.35
1	50%	329	50%	290.00	60.88	350.88
1	45%	296	50%	290.00	67.65	357.65
1	40%	263	50%	290.00	76.10	366.10
1	35%	230	50%	290.00	86.98	376.98
1	30%	197	50%	290.00	101.47	391.47
1	25%	164	50%	290.00	121.77	411.77
1	20%	131	50%	290.00	152.21	442.21

Table – 3

LOAD FACTOR BASED SLAB RATES FOR CONSUMERS AT HT FOR FY 2008-2009						
	Demand Charge	Normal Energy Ch.<=50%	Energy ch.>50%<=60%	Energy ch.>60%	Power Factor	
	(Rs./KVA)	(P/KWH)	(P/KWH)	(P/KWH)	0.9	
HT	200	300	225	220		
Actual CD in KVA	Actual L.F	Max. Units per month	L.F. Limit for incentive	Av. Energy Rate	Demand Component	Total Rate
					(P/KWH)	(P/KWH)
1	100%	657	50%	260.50	30.44	290.94
1	95%	624	50%	262.63	32.04	294.68
1	90%	591	50%	265.00	33.82	298.82
1	85%	558	50%	267.65	35.81	303.46
1	80%	526	50%	270.63	38.05	308.68
1	75%	493	50%	274.00	40.59	314.59
1	70%	460	50%	277.86	43.49	321.34
1	65%	427	50%	282.31	46.83	329.14
1	60%	394	50%	287.50	50.74	338.24
1	55%	361	50%	293.18	55.35	348.53
1	50%	329	50%	300.00	60.88	360.88
1	45%	296	50%	300.00	67.65	367.65
1	40%	263	50%	300.00	76.10	376.10
1	35%	230	50%	300.00	86.98	386.98
1	30%	197	50%	300.00	101.47	401.47
1	25%	164	50%	300.00	121.77	421.77
1	20%	131	50%	300.00	152.21	452.21

22. The surcharge shall be applicable for the appropriate class of consumers. As indicated in Tables - 2 and 3 in the rationalized tariff structure, there is a variation in rate payable by the consumers for operation at different load factor. Therefore fixing a particular rate may be correct only for a particular load factor. To be fair to the distribution utility as well as the consumer, it is necessary to determine the extent

of loss of revenue that could occur due to the migration of consumer from an embedded utility.

23. The rate per unit billed to a consumer, less the bulk supply price of a utility, less the transmission charge, is the marginal benefit from an EHT consumers.
24. Likewise the rate per unit billed to a HT consumer, less the bulk supply price of a utility, less the transmission charge, less the wheeling charge, is equal to the marginal benefit from a HT consumers. Of course, loss in HT Distribution system will be taken into consideration.
25. The Act envisages reduction of cross subsidy and the National Tariff Policy envisages the cross subsidy surcharge will be reduced in a linear manner to a maximum of 20% of its opening level by the year 2010-11. **The transmission and distribution loss in four utilities is taking an improved trend and there may be further improvement by the year 2010-11. We believe that improvement in loss reduction would, to some extent, be able to offset the impact due to withdrawal/ reduction of cross subsidy.**
26. In para 8.5.1 of the National Tariff Policy, it is stated that “when open access is allowed the surcharge for the purpose of sections 38, 39, 40 & 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 licensees to supply electricity to the consumers of the applicable class”. In that context, we have explained the tariff applicable to EHT and HT category of consumers at a normative level of operation for different levels of load factor. As stated earlier, we have rationalized the tariff structure for most of the HT & EHT classes of consumers. The total tariff payable per unit from load factor from 20% to 100% in respect of EHT & HT consumers at 100% MD, is given in Tables - 2 & 3.

- 26.1 Normally Power Intensive Category of industries operate at about a P.F. of 80% where the overall paise/unit rate works out to 295.05 inclusive of Demand & Energy Charge assuming that the industry has reached its full contract demand. This rate could be reduced/increased if the load factor goes up or down.
27. These tables indicate the variation of charges payable by consumers operating at load factor from 20% unto 100%. In respect of HT consumers it varies from 290.94 paise/unit at 100% load factor to 452.21 p/u at a load factor of 20%. Likewise in case of EHT consumers the rate varies from 276.44 p/u at 100% load factor to 442.21 p/u at a load factor of 20%. In Orissa situation industries normally operate between 20 to 100% of load factor.
28. A consumer will be interested to opt for supply from another licensee or a generator only when some financial relief is available to him. A consumer opting out of a licensee and going to a new source will have to pay for the following.
1. Cost of power purchase to generator/energy charge to a licensee
 2. Cost of transmission charge at EHT
 3. Transmission loss at EHT
 4. Wheeling charges at HT
 5. Loss at HT
 6. Surcharge payable to the departing utility
 7. Additional surcharge, if applicable.
29. Suppose an embedded customer in a distribution system proposes to shift to another distribution licensee. Physically he remains connected to the incumbent licensee. Therefore, he is required to pay wheeling charge to the incumbent licensee along with the losses in HT system in addition to cross subsidy surcharge.
30. The consumer has to pay the transmission charge and the transmission loss to the transmission licensee.

31. For direct purchase from a generator/licensee, he has to pay to the generator or the licensee for energy charges depending upon the source to which he chooses to migrate.
32. The problem is, because he is connected to the incumbent licensee's system, his maximum demand gets recorded in the overall maximum demand of the incumbent licensee. The incumbent licensee pays for the demand charges to the bulk supply licensee. It is difficult to distinguish to the extent, the maximum demand of the consumer affects the overall maximum demand of the incumbent licensee due to diversity of consumers drawal in the system. Hence, it is difficult to ascertain the maximum demand component of this consumer in the recorded overall maximum demand of the incumbent licensee.
33. The system power factor may not be affected due to the shifting of large number of consumers from one utility to other but the recorded maximum demand for bulk purchase of the embedded licensee will continue to record the total Maximum Demand as before which is a reflection of both Active & Reactive Load. Hence the migration need to be suitably compensated, so that the embedded licensee is not unduly burdened due to higher recording of Maximum Demand. As an example, if the migrating consumers were supplied power from other independent sources bereft of embedded licensee's distribution system, the recorded Maximum Demand for bulk purchase of the embedded licensee would have been lower. This is also to be noted that the revenue requirement of a DISTCO is determined based on an expected Maximum Demand, beyond which they are liable to pay a penalty to the Bulk Supplier.
34. The next question i.e. by availing open access, how much benefit the consumer will get could be assessed only in terms of money. The incumbent licensee after deducting the bulk supply price, transmission charge at EHT, the transmission loss & wheeling charges and loss in

the HT Distribution system will be able to assess the surplus that it earns from the consumer.

35. The consumer migrating to another licensee/generator will have to bear the cost of transmission and the transmission loss of the transmission licensee – apart from paying wheeling charges & wheeling losses.
36. The consumer thereafter will negotiate and seek a price acceptable to him from either the generator or a licensee after accounting for the surcharge one has to pay to the incumbent licensee.
37. Thus, the applicable rates have been worked out for various classes of consumers which are given in the tables hereafter:
38. The surcharge formula prescribed in National Tariff Policy is given below:

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

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.

For the year 2008-09 the following figures have been approved by the Commission.

EHT transmission loss	4.5%
HT wheeling loss	8%

Table - 4

Name of the licensee	Bulk supply price including transmission loss of 4.5% (p/u) (C)	Wheeling charges (p/u) for HT as per the nomenclature in the formula (D)	Transmission charges /Wheeling charges (p/u) for EHT as per the nomenclature in the formula (D)
WESCO	157.25	51.89	21
NESCO	125.00	63.95	21
SOUTHCO	70.00	67.30	21
CESU	101.50	74.22	21

Example : (at HT)

As an example Surcharge S in case of WESCO for a consumer operating at a L.F. of 80% = $T - (C (1 + L / 100) + D)$

Where,

T = Applicable Tariff for HT at 80% LF = 308.68 p/u

C = Power purchase cost plus Transmission charge by DISTCO

L = Loss at HT = 8%

D = Wheeling charge = Distribution cost / Input at HT = 51.89 p/u

S for WESCO at HT with 80% LF = $308.68 - (178.25 (1 + 8 / 100) + 51.89) = 64.28$ p/u say 64 p/u

Note: The Bulk Supply Price of the DISTCOs from GRIDCO includes transmission loss of 4.5% at EHT.

Table - 5

Surcharge AS PER Tariff policy for FY 2008-09 at HT

Wheeling ch. p/u	Load Factor %	100%	90%	80%	70%	60%	50%	40%	30%	20%	Median
	Tariff (HT) p/u	291	299	309	321	338	361	376	401	452	366
	Surcharge p/u										
52	WESCO	47	54	64	77	94	116	132	157	208	121
64	NESCO	69	77	87	100	117	139	154	180	231	144
67	SOUTHCO	125	133	143	156	173	195	211	236	287	200
74	CESU	84	92	102	115	132	154	170	195	246	159

Example : (at EHT)

As an example Surcharge S in case of WESCO for consumer operating at a PLF of 80% = $T - (C (1 + L / 100) + D)$

Where,

T = Applicable Tariff for EHT at 80% LF = 295.05 p/u

C = Power purchase cost plus Transmission charge by DISTCO

L = Transmission Loss = 4.5% already inbuilt (not to be considered again)

D = Transmission charge /Wheeling charge at EHT =. 21 p/u

S for WESCO at EHT with 80% LF = 295.05 – (157.25 + 21) = 117 p/u

Note: The Bulk Supply Price of the DISTCOs from GRIDCO includes transmission loss of 4.5% at EHT.

Table - 6

Surcharge AS PER Tariff policy for FY 2008-09 at EHT

Wheeling ch. p/u	Load Factor %	100%	90%	80%	70%	60%	50%	40%	30%	20%	Median
	Tariff (EHT) p/u	276	285	295	308	326	351	366	391	442	354
	Surcharge p/u										
21	WESCO	98	106	117	130	148	173	188	213	264	176
21	NESCO	130	139	149	162	180	205	220	245	296	208
21	SOUTHCO	185	194	204	217	235	260	275	300	351	263
21	CESU	154	162	173	186	204	228	244	269	320	232

39. The fixation of the surcharge need to be realistic so that the extent of compensation available to the DISTCOs do not reduce drastically so as to affect their financial viability and, at the same time, give a signal to the enterprising consumers that they can source their power from generators and other licensees for optimizing their efficiency.
40. In this context, acceptance of a median rate as indicated in the margin would mean a higher surcharge for the more efficient high consuming consumers and put an obstacle in their migration from the embedded licensee. It may be appropriate to prescribe a range of surcharge for various level of consumptions so that it becomes fair, both to the

consumer and the licensee. It need not appear complicated as the person who would be utilizing this, are enlightened consumers with contract demand of at least of 1 MW and above. In fact, a parallel could be drawn with the U.I. mechanism that also prescribes a graded structure for various levels of frequency.

41. There should not be really any difficulty for a consumer migrating to be able to forecast their own load factor of operation and carry out commercial negotiations to whom they would be migrating. A linear approach for determining the exact rate in steps of 1% between 20 to 30 or 30 to 40 etc. can be worked out. For Load Factor below 20%, the surcharge at 20% shall apply. The surcharge shall be indicated in each monthly bill raised by the embedded licensee.
42. We plan to reduce the level of surcharge now determined to a level of 20% of its value linearly by the year 2011, though it would not bar the Commission from revisiting the figures in the annual tariff exercise due to upward or down ward revision in input cost/tariff.
43. The provisions of sec.8.5.2 of the National Tariff Policy is also applicable for the appropriate class of consumers which is quoted hereunder:

“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.

44. The mode of recovery of such charge has been explained in par 8.5.3 of the National Tariff Policy which is quoted below:

“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.

45. **Additional Surcharge :**

The Electricity Act, 2003 envisages levy of additional surcharge under sub-section (4) of Sec. 42. According to this section, a consumer opting to avail the facility of open access from a person **other than the distribution licensee of its area** of supply is liable to pay an additional surcharge on the charges of wheeling to meet the fixed cost of such distribution licensee arising out of its obligation to supply. We are conceiving a situation where the consumer is embedded to a particular distribution licensee utilizes the physical infrastructure of the embedded licensee for drawing power from the system. In such a situation, the question of assets getting stranded do not arise.

46. This kind of additional surcharge can be levied when new infrastructure is created for the customer to receive supply from a system other than that of the embedded distribution licensee. For example, a CGP gives power supply directly to such a consumer through an independent feeder. In such a situation, the assets of embedded licensee may become stranded, that too if no new consumers are coming. As long as the consumer remains connected to the embedded distribution licensee, it will only be a change of commercial principle and billing methodology. Hence, no additional surcharge over and above the billing charge needs to be given to the embedded licensee.

47. Para 8.5.6 provides that in case 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. In case of Orissa, tariff for temporary supply is applicable to the appropriate class

to which a consumer belongs. Obviously, the same rate can be applied as per the prevailing tariff structure.

48. To sum up we decide and direct as under:

(i) The wheeling charge and surcharge as indicated in Tables-5 and 6 are applicable for the year 2008-09 w.e.f. 1.4.2008 and may undergo change from time to time as may be decided by the Commission.

(ii) The transmission loss at EHT (4.5%) and wheeling loss for HT (8%) level is applicable for the year 2008-09 and may undergo change as may be decided by the Commission from time to time.

(iii) The additional surcharge would be determined and guided as per the broad principles enumerated from para 45 to 47 above.

49. These charges will be notified for the FY 2008-09 and will remain in force until further order.

Accordingly the case Nos.66, 67, 68 & 69 of 2006 relating to Open Access proceedings are disposed of and the charges are approved in accordance with Reg.4(2)(vii) of the OERC (Determination of Open Access Charges) Regulations, 2006.

(K.C. BADU)
MEMBER

(S.K. JENA)
MEMBER

(B.K. DAS)
CHAIRPERSON