

## CHAPTER – 5

### TARIFF ORDER FOR AEGCL FOR 2006-07

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#### 5.1 Introduction

This order relates to petition number 22 of 2005 filed by the Assam Electricity Grid Corporation Limited (AEGCL) for determination of transmission tariff for electricity to be sold to ASEB by AEGCL for FY 06-07. AEGCL is the owner of the transmission plants previously owned by ASEB. AEGCL has started functioning independently from 10<sup>th</sup> December'2004 as per the Assam Electricity Reform First Transfer Scheme which was notified by the Government of Assam vide PEL.151/2003/pt/165 dated 10<sup>th</sup> December, 2004. While passing the order for determination for Transmission Tariff for FY05-06, the Commission had examined the operational and the financial data in detail of the transmission plants, however financial separation of the entity from the ASEB was not achieved due to various reasons and the detailed limitations and constraints were duly taken care by the Commission and a methodology was developed as explained in Section 7 of the Tariff Order 2005-06. The Government of Assam vide notification no. PEL.151/2003/Pt/349 dated 16<sup>th</sup> August, 2005 issued orders to give effect to the reorganization of the Assam State Electricity Board and the finalization of the provisional transfers effected as per the provisions of the Electricity Act, 2003 and the First Transfer Scheme. Relevant portions of the above notifications are reproduced below:

- “(a) The opening balance sheets as per Schedule I to this order has been prepared based on the approved accounts of Assam State Electricity Board as on 31<sup>st</sup> March, 2004 and such opening balance sheet shall all be subject to all consequential adjustments on the update, finalization and audit of accounts of Assam State Electricity Board as on 31<sup>st</sup> March, 2005.
- (b) The Government of Assam shall pass separate orders in terms of the Transfer Scheme in regard to the transfer and absorption of personnel of Assam State Electricity Board in the five companies, namely: Assam Power Generation Corporation Limited, Assam

Electricity Grid corporation Limited, Upper Assam Electricity Distribution Company Limited, Central Assam Electricity Distribution Company Limited and Lower Assam Electricity Distribution Company Limited.”

The Commission notified the AERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 in the Assam Government Gazette on 29<sup>th</sup> April'2005. AERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 with upto date Amendments upto May, 2006 was published in the Assam Government Gazette on 24<sup>th</sup> May, 2006. As per clause 1.3 of the said Regulations, the Regulations shall come into force from the date of their publication in the official Gazette of the Government of Assam. As per clause 1.2, the Regulations shall apply to all the intra-state transmission licensees operating in the state of Assam. The State Government vide Notification No PEL.133/2003/363 dated 29<sup>th</sup> November 2005 allowed the Assam State Electricity Board (ASEB) to continue to undertake the limited functions of bulk purchase and bulk supply in respect to the existing generating capacity and existing contracted capacity for the said period. It would be necessary to revisit the arrangement here to understand allocation of capacity by the State Government. The Commission has already Notified AERC ( Terms and Conditions for Intra State Open access regulation) 2006, allowing open access facility for transaction for 10 MW and above with effect from FY 2006-07, as such separate transmission tariff for the state has become necessary. In absence of allocation of Power to different DISCOMs by the State Government, the Commission is inclined to consider the annual average peak sharing percentage of power by each DISCOMs as a share of transmission capacity. In the Tariff order 2005-06 Transmission Tariff was included as a part of Bulk Supply Tariff. This year the transmission tariff is notified which will be effective for DISCOMs and other network users, both for long term and short term open access consumers. The Transmission tariff for embedded customer (DISCOMs) is notified in KWH basis and for open access consumer as per Rupees per MW per day basis to facilitate open access transaction. All network users shall come under Transmission Service Agreements (TSA) with AEGCL. Similarly separate SLDC charge is notified in this order which will be applicable for all users. The Commission has determined the tariff for the transmission assets of the AEGCL in this order in line with the terms and conditions stipulated in the Regulations notified on 24th May, 2006 as far as practicable within the limitation of other related matters.

As per clause 5.3 of the Regulations, for multi year tariff principle, the tariff is to be determined on the basis of the principles enunciated for a period of three years commencing from next FY, i.e. 2006-07. The Tariff Policy notified by the Government of India on 6<sup>th</sup> January, 2006 also stipulated that the MYT framework is to be adopted for any tariffs to be determined from April 1,2006 However due to data uncertainty, the Commission decided to adopt the principle of MYT from FY 2007-08. Also as the petitioner has originally filed the tariff proposal on 26<sup>th</sup> December, 2005 before the notification of the Tariff Policy, the MYT principle could not be adopted for the FY 2006-07.

The Commission, had already admitted a Petition No 21 of 2005 from ASEB for approval of ARR and Bulk supply Tariff for FY 2006-07 making available to the Commission full details of its operations including the quantum and the price of electricity purchased by it from the Central Generating Stations and other traders or generators and details of the price paid for the electricity supplied to Distribution Licensees to enable the Commission to discharge its functions under Section 86(1)(b) of the Act as stated earlier.

The Commission draws the attention of the State Government to the situation resulting from non-allocation of generating capacities of the State Generating Stations and the respective share of the Central Generating Stations among the distribution licensees of the State which is sought to be addressed through an agreement made between ASEB and the distribution licensees with differential bulk sale rates. The Commission is of the view that the Deemed Trading Licensee does not have the discretion of charging differential bulk sale rates to different distribution companies. **The Commission suggests that the Power Department of the State Government evolve a suitable allocation plan for the Distribution Licensees of the State and notify the same accordingly.**

The Commission has fixed the bulk sale rate for ASEB for the electricity supplied to it by APGCL and CSGS. The tariff for APGCL units is based on tariff as per this order and for CSGS units as per orders of the CERC. The ARR of ASEB is inclusive of its cost of operation, which the Commission considered under section 86(1)(j) of the Act.

Having stated its policy, the Commission determines the tariff for the transmission service of AEGCL in paragraphs.

## 5.2 Procedural history

In the Commission's regulations, namely, Assam Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff Regulations), and its subsequent amendments, the State Transmission Company (State Transmission Utility) is required to file its proposal for determination of transmission tariff for the next year by 1<sup>st</sup> December every year. On 28<sup>th</sup> November'05, AEGCL along with other petitioners requested for extension for filing of the Petition from 1.12.05 to 31.12.05 on the ground that the annual Accounts for 2004-05 of ASEB is under finalization as this is the last year for which consolidated accounts of ASEB as a single entity is being prepared, and that will be meaningful if the accounts are furnished with the tariff petition for 2006-07. The Commission granted extension of time till 19<sup>th</sup> December'05 with condition detailed in the order vide order dated **29.11.05 (Annexure-1)**. The petitioner further seek extension of time vide petition dated 15.12.05 requesting filing time till 31<sup>st</sup> December'05, against which extension was granted till 29.12.05 with similar conditions vide order dated **16.12.05 (Annexure-2)**. However AEGCL along with other petitioners filed the Petition on 26.12.05 which was duly admitted by the commission and issued order dated **27.12.05 (Annexure-3)** to publish the same on or before 2<sup>nd</sup> January 2006. Meanwhile, the Commission received a communication from the Government of Assam vide PEL.229/2005/59 dated 2<sup>nd</sup> January'06 stating that Government of Assam is contemplating some holistic approach to reorganize the sector and requested the Commission not to pursue the petitions till then, which was followed by supplementary petitions from the petitioners including AEGCL on 2<sup>nd</sup> January'06 with similar request. The Commission considered the petition filed by the petitioners and issued direction for hearing the matter by order dated **16.01.06 (Annexure-4)** with show cause notice to Government of Assam, Department of Power, Chairman, ASEB & MD AEGCL and other petitioners, as to why the Commission should not proceed with determination of ARR and Tariff as per petition dated 26.12.05 filed before the Commission, fixing hearing date as 21.01.06.

On 21.01.06, hearing was held before the Commission and on request from petitioners, the Commission, by an order (**Annexure-5**), extended the time of filing to 31.01.06, which was further extended to 3<sup>rd</sup> Feb'06, at the request from Government of Assam, by an order dated **25.01.06 (Annexure-6)**.

In response to the direction from the Commission , the Government of Assam submitted before the Commission requesting not to pursue the tariff petitions filed by AEGCL and other entities till government takes a holistic view on the restructuring of the DISCOMs vide letter no PEL\_229/2005/68 dated 2.02.06 (**Annexure-7**). At this stage it may not be out of place to mention that with effect from 1<sup>st</sup> Feb'06 the Commission becomes a multimember Commission with joining of newly appointed members.

The full bench of the Commission took the matter on **16.02.06** and issued directions to the petitioners and Government of Assam as mentioned and fixing 27.02.06 for hearing all the petitioners including AEGCL and Government of Assam by an order (**Annexure-8**).

Hearing was held on **27.02.06** and the order was passed (**Annexure-9**) with a response time of one week for further order.

In response to the Commission Order dated 27.02.06, Government of Assam vide letter PEL\_229/2005/80 dated **8.03.06** (**Annexure-10**) submitted before the Commission that ASEB and successive entities will submit their revised petition within 7<sup>th</sup> April'06. On the matter of cash support it was stated that it is not possible for the Government to indicate the same since the election for state assembly has already announced.

The Commission after perusing the Govt. letter extended the time to file petition latest by 11<sup>th</sup> April, 2006 vide order dated **16.03.06** (**Annexure-11**).

The petitioners including AEGCL filed petition(s) on 11.04.06 and the Commission admitted the petition and issue order on **17.04.06** (**Annexure-12**) for further action as per provision of the AERC Conduct of Business Regulation 2004.

### **5.3 Processing of Tariff Petition**

While examining the ARR and Tariff Petition for FY 2006-07 filed by AEGCL, it was observed that a number of additional documents /information were needed for processing the Tariff Petition. A letter No AERC.194/2005/148 Dated 25<sup>th</sup> April, 2006 was sent to M.D, AEGCL (**Annexure-13**) requesting them to submit the information/documents. Also a meeting was held on 5<sup>th</sup> May, 2006 with officers of AEGCL to clarify certain issues. The

minutes of the meeting are at (Annexure-14). The M.D, AEGCL submitted the documents/information along with the list of projects undertaken by AEGCL on 16/05/06(Annexure-15 B).

Summary of the Petition filed by AEGCL is given below:

**Table - T**

**A. Annual Revenue Requirements (ARR) for FY 2006-07 (Rs. in crores)**

SI.	ITEMS	AEGCL
1	Employees Cost	43.17
2	Repairs & Maintenance Cost	7.75
3	Administrative & General Expenses	2.63
4	Interest & Financial Charges	
5	(a) On Term Loan	19.66
6	(b) On Working Capital	1.23
7	Depreciation	0.93
8	<b>Total Expenses</b>	<b>75.37</b>
9	Less: Miscelleaneous Reciept	9.39
10	<b>Net Expenses</b>	<b>65.98</b>
11	Less: Interest Capitalised	16.16
12	<b>Net Annual Revenue Requirement</b>	<b>49.82</b>

On 16/05/06, M.D, AEGCL submitted a separate ARR for SLDC which is as below:

SL	ITEMS	Amount Rs. Crore
1	Employee Cost	0.87
2	Repairs & Maintenance	0.08
3	Administrative and General expenses	0.05
4	Total cost	0.99
5	Total units transmitted (MU)	3561
6	Wheeling Charge paise per unit allocated to SLDC	0.28

**B. Salient Features of Tariff Petition for FY2006-07**

The salient features of the petition are:

- |     |                                    |                  |
|-----|------------------------------------|------------------|
| (a) | Total Annual Revenue requirements  | Rs. 49.82 Cr     |
| (b) | Anticipated transmission of energy | 3561 MU          |
| (c) | Transmission loss                  | 7.5 %            |
| (d) | Average transmission charge        | 13.99 Paise/kwh. |

## 5.4 Public Hearing

The Commission prepared draft notice incorporating the summary of the ARR proposed and also the tariff suggested by AEGCL and send it to AEGCL for publication in two leading Assamese dailies, two leading English dailies and one leading Bengali newspaper not later than 27/05/06. The notice was published on 27/05/06 as directed as follows:

- i) The Assam Tribune
- ii) The Sentinel
- iii) Dainik Agradoot
- iv) Asomiya Khabar
- v) Samayik Prasanga

The Commission held a public hearing on the tariff petition of AEGCL in the Assam Administrative Staff College, Khanapara, Guwahati on 14<sup>th</sup> June, 2006.

## 5.5 State Advisory Committee

The members of the State Advisory Committee were apprised of the Tariff Proposal of AEGCL in its meeting held on 9<sup>th</sup> May, 2006. A lively discussion ensued where a number of clarifications were given to points raised by members (**Annexure-16**).

## **STATUS OF THE STATE TRANSMISSION UTILITY**

AEGCL is a company incorporated under the Companies Act, 1956 and has come into being on 10<sup>th</sup> December, 2004. The Government of Assam notified the transfer scheme vide its notification No. PEL.150/2003/Pt/349 dated 16<sup>th</sup> August, 2005 as per which the AEGCL was assigned assets and liabilities, on a provisional basis as per the table given below:

**Table - U****Opening Balance Sheet OF AEGCL as on 1<sup>st</sup> April, 2005**

<b>Particulars</b>	<b>AEGCL</b>
<b>NET ASSETS</b>	
Gross Fixed Assets	501.73
Less: Accumulated Depreciation	478.63
<b>Net Fixed Assets</b>	<b>23.10</b>
Capital Work in Progress	96.68
<b>Total Fixed Assets</b>	<b>119.78</b>
Investment	11.91
<b>Current Assets</b>	
<b>Total Current Assets</b>	<b>26.40</b>
<b>Current Liabilities</b>	
Others	5.12
<b>Total Current Liabilities</b>	<b>5.12</b>
<b>Net Current Assets</b>	<b>21.28</b>
<b>Total Assets</b>	<b>152.97</b>
<b>FINANCED BY</b>	
Payment due on Capital Liabilities	3.20
Capital Liabilities	28.44
Fund / Loan from State Govt.	2.57
Equity Share Capital	80.55
Contribution, Grants & subsidies towards cost of capital assets	0.00
Reserve & funds	38.21
<b>Total Fund</b>	<b>152.97</b>



It was stated in the notification that the opening balance has been prepared based on the approved accounts of Assam State Electricity Board as on 31<sup>st</sup> March 2004 and such opening balance sheet shall be subject to all consequential adjustments on the update, finalization and audit of accounts of ASEB as on 31<sup>st</sup> March' 2005.

In the following chapters the Commission has determined the ARR and transmission tariff including SLDC charges based on the opening balance sheet notified by Govt. of Assam and AERC (Terms and Conditions for Determination of Tariff Regulation) 2006.

### **5.6 Annual Revenue Requirement for FY 2006-07**

The petitioner submitted an ARR for FY2006-07 that included the expenditure of SLDC also. However, in view of the implementation of Open Access Regulation, the Commission decided to separate the ARR for SLDC. Accordingly, the expenditures involved with the operation and maintenance of SLDC have been taken out of the ARR of AEGCL, and a separate SLDC Charge is allowed. The ARR of the AEGCL, after deduction of SLDC expenditure, have been considered for Transmission Charge.

### **5.7 Transmission Charge**

The Commission has reviewed the estimates of each ARR cost elements submitted by the AEGCL and made its own assessment of the level of expenditure required. In most cases the Commission has approved the figures based on principles given in the Regulations. The table below presents the estimated filed and the approved ARR cost elements along with the related technical parameters:

**Transmission Charge****Energy Transmitted by AEGCL in Million Units**

	2005-06		2006-07		
	Filed	Approved	Filed	Approved	
Total Qty after PGCIL Loss	3737.00	3792.00	3701.00	3983.75	MU
Less: Trading	420.00	407.00	140.00	424.38	MU
Available in ASEB Grid	3317.00	3385.00	3561.00	3559.37	MU
Transmission Loss	8.55	8.55	7.50	6.50	%
Transmission Loss	283.60	289.42	267.08	231.36	MU
Available for DISCOMs	<b>3033.40</b>	<b>3095.58</b>	<b>3293.93</b>	<b>3328.01</b>	MU
Petitioners figure	<b>3033.40</b>		<b>3294.00</b>		
Unreconciled difference	<b>0.00</b>		<b>-0.07</b>		MU

+

ARR Element	2005-06		2006-07		Increase/decrease	Remarks
	Filed	Approved	Filed	Approved		
Employee Cost	37.05	37.04	42.31	42.31	0.00	Full amount considered and SLDC cost deducted. allowed 6% rise on approved amount of TOfor2005-06 and SLDC cost deducted allowed 6% rise on approved amount of TOfor2005-06 and SLDC cost deducted
Repairs and Maintenance	5.91	5.91	7.67	6.17	-1.50	
Admin & General	2.89	1.79	2.60	1.85	-0.75	
<b>Interest and Finance Ch.</b>						
Interest on term loan	8.45	8.45	3.49	-	-3.49	Allowed as per tariff regulations
Interest on Working Capital		1.18	1.23	3.51	2.28	Allowed as per tariff regulations
Depreciation	31.4	3.54	0.92	0.92	0.00	Allowed as per tariff regulations
<b>Total</b>	<b>85.7</b>	<b>57.91</b>	<b>58.22</b>	<b>54.76</b>	<b>-3.46</b>	
Less: Miscellaneous receipt	8.94	8.94	9.39	9.39	0.00	Full amount considered
<b>Net</b>	<b>76.76</b>	<b>48.97</b>	<b>48.83</b>	<b>45.37</b>	<b>-3.46</b>	
Return on Equity	8.66	0	0	5.64	5.64	Allowed as per tariff regulations
<b>ARR</b>	<b>85.42</b>	<b>48.97</b>	<b>48.829</b>	<b>51.01</b>	<b>2.18</b>	
<b>Per Unit Transmission cost</b>	<b>0.28</b>	<b>0.16</b>	<b>0.15</b>	<b>0.15</b>		
PGCIL Charges @ 35 paisa per unit (other than PTC,etc)			95.49	100.28		Estimated at 0.35 / Unit (PGCIL Transmission rate) considered with SLDC Charges  See calculation
NERLDC Charges			0	0.00		
Special Charges on BST-Terminal Benefits			65.87	27.29		
<b>Sub-Total</b>			<b>161.36</b>	<b>127.573</b>		
<b>Total ARR</b>			<b>210.19</b>	<b>178.58</b>		
<b>Per Unit Transmission Charge (Rs. / Unit)</b>			<b>0.64</b>	<b>0.5366</b>		

## **5.8 Employee Expenses**

The petitioner has claimed an amount of Rs. 42.31 Crores. The Commission fully allowed this amount.

## **5.9 Repairs and Maintenance Expenses**

R&M expenses are important to maintain and improve reliability of power system and to maintain standard of quality of power supply. While allowing 6% increase, the Commission has taken into account normal inflation @ 5% and 1% cushion to take care of any additional expenditure.

## **5.10 Administration and General Expenses**

The Commission has estimated the Administration and General expenses by giving a rise of 6% for all the items over the figures of Tariff order for 2005-06. While allowing 6% increase, the Commission has taken into account normal inflation @ 5% and 1% cushion to take care of any additional expenditure.

## **5.11 Calculation of Capital Cost, Equity and Debt**

The Commission re-calculated the Capital Cost, Equity component and Debt component of APGCL on the basis of the AERC (Terms and conditions for determination of Tariff) Regulations 2006. The Gross Fixed Assets value as on 01-04-2005, as per notification No. PEL.15/2003/Pt./349 dated 16-08-2005, has been considered as the capital cost as on 01-04-2005. The AEGCL didn't show any addition of assets during FY2005-06 in their petition. As such, the capital cost as on 01-04-2005 has been approved by the commission as Capital Cost on 01-04-2006 detailed at Annexure-24.

To arrive at the equity component of this capital cost, the commission first considered the actual equity as on 01-04-2005, as per notification No. PEL.15/2003/Pt./349 dated 16-08-2005. The company didn't show any addition of equity during FY2005-06 in their petition. As such,

the equity as on 01-04-2005 has been considered as the actual equity as on 01-04-2006. This amount of actual equity has been approved by the commission as Equity on 01-04-2006, subject to a ceiling of 30% of the approved capital cost as on 01-04-2006 detailed at Annexure-25.

To arrive at the Debt component of this capital cost as on 01-04-2006, the commission deducted the approved Equity component from the approved Capital Cost. The accumulated depreciation as on 01-04-2005, as per notification No. PEL.15/2003/Pt./349 dated 16-08-2005 is considered as the amount available to the entity for repayment of debt till 01-04-2005. For the FY2005-06, the commission allowed only an amount required for capital repayment as depreciation, instead of the actual depreciation filed for. As such, the accumulated depreciation as on 01-04-2005 and the amount allowed by the Commission against depreciation in the FY2005-06 has been deducted from the Debt as on 01-04-2006 to arrive at the debt component as on 01-04-2006. This amount of debt capital has been approved by the Commission as Debt on 01-04-2006, subject to a minimum amount of Rs.0 (zero) if the amount so arrived is negative detailed at Annexure-26. The amounts so arrived are:

(Rs. In Crores)

<b>Particulars</b> (as approved by Commission as on 01-04-2006)	<b>AEGCL</b>
<b>Capital Cost</b>	501.73
<b>Equity</b>	80.55
<b>Debt</b>	0.00

## 5.12 Capital Work-in-Progress (CWIP)

The CWIP as on 01-04-2005, as per the final transfer scheme, as per notification No. PEL.15/2003/Pt./349 dated 16-08-2005, is Rs.96.68 crores. In comparison to the Net fixed Asset of Rs.23.10 crores as on 01-04-2005, the CWIP seems to be very high. At every stage of completion of the schemes under progress, a part of this CWIP will be added to the

Gross Fixed Assets, and thereby will become a part of Capital Cost in due course. This will add to the ARR of the entity in the form of depreciation, ROE and interest on debt capital. The Commission believes that there is a need to do thorough scrutiny of CWIP. *As such, the Commission directs the entity to furnish detailed cost break-up of the schemes shown under CWIP along with expected date of completion within two month of issue of this tariff order and, on a quarterly basis there after.*

### **5.13 Interest on Term Loan**

Interest on term loan has been allowed at the Weighted Average Rate of Interest on debt for FY2006-07, on the basis of petition figure detailed at Annexure-28.

As the approved debt of AEGCL as on 01-04-2006 is zero, the interest approved by the Commission is NIL detailed at Annexure-27.

### **5.14 Return on Equity**

AEGCL have shown marked improvement in their performance in the recent years. Actual Transmission loss for the FY2005-06 is 6.31%, which is 2.24% lower than the approved Transmission loss of 8.55%. Even if the Commission considers some percentage of errors in this loss calculation on account of non-availability of proper meters at some feeders, the loss most probably will not be more than 7.00%. To maintain this pace of improvement, the Commission believes that AEGCL should not face any cash shortage. As such, the Commission approved a Return on Equity @7% to AEGCL on their approved Equity of Rs.80.55 crores. The amount of Return on Equity approved is Rs.5.64 crores (Annexure A XXIII 4).

### **5.15 Interest on Working Capital**

Interest on working capital has been estimated based on the AERC (Terms and Conditions for Determination of Tariff) Regulations, 2006.

<b>Determination of Working Capital and interest</b>	
	<b>Allowed</b>
O&M for one month-Employee+R&M+Admin	4.19
Maintenance Spares-	
1% of Gross Fixed Assets ( Rs.506.36 Crores)	5.06
Receivables (two months)	29.76
<b>Total Working Capital</b>	<b>39.02</b>
<b>Interest @ 9% p.a.</b>	<b>3.51</b>

### 5.16 Depreciation

Depreciation has been to AEGCL, based on the figures of the Final Transfer Scheme, as per notification No. PEL.15/2003/Pt./349 dated 16-08-2005 and, the calculation submitted by the petitioner in their petition. The Commission, while analysing the average rate of depreciation used by the entity in their petition, on the basis of additional information submitted by the petitioners, found that these average rate of depreciations calculated on the gross block of a particular asset have been derived from and are in line with the Rate of Depreciation approved by the Commission. The entity also considered the depreciation only upto 90% of the respective fixed assets. As such, the Commission accepted the depreciation submitted by the petitioner in their petition. However, the Commission will have the right to re-analyse this depreciation value on the receipt of audited financial accounts.

### 5.17 PGCIL Charges

Transmission Charges payable to PGCIL has been considered @35 paise per unit, as approved by the CERC. As such, the Commission approves a transmission charges of Rs.100.28 crores, payable to PGCIL against 2865.251MU of energy to be received from Central sector Generating Units.

### 5.18 Special Charges for Past Terminal Benefits

The Government of Assam vide notification no.PEL.190/2004/69 dated 4<sup>th</sup> February 2005 (Annexure 16) notified the plan for funding Terminal Benefit of ASEB Employees. The actuarial valuation for current value of liability for ASEB Employees was carried out on 9<sup>th</sup> December 2004 to determine the following:

- (a) Quantum of Assets required as on the valuation date,
- (b) Annual future rate of contribution, as a percentage of payroll, to pay for the gratuity and pension benefits,
- (c) Total projected cash flow over the next 20 years period

The net present value of ASEB's past unfunded Terminal Benefits as on 9<sup>th</sup> December 2004 has been estimated as Rs. 2,169.00 Crores.

In addition to this, actuarial studies have estimated that the contribution to be made by new companies for meeting the liabilities arising out of future services rendered by the existing employees after transfer date would need to be made @ 22.79% of the Basic plus DA every month of the existing employees till they retire.

Actuarial studies have also estimated the cash outflows for Terminal Benefits for past services for FY 2006-07 as Rs. 101.70 Crores.

In the Tariff Order for FY 2005-06, the Commission had allowed a total amount of Rs. 25.39 Crores as estimated for FY 2005-06 against a proposal of Rs. 60.56 Crores in the ASEB Petition against an actual requirement of Rs.94.0 crores. The balance shortfall is required to be supported by the Government of Assam detailed at Annexure-29.

The estimated cash outflow towards past unfunded liabilities of existing employees, existing pensioners and existing family pensioners is to be generated through the streams as shown in the following table:

### 5.19 Estimated Cash Flow Streams

Sl No.	Particulars
1	Interest from existing fund of Rs.88.7 crores at ASEB Pension and CPF Trust.
2	Electricity Duty @ 5 paise/unit.
3	Special charge on BST / Transmission tariff to meet past unfunded liability subject to AERC approval.
4	Budgetary support from Government of Assam to meet any shortfall.
5	In addition to this when the companies turnaround and they have a cash surplus, after duly meeting their obligations including contributing to the pension fund for future services, the companies will contribute a maximum of 50% of their cash surplus towards funding of past un-funded liabilities till the time mutually agreed between Government of Assam and new companies.

Chairman, ASEB has constituted the “Board of Trustees of ASEB Employees’ Pension Fund Investment Trust” with 11 Trustees including Chairman, ASEB/Successor Companies as President of the Trust. As per the arrangement the maintenance of the trust is vested on AEGCL.

As per the Notification , a special BST charge @ 20 paise/ kwh, 15 paise/ kwh, 10 paise/ kwh, 5 paise/ kwh or, nil paise/ kwh, subject to approval of the Commission is to be embedded in tariff. In the previous occasion, this charge was embedded with the ARR of ASEB, making it a part of Power Purchase cost to be shared by all DISCOMs and in turn by the consumers under three DISCOMs. The Commission reviewed the scenario in the background of Open Access facilities which is likely to be availed by some consumers. It is observed that with the present arrangement, if the special charges are considered as a part of ASEB trader cost, the entire cost shall have to be borne by the DISCOMs only and ultimately



by Consumers of DISCOMs. In the event of entry of Open Access consumers and increase in their numbers, it may create such a situation where the consumers under DISCOMs may proportionately become less. The sales by DISCOMs may reduce due to shifting of more consumers to open access regime. In that case, the burden of sharing the past terminal benefits of the employees in the form of special charge shall have to be borne by the consumers under DISCOMs only, leaving the open access consumers out side the purview. In that scenario even the maximum special rate @ 20 paise will contribute much lower amount towards the fund to cover the liabilities of terminal benefit for past period service as envisaged in the Notification. To address this probable uncomfortable situation in near future, there is an urgent need to review the arrangement. The Commission is of the reasoned view that such liabilities arising out of restructuring process of power sector should be shared by all beneficiaries irrespective of whether they are embedded with DISCOMs or not. The Commission decides to include the net approved special BST charge as a part of Transmission Tariff so as to recover the charge uniformly from all users of transmission network in a principle of equality and justice. This principle of cost allocation as per cost of causation is considered as more appropriate approach in determination of transmission tariff for the State. The Government of Assam notification also says that, ‘Special charge **on BST/Transmission tariff** to meet past unfunded liability subject to AERC approval’ as a probable source of fund, thereby agreeing that the special charge may be imposed on the BST or the Transmission Tariff, as the Commission deems fit.

In the tariff order of FY2005-06, the Commission allowed a special charge @8.20 paise per unit on BST, amounting to Rs. 25.39 crores. As in last tariff, this year also the Commission approves a special charge @8.20 paise per unit on transmission charge amounting to Rs. 27.29 crores.

## **5.20 Transmission Charge**

After arriving the final ARR of AEGCL on account of transmission next step is to finalize the transmission tariff for intrastate transmission of power. The responsibility of transmission activities of the state is mandated to State Transmission Utility as per provision of Section 39 of the Act. However actual transmission activities comprise of transmission of

power from CSGS by Central Transmission Utility network to AEGCL network, and a number of the State Transmission Utility transmission lines also engaged in transmission of CSGS power to other constituent of the region. Due to that reason the NER transmission tariff is termed as Unified Common Pool Transmission Tariff (UCPTT) and is unique in comparison with other region of the country. The State Transmission Utility network of the state is not contiguous to transmit power independently within the geographical area of the state due to peculiar locations of some areas of the state. In an ideal condition the Central Transmission Utility tariff is considered as a part of power purchase cost of DISCOMs, the cost of which should have been allocated in proportion to the percentage CSGS power allocation to different DISCOMs. However, due to the constraints mentioned above, State Transmission Utility network is not in a position to deliver power independently to all its delivery points of DISCOMs. In case open access transaction is functionalized as per the provision of Open Access Regulation notified by the Commission, the Central Transmission Utility transmission network shall be part of such transaction. As such, while determining the transmission tariff of the state, both for long term and short term open access consumer, the Commission considered it appropriate to consider the net Central Transmission Utility transmission charge as approved by CERC. In the similar consideration the NERLDC charge payable to NERLDC as approved by the CERC shall be considered while fixing SLDC charge for both long term and short term open access consumers.

## **5.21 Determination of Transmission Charge**

1. The monthly transmission charge payable by the long term open access consumers or DISCOMs shall be determined as below:

$$TC = \text{Approved Net Transmission ARR} / (12 * TCC)$$

Where TC: Transmission Charge in Rs./KW/month

Net Transmission ARR, as approved= Rs. 178.58 Crores

TCC: Total gross contracted capacity in KW of the transmission system by all long term open access customers including DISCOMs . The Commission assumes Gross contracted Capacity as 750MW.

**TC = Rs. 198.42/kw/month**

However, for FY2006-07, the Commission decides to approve the Transmission Charge applicable to DISCOMs in terms of rupees per unit. As such, Transmission Charge for DISCOMs for the FY2006-07 will be Rs.0.5366 per unit.

2. For short term open access customer the transmission charge shall be as follows:

$$\text{Short term Rate (ST\_Rate) Per day} = \text{Tr ARR/ Annual Maximum Peak} \times 365$$

$$= \text{Rs. 6404/MW/day}$$

N.B. 1) The Commission assumes Annual Maximum Peak as 750MW.

- 2) Any recovery on account of short term open access charge shall be adjusted to net ARR of the transmission system after meeting all contingency expenditure in connection with open access transactions.

Intra-state transmission charges are to be paid by a distribution licensee for the transmission of power purchased from the ASEB Trader as measured at the metering points at the boundary of each distribution licensee. The table below shows that the total purchase volumes are 3328.01 MUs and the purchases made by the Distribution Licensees after transmission loss of 6.5%.

Distribution Licensee	MU Purchases	Amount in Rs.(Crores)
LAEDCL	1303.94	69.97
CAEDCL	946.68	50.80
UAEDCL	1077.39	57.81
<b>TOTAL</b>	<b>3328.01</b>	<b>178.58</b>

## 5.22 SLDC CHARGES FOR 2006-07

The Commission in the process of discussion with AEGCL directed AEGCL to submit detail claim separately for SLDC function. The Commission adopted the same principle of fixing transmission tariff in case of determining SLDC charges to be recovered from both long term and short term open access consumers of the state by adding the NERLDC charges with that of SLDC charges.

The ARR for SLDC for the FY 2006-07 has been approved as below:

ARR Element	2006-07 (Rs. in crores)			Remarks
	Filed	Approved	Increase/ decrease	
Employee Cost	0.87	0.87	0.00	Full amount considered
Repairs and Maintenance	0.08	0.08	0.00	Full amount considered
Admin & General	0.05	0.05	0.00	Full amount considered
NERLDC Charges	1.60	1.60	0.00	Full amount considered
<b>Net</b>	<b>2.60</b>	<b>2.60</b>	<b>0.00</b>	
Return on Equity			0.00	Allowed as per tariff regulations
<b>ARR</b>	<b>2.60</b>	<b>2.60</b>	<b>0.00</b>	
<b>Per Unit SLDC Charge (Rs. / MW/ Day)</b>		<b>94.98</b>		
<b>Per Unit SLDC Charge (Paise / Unit)</b>		<b>0.78</b>		

The SLDC charge has been allocated to DISCOMs in the ratio of average percentage share of loads in MW drawn by them during peak load hours of FY2005-06 as shown below:

### Allocation to DISCOMs

	MW	%age	Allocation
<b>DISCOMs</b>	8PM	8PM	Rs. Crores
<b>LAEDCL</b>	247.91	38.54	1.00
<b>CAEDCL</b>	175.70	27.31	0.71
<b>UAEDCL</b>	219.71	34.15	0.89
<b>TOTAL</b>	<b>643.32</b>	<b>100.00</b>	<b>2.60</b>

1. Approved SLDC charge = Rs. 2.60 Crores
2. Assumed Total Generation Capacity handled by SLDC 750 MW
3. Approved SLDC Charge = Rs. 94.98 /MW / day

### 5.23 Transmission Loss

As per the petition filed the transmission loss was proposed at 7.5% of total energy transmitted by AEGCL network. Commission in its last tariff order said that transmission loss should be brought down to 6.25% in FY2006-07. As per the data available from SLDC, actual Transmission loss for the FY2005-06 is 6.31%, which is 2.24% lower than the approved Transmission loss of 8.55%. Considering some percentage of errors in this loss calculation on account of non-availability of proper meters at some feeders, the Commission after examining the detail energy flow from different sources and taking into consideration of direction issued in the Tariff Order 2005-06 allowed a **transmission loss of 6.50% for FY2006-07.**

Meanwhile as per the loss matrix developed by the Commission as a part of cost of supply model, the transmission loss to be compensated by open access consumers for transacting energy in different voltage level shall be as below

Injecting points	Delivery points	% loss
220 KV	220 KV	2%
220 KV	132 KV	2.5%
132 KV/66KV	132 KV/66KV	2 % for each steps
132 KV	66 KV/ 33 KV	3% for each steps

Details about loss matrix are explained separately in the Section 'Cost of Supply' of DISCOMs.

## **5.24 Recovery of Charges**

1. Fixed charges shall be recoverable on pro rata basis if actual availability is lower than that stipulated in the AERC (Terms & Conditions for Tariff Regulations) 2006.
2. Availability shall be computed in accordance with the relevant provisions of the Regulations. SLDC shall verify the availability figures submitted by AEGCL for claiming the fixed charges.

AEGCL should maintain sufficient records of its availability of their network in consultation with SLDC so that claim of recovery of fixed cost can be made as per provision of the Regulation.