

CHAPTER – 5

TARIFF ORDER FOR AEGCL FOR 2007-08

5.1 Introduction

This order relates to petition number 5 of 2007 filed by the Assam Electricity Grid Corporation Limited (AEGCL) for determination of Transmission Multi Year Tariff for electricity to be sold to ASEB by AEGCL for FY 2007-08 to 2009-10. AEGCL is the owner of the transmission plants previously owned by ASEB. AEGCL has started functioning independently from 10th 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 10th December, 2004. While passing the order for determination of Transmission Tariff for FY 2007-08, the Commission had examined the operational and the financial data in detail of the transmission plants. The Government of Assam vide notification No. PEL.151/2003/Pt/349 dated 16th 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.

The Commission notified the AERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 vide No. AERC. 2005/19 dated 28th April, 2006, which was published in The Assam Gazette on 24th 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.133/2003/416 dated 7th June, 2007 (**Annexure-III**) allowed to continue the Assam State Electricity Board (ASEB) to undertake the limited functions of Bulk purchase and bulk supply upto 9th December, 2007 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. The transmission tariff notified this year 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 1st April, 2006 for transmission. The Tariff Policy notified by the Government of India on 6th January, 2006 also stipulated that the MYT framework is to be adopted for any tariffs to be determined from 1st April, 2006. However, the Commission decided to adopt the MYT from FY 2007-08 with a 3 year control period and accordingly the utilities are directed to file their Tariff Petitions for the entire control period. After thorough scrutiny of the petitions submitted by the utilities the Commission decided to adopt the principle of MYT in a cautious manner due to non availability of reliable data and therefore recalculated the ARR for 2007-08 in this Tariff Order and will take up the matter of ARR for 2008-09 and 2009-10 in due course on receipt of authentic records like Audited Annual Financial Statements of relevant years, Assets Registers etc. from the Utilities.

The Commission, had already admitted a Petition No. 1 of 2007 from ASEB for approval of ARR and Bulk supply Tariff for FY 2007-08 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.

In the Tariff Order for 2006-07, the Commission had drawn 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 was of the view that the Deemed Trading Licensee does not have the discretion of charging differential bulk sale rates to different distribution companies. Meanwhile the Commissioner & Secretary, Power (Elect) Deptt, Government of Assam vide his letter No. PEL.41/2006/132 Dated 8th May, 2007 (**Annexure-IV**) informed the Commission that the Government is re-examining the issue of distribution configuration of the power companies in the state and contemplating to reorganize the distribution companies into one after examining the pros and cons of the legal as well as technical aspects in the greater interest of the people of Assam and requested the Commission to keep this aspect in view while finalizing the Tariff Proposals on the petitions of the distribution companies. The Commission had kept in mind the views of the Government while finalizing the tariff. The Commission feels that if the three distribution companies are combined into one, the question of charging differential Bulk Supply Tariff will not arise.

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 AEGCL in the following paragraphs

5.2 Procedural history

In the Commission's Regulations namely Assam Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff Regulations), the State Transmission

Company (State Transmission Utility) is required to file the proposal for determination of transmission tariff annually with the Commission for the next year by 1st of December every year. On 29th November, 2006, AEGCL along with other petitioners requested for extension for filing of the Petition from 01.12.2006 to 28.02.2007 on the following grounds:

1. Filing of Multi Year Tariff Petition requires collection large amount of data, its analysis so that reasonable assumptions can be made for next three years regarding likely load additions, likely customer mix etc. Other items of expenditure like O&M also need to be analyzed thoroughly. This being the first MYT control period, DISCOMs will require special efforts to compile all the information.
2. The Tariff Order for 2006-07 was made effective from 4th August, 2006. As such the actual data after implementation of the Tariff is available for four months only, which make it very difficult for projecting the figures for the remaining part of the year. At least six months actual figures will be needed for the realistic projection of the same.
3. As per the above Tariff Order except for the month November 2006, the availability of power is shown as surplus, estimated at 424 MU. But due to low monsoon actual position is quite different. ASEB has to make arrangement for extra purchase of power from Traders to overcome the crises. This has made the projection more difficult as the period of consideration is for three years.
4. The companies has also stated that due to non finalization of Balance Sheets for 2005-06, the companies are not in a positions to submit the same before the Commission along with their Tariff petitions within the schedule date.

The Commission reserved its order till 22.12.2006 vide its order dated **18.12.2006 (Annexure-V)**. The Commission granted extension of time till 28th February, 2007 with condition detailed in the order dated **22.12.2006 (Annexure-VI)**. However, AEGCL along with other petitioners filed the Petition on 28.02.2007 which was not admitted by the Commission as the petitions suffer from infirmity of incomplete submission of important and

vital and documents in support of their claim of ARR. The Commission issued order dated **08.03.2007 (Annexure-VII)** to the Utilities directing them to furnish all detail information supporting their claims on ARR as per provision of AERC (Terms and conditions for determination of tariff) Regulation 2006 within 30th March 2007. The Petitioners submitted their revised petitions on 30.03.07

The revised Tariff Petitions filed as per direction of the Commission still contained some discrepancies/anomalies which were brought to their notice. A meeting was also held on 27.04.07 for clarifying the discrepancies in the revised Tariff Petitions. The minutes of the meeting is annexed at **Annexure-VIII**. The petitioners having assured the Commission that they will make necessary rectification and remove the discrepancies, the Commission admitted the petitions vide its order dated 11.05.2007 (**Annexure-IX**) for further action as per provision of the AERC Conduct of Business Regulation 2004.

In the meantime, the Commission received a communication from the Government of Assam vide letter No. PEL.41/2006/132 Dated 8th May, 2007 on the Distribution configuration in Assam as stated above. The Commission vide its letter No. AERC. 251/2006/199 dated 14th May, 2007 (**Annexure-X**) had informed the Government that the Commission had admitted the Tariff petitions and requested the Government of Assam to intimate if the Government had contemplated /decided to give any subsidies to the utilities.

5.3 Processing of Tariff Petition

The Chief General Manager (CF), ASEB sent a letter dated 14.05.07 on behalf of all the Utilities on the points raised in the letter dated 24th April, 2007 and also on the points raised in the meeting held on 27.04.2007. While processing this letter, it was felt that a few more clarifications/additional information were needed for Tariff formulation and a letter dated 4th June, 2007 was sent to all the petitioners on the matter. A meeting was again held on 22.06.07 with representatives of ASEB, APGCL and AEGCL for clarification on some of the issues on the Tariff petitions of these companies. The minutes of the meeting are at

Annexure-XI. The Managing Director, AEGCL submitted additional documents/information on 05.07.2007.

Summary of the Petition filed by AEGCL is given below:

Table – T

A. Annual Revenue Requirements (ARR) of AEGCL

	FY 07-08	FY 08-09	FY 09-10
Energy Available at interface point (MU)	4,127.43	4,579.47	5,292.35
Sale of Power (MU)	3,875.65	4,312.94	4,984.86
Loss %	6.10%	5.82%	5.81%
INCOME			
Revenue from tariffs & Miscell. Charges	300.91	289.01	325.76
EXPENDITURE			
PGCIL Charges & NERLDC charges	109.52	111.06	125.49
Repairs & Maintenance Expenses	9.97	10.57	11.20
Employee Expenses	127.35	100.16	112.14
Administration & General Expenses	1.98	2.09	2.22
Depreciation	24.54	33.15	34.57
Interest & Finance Charges	34.35	44.11	64.21
Less: Interest & other expenses capitalised	1.48	7.09	11.85
Other Debits	0.86	-	-
Extraordinary Items	-	-	-
Other (Misc.)-net prior period credit	-	-	-
Total	307.08	294.05	337.98
Return on Equity	13.99	13.99	13.99
Less: Other Income	25.68	26.12	26.58
Add: Provision for taxes	6.38	7.10	4.84
Annual Revenue Requirement	301.96	289.01	330.23

B. Annual Revenue Requirements (ARR) of SLDC

<u>Fixed charges</u>	Rs Crores		
Operations & Maintenance	07-08	08-09	09-10
Employees cost	1.27	1.00	1.12
Repairs & maintenance	0.10	0.11	0.11
Administrative & General Expenses	0.02	0.02	0.02
Depreciation	0.50	0.81	0.81
ULDC /NERLDC	5.16	5.16	5.16
Interest and Financing Charges	0.50	0.50	0.49
Taxes on Income	0.16	0.19	0.17
TOTAL	7.71	7.79	7.88
Less: Other Income	0.15	0.15	0.15
ARR of SLDC	7.57	7.64	7.74

Salient Features of Tariff Petition for FY 2007-08

The salient features of the petitions of AEGCL are:

- | | | |
|-----|------------------------------------|----------------|
| (a) | Total Annual Revenue requirements | Rs. 301.96 Cr |
| (b) | Anticipated transmission of energy | 3875.65 MU |
| (c) | Transmission loss | 6.10 % |
| (d) | Average transmission charge | Rs. 0.78 / kwh |

The salient features of the petitions of SLDC are:

SLDC charges Rs /MW/per day	Rs 203.68
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5.4 Public Hearing

The Commission prepared draft notice incorporating the summary of the ARR proposed and also the tariff suggested by AEGCL and sent it to AEGCL for publication in two leading Assamese dailies, two leading English dailies and one leading Bengali newspaper inviting objections not later than 21.06.2007 which was further extended to 10.07.2007. The notice was published on 22.05.2007 as directed as follows:

- i) The Assam Tribune
- ii) The Sentinel
- iii) Dainik Janasadharan
- iv) Asomiya Protidin
- v) Dainik Jugasankha

The Commission held a public hearing on the tariff petition of AEGCL in the Assam Administrative Staff College, Khanapara, Guwahati on 20th July, 2007.

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 27th June, 2007. A lively discussion ensued where a number of clarifications were given to points raised by members (**Annexure-XII**).

STATUS OF THE STATE TRANSMISSION UTILITY

- 2.1 AEGCL is a company incorporated under the Companies Act, 1956 and has come into being on 10th December, 2004. The Government of Assam notified the transfer scheme vide its notification No. PEL.150/2003/Pt/349 dated 16th August, 2005 as per which the AEGCL was assigned assets and liabilities, on a provisional basis as per the table shown in page 114 of Tariff order 2006-07.
- 2.2 **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 31st March, 2004 and such opening balance sheet shall all be subject to all consequential adjustments on the update, finalization and audit of accounts of ASEB as on 31st March, 2005.**
- 2.3 The Audited Financial statement of ASEB for 2004-05 ending as on 31st March, 2005 was published in August, 2006 after the Tariff Order for FY 2006-07 was notified by the Commission on 28th July, 2006.
- 2.4 Based on the Audited Financial Statement of FY 2004-05, the Opening Balance Sheet (OBS) was updated for all unbundled entities as per the GOA Notification No. PEL.150/2003/Pt/349 dated 16th August, 2005 and sent to Government of Assam vide ASEB.AXT/FIN/21/48 dated 19th September, 2006 for notification.
- 2.5 After consequential adjustment of accounts as per the GOA notification, the OBS as on 01.04.2005 is modified as below

Particulars	AEGCL
	Rs. Crs.
ASSETS	
Gross Fixed Assets	502.32
Less: Accumulated Depreciation	(483.17)
Net Fixed Assets	19.15
Capital Work in Progress	120.03
Investment	52.26
Total Current Assets	58.07
Total Current Liabilities	(27.65)
Net Current Assets	30.42

Total Assets	221.86
FINANCED BY	
Borrowing for Working Capital	0
Payment due on Capital Liabilities	11.52
Capital Liabilities	65.54
Fund / Loan from State Govt.	6.06
Equity Share Capital	99.88
Contribution, Grants & subsidies towards cost of capital assets	0
Reserve & funds	38.86
Deficit / Surplus	0
Total Fund	221.86

Capital Cost for Tariff Calculation:

As per the provision of Section 131(2) of the Electricity act 2003 the transfer scheme notified by the Govt. is the value of assets transferred. Section 131(3) (a) stipulates that “*The transfer scheme involves the transfer of any property or rights to any person or undertaking not wholly owned by the state Government, the scheme shall give effect of the transfer only for fare value to be paid by the transferee to the state Government.*” The GOA vide Notification dated 16th August, 2005 notified a provisional transfer scheme which was subjected to consequential adjustment of Audited Financial Statement of ASEB for 2004-05. The final scheme has already approved by ASEB and sent to GOA for notification. The ASEB and other entities have prepared the Balance Sheet and Financial Statement based on this final transfer scheme.

In the transfer scheme both GFA and NFA has been shown considering NFA for the purpose of balance sheet. In the Scheme, the GFA is a cumulative addition of assets since inception of erstwhile ASEB’s Transmission assets without having any information in form of asset register showing residual life of assets as on date of transfer. The cumulative depreciation shown in the scheme was similar to the GFA without any information about cumulative depreciation of individual assets, many of the assets might have been fully depreciated during the years of operation.

As an example of APGCL, where GFA is shown as Rs 712.37 Cr. along with cumulative depreciation of Rs 512.09 Cr the NFA is at Rs 200.28 Cr. Considering the

available information of DOCO (Date of Commercial Operation) of all the generating units along with useful life as per the depreciation schedule, most of the units of all old generating stations have crossed the useful life and 90% of GFA as depreciation. Accumulated depreciation and NFA might be for the assets which has not yet cross the useful life and may be due to addition of assets during the process of operation under R&M (Renovation and modernization) schemes etc.

Similar is the case of all other entities like AEGCL where asset wise record to ascertain the asset crossing the useful life is not available.

The AERC has stress the need of “Assets register” since its first Tariff Order of 2001-02. However, the same has not yet materialized in spite of repeated directions in subsequent Tariff Orders. However utilities are not in a position to furnish the same till date. In this petition the utilities submitted before the Commission that the same is under process.

In the AERC T&C for tariff regulation also, the OBS as per transfer scheme has been stated as capital cost for first year of operation.

Considering above, in the absence of asset register, the GFA with cumulative depreciation of the notified transfer scheme is considered as value of assets under operation for all entities as on 01.04.2005 and updated to arrive at the value for 2007-08.

In the following paragraphs the Commission has determined the ARR and transmission tariff including SLDC charges based on the updated opening balance sheet notified by Govt. of Assam and the additions made during FY 2005-06 to 2007-08 and AERC (Terms and Conditions for Determination of Tariff) Regulation, 2006.

5.6 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 : AEGCL

	2007-08		2006-07		
	Filed	Approved	Filed	Approved	
Total Qty after PGCIL Loss	4,127.43	4,677.69	3701.00	3983.75	MU
Less: Trading	-	550.25	140.00	424.38	MU
Available in Grid	4,127.43	4,127.43	3561.00	3559.37	MU
Transmission Loss %	6.10	6.10	7.50	6.50	%
Transmission Loss	251.77	251.77	267.08	231.36	MU
Available for Discoms	3,875.66	3,875.66	3293.93	3328.01	MU
Petitioners figure			3294.00		
Un-reconciled difference			-0.07		MU

ARR Element	2007-08		2006-07		Remarks
	Filed	Approved	Filed	Approved	
Employee Cost	127.35	49.84	42.31	42.31	Increase/decrease -77.51
Repairs and Maintenance	9.97	6.64	7.67	6.17	-3.33
Admin & General	2.41	2.01	2.60	1.85	-0.40
Interest and Finance Ch.	-	-	-	0	0
Interest on term loan	25.36	0.00	3.49	-	-3.49
Interest on Working Capital	7.51	4.44	1.23	3.51	2.28
Depreciation	24.53	16.07	0.92	0.92	0.00
Other debits	0.86	0.00			
Provision for Taxes	6.57	0.00			
Total	204.56	78.99	58.22	54.76	-3.46

Special Charges on BST-Terminal Benefits; separately considered allowed 6% rise on approved amount of TO for 2006-07

allowed 6% rise on approved amount of TO for 2006-07

Allowed as per tariff regulations

Allowed as per tariff regulations

Allowed as per tariff regulations

Less: Miscellaneous receipt/other Income	25.68	20.47	9.39	9.39	0.00	Full amount considered
Net	178.88	58.52	48.83	45.37	-3.46	
Return on Equity	13.99	13.99	0	5.64	5.64	Allowed as per tariff regulations
ARR	192.87	72.51	48.83	51.01	2.18	
Per Unit Transmission cost	0.50	0.187	0.15	0.15		#See Working Note Considered with SLDC charges Charge @ 10 paisa/KWH on the MU available for DISCOMS
PGCIL Charges on Annual Transmission Charges for 2007-08	109.52	98.13	95.49	100.28		
NERLDC Charges	-	-	-	-		
Special Charges on BST-Terminal Benefits	-	38.76	65.87	27.29		
Sub-Total	109.52	136.89	161.36	127.57		
Total ARR	302.39	209.40	210.19	178.583		
Per Unit Transmission Charge (Rs./Unit)	0.78	0.54	0.64	0.54		

5.7 The Operation and Maintenance Expenses

The Operation and Maintenance Expenses or O&M expenses mean the total of all expenditure under the following heads;-

- (a) Employee cost
- (b) Repairs and Maintenance
- (c) Administration and General Expenses.

It is stated in the Regulations that the norms for O&M expenses shall be fixed on the basis of circuit kilometres of transmission lines, transmission capacity and the number of bays in the substations. But as the complete data regarding length of transmission lines, transmission capacity and the number of bays are not available due to the reason that many schemes are under implementation through ADB and other financial institutions and a clear picture will emerge after completion of the schemes, so the O&M expenditure are set based on the Commission's assessment of the estimates submitted by the licensee.

5.8 Employee Expenses

The petitioner has claimed an amount of Rs. 127.35 Crores. The Commission allowed Rs. 49.84 Crores only as total employee expenses. The petitioner claimed Rs. 85.80 Crs. as Terminal Benefits which has been limited to Rs. 8.29 Crs. for future liability being 22.79% of salaries and DA claimed. The Terminal benefits for past liabilities have been dealt with separately in the calculation of Transmission Charge All other employee expenses are fully allowed by the Commission.

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. The Commission allowed 6% increase taking into account normal inflation @ 5% and 1% cushion to take care of any additional expenditure over the figures of Tariff order for 2006-07.

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 2006-07. 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 AEGCL 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, after deducting there from the contributions, grant and subsidy, if any, as per updated OBS based on Audited Financial statement of FY 2004-05 has been considered as the capital cost as on 01-04-2005. The AEGCL didn't show any addition of assets during FY 2005-06 in their petition, but during the FY 2006-07 the addition of Rs. 109.30 crs has been made. As such, the Capital cost as on 01-04-2007 has been approved by the commission after deducting the cumulative grant of Rs. 201.63 crs. as detailed at **Annexure-XIII**.

To arrive at the Equity component of the Capital cost, the commission first considered the actual equity as on 01-04-2005, as per updated OBS based on Audited Financial statement of FY 2004-05. The company didn't show any addition of equity during FY 2005-06 and FY 2006-07 in their petition. As such, the equity as on 01-04-2005 has been considered as the actual equity as on 01-04-2007. This amount of actual equity has been approved by the commission as Equity capital as on 01-04-2007, subject to a ceiling of 30% of the Approved Capital cost as on 01-04-2007 detailed at **Annexure-XIII**.

To arrive at the Debt component of this capital cost as on 01-04-2007, the commission deducted the approved Equity component from the approved Capital Cost. The accumulated depreciation as per updated OBS based on Audited Financial statement of FY 2004-05 is considered as the amount available to the entity for repayment of debt till 01-04-2005. For the FY2005-06 and FY2006-07, 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 FY 2005-06 and FY 2006-07 has been deducted from the Debt as on 01-04-2007 to arrive at the debt component as on 01-04-2007. This amount of debt capital has been approved by the Commission as Debt as on 01-04-2007, subject to a minimum amount of Rs. 0 (zero) if the amount so arrived is negative as detailed at **Annexure-XIII**.

5.12 Capital Work-in-Progress (CWIP)

The CWIP as on 01-04-2006, as per as per updated OBS based on Audited Financial statement of F.Y 2004-05 was Rs 12.00 crores. In comparison to the Net fixed Asset of Rs.0.43 crores as on 01-04-2006, 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 AEGCL is directed to account for the amount of capital locked up in CWIP and its conversion into Gross Fixed Assets in the current FY 2007-08 and submit its report to the Commission within two months from end of financial year 2007-08**

5.13 Interest on Term Loan

As the approved debt capital of AEGCL as on 01-04-2007 is zero, the interest approved by the Commission is NIL as detailed at Annexure -.

5.14 Return on Equity

AEGCL have shown marked improvement in their performance in the recent years. Actual Transmission loss for the FY 2006-07 is 7.26 % which is marginally higher than the approved Transmission loss of 6.5% and for the FY 2007-08 the filed and the Approved Transmission Loss is 6.10%. 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 be around 7 %. To maintain this pace of improvement and stability in the generation process, the Commission believes that AEGCL should not face any cash shortage. As such, the Commission approved a Return on Equity @ 14.0% to AEGCL on their approved Equity of Rs.99.93 crores. The amount of Return on Equity approved is Rs.13.99 crores (**Annexure-XIII**).

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. The rate of interest provided on the Working Capital is bank's average prime lending rate.

Determination of Working Capital and interest

	2007-08	
	Filed	Approved
O&M for one month- Employee+R&M+Admin	11.61	4.86
Maintenance Spares- (1% of Gross Fixed Assets (Rs.694.19 Crores))	17.28	6.94
As on 01/4/2007 Receivables (two months)	50.15	34.90
Total Working Capital	79.04	46.70
Interest @ 9.5% p.a.	7.51	4.44

5.16 Depreciation

Depreciation has been allowed to AEGCL, as per updated OBS based on Audited Financial Statement of FY 2004-05, including the Additions made during the Financial years 2005-06, 2006-07 and 2007-08 and, the calculation submitted in the petition. The Commission considered the additions to the Fixed Assets and deductions (if any) as submitted in their petitions during the FY 2006-07 and FY 2007-08. The Commission deducted the cumulative grant component till 31.03.2008 to arrive at the net fixed assets for the purpose of calculating

depreciation. The rate of Depreciation being taken as per the AERC regulations on 90% of the net fixed assets.

5.17 PGCIL Charges

Transmission Charges payable to PGCIL has been considered at actual for April 2007 and May 2007. As such, the Commission approves a transmission charges of Rs.98.13 crores, payable to PGCIL against 2812.95MU (vide their Petition) of energy to be received from Central sector Generating Units.

	Rs./Crs.
Apl. 2007	7.87
May-07	8.49
Total for 2 months (at Actual)	16.35
Total for 12 mths for F.Y. 2007-08	98.13

5.18 Special Charges for Past Terminal Benefits

The Government of Assam vide notification no.PEL.190/2004/69 dated 4th February 2005 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 9th 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 9th 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 2007-08 as Rs. 109.50 Crores.

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:

Estimated Cash Flow Streams

SI No.	Particulars
1	Interest from existing fund of Rs.88.7 crores at ASEB Pension and CPF Trust.
2	Electricity Duty @ 10 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. The sources and application of the Pension Fund for 2006-07 (provisional) as submitted by AEGCL has been shown below:

<u>ASEB EMPLOYEES PENSION FUND INVESTMENT TRUST</u>					
SOURCES AND APPLICATION OF TERMINAL BENEFIT FUND (provisional) FOR THE YEAR 2006-07					
			(Rupees in crores)		
SOURCE			APPLICATION		
Sl. No.	Particulars	Amount	Sl. No.	Particulars	Amount
i)	Interest on investment received	7.45	i)	Pension / terminal benefits	73.44
ii)	Govt. of Assam's fund received	44.1	ii)	Payable to successor Companies for Reimbursement GPF & UUL	10.14
iii)	B.S.T. Charges (3344.30 lakh MU *8.2 p)	27.42	iii)	Investment made	51.55
iv)	Electricity Duty realised	7.06			
v)	Pension Contribution for future service liabilities of existing employees (as per Budget provision)	49.1			
	TOTAL	135.13			135.13
N.B. :-	1) The Pension Trust started independent functioning from 01-04-2007.				
	2) The salaries (pay + DA) of the employees appointed after 01-01-2004 have not been considered for calculation of Pension Contribution (22.79%).				
	3) Rs. 45.00 crores being fund from GoA has been received after 31-03-2007.				
	4) In the year 2006-07, pension payment has been made from ASEB / Successor Companies accounts but investment has been made by the Trust itself.				

As per the Notification , a special BST/Transmission 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. 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 year the Commission allowed a special charge @ 10.00 paise per unit on transmission charge amounting to Rs. 38.75crores.as shown in **Annexure-XIV**. The balance shortfall may be supported by the Government of Assam.

5.19 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 are also engaged in transmission of CSGS power to other constituent of the region. CERC discontinued the concept of UCPTT and directed to share the Annual Fixed Cost of CTU as per percentage share of CSGS entitlements of the constituents. The arrangement is in the line 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 for intra state consumers.

5.20 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. 209.40 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 830MW.

$$TC = \text{Rs } 210.24. /\text{kw/month}$$

However, for FY2007-08, 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 FY2007-08 will be Rs.0.54 per unit.

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

$$\begin{aligned} \text{Short term Rate (ST_Rate) Per day} &= \text{Tr ARR} / \text{Annual Maximum Peak} * 365 \\ &= \text{Rs. } 6912/\text{MW/day} \end{aligned}$$

N.B. 1) The Commission assumes Annual Maximum Peak as 830 MW.

- 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 3875.65.01 MUs and the purchases made by the Distribution Licensees after transmission loss of 6.1%.

Distribution Licensee	MU Purchases	Amount in Rs.(Crores)
LAEDCL	1614.01	87.21
CAEDCL	1060.01	57.27
UAEDCL	1201.63	64.92
TOTAL	3875.65	209.40

5.21 SLDC CHARGES FOR 2007-08

. 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 2007-08 has been approved as below:

ARR Element	2007-08		2006-07		Increase/ decrease	Remarks
	Filed	Approved	Filed	Approved		
Employee Cost	1.27	1.27	0.87	0.87	0.00	Full amount considered
Repairs and Maintenance	0.10	0.10	0.08	0.08	0.00	Full amount considered
Admin & General	0.02	0.02	0.05	0.05	0.00	Full amount considered
Depreciation	0.50	0.16			0.34	
NERLDC Charges	-	-	1.60	1.60	(1.60)	NERLDC & URLDC charges are combined as NERURLDC charges
NERURLDC Charges	5.16	5.19			(0.03)	
Interest & Finance charges	0.50	-			0.50	
Taxes on Income	0.16	0.16			0.00	
Less: Other Income	(0.15)	(0.15)			0.00	
Net	7.56	6.75	2.60	2.60	(0.79)	
Return on Equity	-	-			0.00	
ARR	7.56	6.75	2.60	2.60	(0.79)	
SLDC CHARGE (Rs./MW/Day)	203.46	181.66		94.98		
SLDC Charge (Paise / Unit)	1.95	1.74		0.78		

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 FY2007-08 as shown below:

Allocation to DISCOMs

	MW 2007-08	% age	Allocation
DISCOMs			Rs. Crores
LAEDCL	424	41.65	2.81
CAEDCL	278	27.31	1.84
UAEDCL	316	31.04	2.10
TOTAL	1018	100.00	6.75

1. Approved SLDC charge = Rs. 6.75 Crores
2. Assumed Total Generation Capacity handled by SLDC 830 MW
3. Approved SLDC Charge = Rs. 181.66/MW / day

5.22 Transmission Loss

As per the petition filed the transmission loss was proposed at 6.10% of total energy transmitted by AEGCL network. Commission in its last Tariff Order said that transmission loss should be brought down to 6.50% in FY 2006-07. As per the data available from SLDC, actual Transmission loss for the FY2006-07 is 7.26%, which is 0.76 % higher than the approved Transmission loss of 6.50%. 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 allowed a **transmission loss of 6.10% for FY2007-08.**

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	1.93 %
220 KV	132 KV	1.93 %

Injecting points	Delivery points	% loss
132 KV/66KV	132 KV/66KV	2.0 % for each steps
132 KV	66 KV/ 33 KV	2.41 s % for each steps

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

5.23 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.
