

CHAPTER – 6

TARIFF ORDER FOR ASEB TRADER FOR 2007-08

6.1 Introduction

This order relates to petition number 1 of 2007 filed by the Assam State Electricity Board (ASEB) for determination of Bulk Supply Tariff at which ASEB will sell power to the three DISCOMs for FY 07-08. ASEB has been assigned the role of bulk purchase and supplies of electricity. 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(c), the Regulations shall apply to the Assam State Electricity Board in its functions as trader, buying and selling electricity to the successor distribution licensees of the Board for the contracted generation entitlements held by ASEB on the notification date of the Transfer Scheme. The State Government vide Notification No PEL.133/2003/416 dated 7th June, 2007, (**Annexure-III**) allowed 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 upto 09.12.2007 .

It would be necessary to revisit the arrangement here to understand allocation of capacity by the State Government. As per the Notification, bulk purchase and bulk supply functions, namely, purchase of electricity in bulk from the generating companies of CSGS including APGCL and supply of electricity in bulk to the DISCOMs have been specified as functions retained by ASEB. Even though the State Government had not specifically allocated the generating capacity of stations of APGCL and CSGS to the ASEB, the Government had notified that the purchase of electricity in bulk from the APGCL, other generators in Assam, the Central Sector Generating Stations and the power trading would be

the responsibility of ASEB and ASEB would also supply electricity in bulk to the DISCOMs. As such, it can be construed that entire generating capacity of the APGCL had been allocated to the ASEB who, at present, is operating as a trading licensee in the State. As per section 86(1)(a) of the Act, the State Commission shall determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State. As per Section 86(1)(b) of the Act, the Commission shall regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State. As the ASEB, as trader, will be supplying electricity in bulk to the DISCOMs, the Commission has determined the Bulk Supply Tariff (BST) at which ASEB will supply power to the three DISCOMs in this order in line with the terms and conditions stipulated in the Regulations notified on 24th May'06 as far as practicable within the limitation of other related matters.

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 reexamining 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. The State Government 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. Further the issues concerned with the allocation of generating capacities of CSGS, IPP and APGCL to the three DISCOMs shall be resolved as and the three DISCOMs are merged into one single entity.

The Commission has fixed the Bulk Supply Tariff 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 Bulk Supply Tariff for ASEB in the next paragraphs. The BST will cover the costs of APGCL, the transmission costs of AEGCL, and other power purchases. The Commission has issued separate Tariff Orders for APGCL and AEGCL. The following sections will discuss the approved power purchase costs from other sources, the own costs of ASEB trader and the Bulk Supply Tariff.

6.2 Procedural history

In the Commission's Regulations namely Assam Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff Regulations), the ASEB is required to file their proposal for determination of Bulk Supply Tariff annually with the Commission for the next year by 1st of December every year. On 29th November'06, ASEB along with other petitioners requested for extension of filing the Petition from 1.12.06 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, 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 2007-08 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 of November 2006, the availability of power is shown as surplus, estimated at 424MU. 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 crisis. 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, ASEB 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 documents in support of their claim of ARR. The Commission issued order dated **08.03.07 (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. As per the direction of the Commission, the petitioners have published the ARR in the newspapers inviting objection on or before 21.06.2007. Later, on requests from consumer organizations, the Commission extended the date for submission of objection petition till 10.07.07.

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 asked if the Government had contemplated /decided to give any subsidies to the utilities.

6.3 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 General Manager (Commercial-Tariff), ASEB, submitted additional documents / information on 19.07.2007.

6.4 Summary of the Petition

Summary of the Petition filed by ASEB is given below:

Annual Revenue Requirements (ARR) of ASEB as Trader :-

	FY 07-08	FY 08-09	FY 09-10
Sale of Power (MU)	4,127.43	4,579.47	5,147.44
INCOME			
Revenue from tariffs & Miscell. Charges	825.80	896.59	1,025.73
Total	825.80	896.59	1,025.73
Expenditure			
Power Purchase	798.80	866.98	992.39
Trans charges	-	-	-
Trans charges for PGCIL	-	-	-
R&M Expense	-	-	-
Employee Expenses	0.53	0.68	0.75
A&G Expense	1.07	1.14	1.21
Depreciation	-	-	-
Interest & Finance Charges	13.37	14.46	16.47
Less: Interest & other expenses capitalised	-	-	-
Other Debits	11.21	12.46	14.33
Extraordinary Items			
Other (Misc.)-net prior period credit			
Total	824.98	895.72	1,025.16
ROE 14%			
Less: Other Income	0.47	0.48	0.48
Add Provision for taxes	0.43	0.45	0.36
Annual Revenue Requirement	824.94	895.70	1,025.03

Salient Features of Tariff Petition for FY 2007-08

ARR Element	Filed (Rs. cr)			
	LAEDCL	CAEDCL	UAEDCL	Weighted Average
BST rate per unit (Differential)-Rs./per unit	2.21	1.63	2.46	2.13

6.5 Public Hearing

The Commission prepared a draft notice incorporating the summary of the ARR proposed by ASEB and sent it to the ASEB for publication in two leading Assamese dailies, two leading English dailies and one leading Bengali newspaper not later than 21/06/07. The notice was published on 17/05/07 as directed.

- i) The Assam Tribune
- ii) Dainik Asom
- iii) Dainik Jugasankha

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

6.6 State Advisory Committee

The members of the State Advisory Committee were appraised of the ARR proposal of ASEB in its meeting held on 27th June, 2007. The members of the Committee discussed the issues and offered valuable suggestions which have been taken note of by the Commission in finalizing this order. The minutes of the meeting is at **Annexure-XII**.

STATUS OF THE ASEB AS TRADER

- 2.1 The Assam State Electricity Board had been constituted in 1958 under the provisions of The Indian Electricity Supply Act, 1948. Following the reorganization of ASEB, the State Government vide Notification No PEL.133/2003/363 dated 29th November 2005 allowed 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 upto 09.06.2006 which was further extended upto 09.12.2007 .

- 2.2 The Government of Assam notified the Final Transfer Scheme vide its notification No. PEL.150/2003/Pt/349 dated 16th August, 2005 as per which the ASEB assigned assets and liabilities, on a provisional basis as per the table shown in page 137 of Tariff order 2006-07
- 2.3 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.
- 2.4 The Audited Financial statement of ASEB for 2004-05 ending as on 31st march'2005 was published in Aug'06 after the tariff order for FY 2006-07 was notified by the Commission on 28th July'06.
- 2.5 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 Sept,06 for notification.
- 2.6 After consequential adjustment of accounts as per the GOA notification, the OBS as on 01.04.05 is modified as below:

Particulars	ASEB
	Rs. cr.
ASSETS	
Gross Fixed Assets	0
Less: Accumulated Depreciation	0
Net Fixed Assets	0
Capital Work in Progress	0
Investment	0.53
Total Current Assets	288.32
Total Current Liabilities	(150.01)
Net Current Assets	138.31
Total Assets	138.84
FINANCED BY	
Borrowing for Working Capital	0

Payment due on Capital Liabilities	0
Capital Liabilities	0
Fund / Loan from State Govt.	39.00
Equity Share Capital	99.84
Contribution, Grants & subsidies towards cost of capital assets	0
Reserve & funds	0
Deficit / Surplus	0
Total Fund	138.84

In the following paragraphs, the Commission has determined the ARR of ASEB based on the updated opening balance sheet to be 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.

ARR ANALYSIS

The Commission has reviewed the estimates of each ARR cost elements submitted by ASEB and made its own assessment of the level of expenditure required. The table below presents the estimated filed and the approved ARR cost of ASEB:

ARR Element (Rs. cr)	FY 2007-08				FY 2006-07			
	Filed		Approved		Filed		Approved	
Power Purchase- APGCL		286.91		235.38		194.88		180.17
Fuel Cost	115.54		106.38		108.71		115.65	
Fixed Cost	171.37		129		86.17		64.52	
Purchase - Others		566.85		605.5		502.48		498.32
Purchase Others- Variable Cost	202.94		199.39		150.64		182.481	
Purchase Others-Fixed Cost	363.91		406.11		351.84		315.8348	
Total Power Purchase Cost		853.76		840.88				
PGCIL Charges @		-		-				
NERLDC Charges		-		-				

ARR Element (Rs. cr)	FY 2007-08				FY 2006-07			
	Filed		Approved		Filed		Approved	
Wheeling Charges to AEGCL		-		-				
Cost of losses of PGCIL Net Work		-		-				
Employee Cost		0.53		0.53		0.49		1.3
Admin & General		1.07		1.07		1.07		1.07
Interest on Term Loan		0.29		0.01		10.33		8.94
Interest on Working Capital		16.16		0.03				
Past period Fuel & Power purchase cost Adjustment		205.11		72.07		45.14		53.08
Depreciation		-		0.01				
		-						
Development Surcharge		-		-		31.91		
Total		1,076.92		914.61		786.3		742.87
Less: Miscellaneous receipt/ Trading Sales+UI)		0.47		0.47		59.62		110.9
Less Govt. Support (FRP Support)		-		-				
Less Rebate on Power Purchase		-		-		10		8.53
Total ARR		1,076.45		914.14		716.68		623.44
Net Available (MU) at Grid		4,430.08		4,392.35		3294		3328.01
Average Bulk Supply Rate [BST]		2.43		2.0812		2.18		1.87

6.7 Power Purchase Cost

Purchase of energy

ASEB has projected an expenditure of Rs.1076.45 cr in its ARR filings for FY 2007-08, for the purchase of 4430.08 MU to meet the requirement of DISCOMs sales of 2904.93 MU and trading sales of 177.14 MU. Against this, the Commission has approved a quantum of 4392.35 MU to meet the requirement of DISCOMs sales of 2904.93 MU and trading sales of 550.25 MU.

At present ASEB is the single buyer of energy and the bulk supply Licensee in Assam. It estimates the requirement of energy, month-wise, as per the sales forecast of the DISCOMs. Losses projected for each DISCOMs are added to arrive at the monthly power purchase requirement. The salient features and energy balance table below summarizes the above process of aggregation by ASEB to arrive at the power purchase requirement for FY 2007-08.

Purchases Analysis (MU)	FY2007-08 (Appvd.)		FY2007-08 (Petition)	
	ASEB	AEGCL	ASEB	AEGCL
Central Generators	3,332.25	4,677.69	3,343.65	4,684.79
APGCL	1,329.52		1,326.07	
DLF	141.41		141.02	
Mseb	7.80		7.80	
Traders	-		-	
Total	4,810.98	4,677.69	4,818.54	
Loss on PGCIL transmission net work (4.0%)	133.29		133.75	
Loss on AEGCL transmission net work (6.10%)		285.34		254.71
Available after PGCIL loss	4,677.69	4,392.35	4684.79	
Trading	* 550.25		177.14	
Net Available (MU) at Grid	4,677.69	4,392.35	4,684.79	4,430.08

* The treatment of Trading Sales 550.25MU is explained separately in this Order.

The Commission reviewed the sales forecast of the DISCOMs after having discussion with the entities and comparing the same with that of provisional actual figure of FY 2006-07, which is explained in Chapter 7 of the petition on DISCOMs.

Against the filed sales of 2904.91 MU, the Commission approved sales of 2904.87 MU. Details of sales forecast have been discussed in Chapter 7, DISCOMs.

In the previous year, the Commission had approved losses of 23.88% (LAEDCL), 30.52% (CAEDCL), and 28.78% (UAEDCL) respectively and the total loss of 27.36%. In the petition for 2007-08, DISCOMs has projected their losses at 21.60% (LAEDCL), 26.55% (CAEDCL) and 28.35% (UAEDCL) and 25.05% for total. From the above, it is seen that the DISCOMs have reduced their overall losses by 2.31%. The Commission has accepted the loss projection by the DISCOMs for FY 2007-08 and approved the same. The power purchase requirement of each DISCOMs is worked out taking into account the approved sales and losses as shown in the table below:

Power purchase requirements of DISCOMs in FY 2007-2008

	Sale MU	Loss (% /MU)		Purchase MU
LAEDCL	1265.38	21.60%	348.63	1614.01
CAEDCL	778.58	26.55%	281.43	1060.01
UAEDCL	860.97	28.35%	340.66	1201.63
AGCEL losses		6.10%	251.77	251.77
Total	2904.93		1222.49	4127.42

All the DISCOMs have provided details of sales forecasts, category-wise, as part of their petitions and the Commission reviewed the same. ASEB submitted availability of sources of energy, month-wise, against the demand projected.

The Commission approved a total power purchase of 4127.42 MU to DISCOMs including losses for retail sales of 2904.93 MU for FY 2007-08.

The DISCOMs have entered into Bulk Supply Agreements (BSA) with ASEB for the supply of energy. Under the present single buyer system, ASEB, the Bulk supply licensee alone, is authorized to supply the entire requirement of the DISCOMs which is required to be suitably amended on or before 9th December 2007 in line with the Electricity Act 2003, when the extension of entity as deemed trader or residual entity will cease to exist. ASEB may choose to remain as a state level trader by obtaining a trading license as per the provision of AERC (Procedure Terms and Conditions for granting of Trading License and other related matters) Regulation 2005. The AEGCL has projected losses of 7.5% (exclusive of PGCIL losses external to ASSAM Grid) for FY2006-07. The Commission, after thorough scrutiny, approved a transmission loss of 6.5% for FY2006-07 to AEGCL for estimation of power purchases. But AEGCL could achieve actual transmission loss of 7.26% in 2006-07 as per data provided by SLDC. The AEGCL has projected transmission losses of 6.1% (exclusive of PGCIL losses external to ASSAM Grid) for the FY 2007-08. The Commission, after thorough scrutiny, approved a transmission loss of 6.1% to AEGCL for FY 2007-08 for estimation of power purchases.

Total system losses are 1222.49 MU (31.15%), consisting of transmission losses of 251.77 MU (6.1 %) with respect to input to AEGCL and distribution losses of 970.72 MU (25.05%) with respect to input to DISCOMs. This translates into power purchase requirement of 4127.43MU by ASEB for the DISCOMs including losses. The losses at the PGCIL grid are assumed to be 133.29MU (4.0% of CSGs power availability).

Availability of power

As per the filings, ASEB has projected an availability of 4684.79 MU. The Commission has determined the same at 4677.69MU.

Approved Availability of energy from different sources for FY2007-08

Availability - APGCL for FY2007-08

Sl. No.	Plant	Capacity (MW)	Plant Load Factor	Gross Generation (MU)	Auxiliary Consumption	Net Generation (MU)
1	Namrup TPS	115.5	50.0%	477.41	4.3 %	485.46

Sl. No.	Plant	Capacity (MW)	Plant Load Factor	Gross Generation (MU)	Auxiliary Consumption	Net Generation (MU)
2	Lakwa TPS	120.0	45.0%	507.28	5.59 %	450.75
3	Karbi Langpi TPS	100.0	45.0%	395.28	0.5 %	393.30
4	Total	335.5	46.6%	1379.97		1329.52

Availability – NEEPCO Hydroelectric Power Stations for FY2007-08

Sl. No.	Plant	Design Energy (MU)	Auxiliary Consumption & Transformation loss	Saleable Primary Energy - net (MU)	ASEB Share	ASEB Share (MU)	ASEB share adjusted for hydrological fluctuations (MU)
1	Doyong	227.24	1%	197.97	45.43%	89.93	80.94
2	Kopili-1	969.880	1%	844.96	55.19%	466.33	419.70
3	Kopili-1 (Free share)				6.00%	57.61	51.85
4	Khandong	277.6	1%	241.85	58.01%	140.29	126.26
5	Khandong (Free Share)				6.00%	16.489	14.84
6	Ranganadi	1509.66	1%	1315.22	45.05%	592.51	533.26
7	Kopili-2	86.3	1%	75.19	48.35%	36.358	32.72
8	Kopili-2 (Free share)				6%	5.13	4.62
9	Total	3070.68	0.5%	2675.18		1404.65	1264.20

Availability – NEEPCO Thermal Stations for FY2007-08

Sl. No.	Plant	Capacity (MW)	Auxiliary Consumption	Plant Load Factor	Energy Available (MU)	ASEB Share	ASEB Share (MU)	ASEB Share adjusted for plant availability
1	AGBPP	291	3.00%	85%	2044.92	58.20%	1154.44	1154.44
2	AGIPP	84	1.00%	85%	590.29	46.80%	273.49	273.49
3	Total	375	2.55%	85%	2635.20	50.37%	1427.93	1427.93

Availability – Loktak HE (NHPC) for FY 2007-08

Sl. No.	Plant	Design Energy (MU)	Auxiliary Consumption & transformation loss	Saleable Primary Energy (MU)	ASEB Share	ASEB Share (MU)	ASEB share adjusted for hydrological fluctuations (MU)
1	Loktak HE	448	0.75%	391.28	31.07%	121.57	109.41

Availability – DLF Thermal Stations for FY2007-08

Sl. No.	Plant	Capacity (MW)	Auxiliary Consumption	Plant Load Factor	Net Energy Available (MU)	ASEB Share	ASEB Share (MU)
1	Adamtilla	9.0	3.0%	55.00%	50.96	100%	50.96
2	Banskandi	15.5	3.0%	60.00%	90.45	100%	90.45
3	Total	24.5	3.0%	58.16%	141.41	100%	141.41

Apart from procurement of energy by ASEB from APGCL, NEEPCO, NHPC and DLF as discussed above, it will purchase the following power from following sources

1 NTPC 530.70 MU

2 MeSEB 7.8 MU

Thus the total power available during the FY 2007-08 shall be 4810.98 MU.

The Commission approves an export of 550.25 MU of power during FY 2007-08 after meeting the demand of DISCOMs.

Approved Availability of energy from different sources for FY2007-08

The Commission, after taking into consideration AERC Terms and Conditions for Tariff Regulation 2006 and other relevant information like share allocation of CSGSs (**Annexure-XV**), Design Energy of CSGSs (**Annexure-XVI**), allowable Auxiliary Consumptions (**Annexure-XV**), etc. have re-calculated and the availability of energy from different sources for FY 2007-08 has been obtained. This has been discussed in details below.

APGCL:

After detail review of the availability of power from APGCL, which is explained in details in Chapter 4, APGCL, taking into consideration AERC Terms and Conditions for Tariff Regulation 2006 and other relevant information, the Commission approves net availability of power from APGCL for FY 2007-08 from different power stations, as below

Power Station	Actual 2006-07	Filed (2007-08)	Approved (2007-08)
LTPS	443.22	450.74	450.75
NTPS	367.53	483.29	485.46
KLHEP	15.44	392.03	393.31
Total	826.19	1326.06	1329.52

Central Sector Generating Stations: (CSGS)

NEEPCO HYDRO:

The Commission after careful consideration of nature of hydrological behaviour of the NE Region for last few years observed that there were shortfall in generation targets of Hydro stations in this region for these years. With this in view the Commission has considered 90% of the saleable energy from these Hydro Stations for FY2007-08 as notified

in the CERC Tariff Orders of respective stations as shown at **Annexure-XVI**. Shortfall if any, beyond the reasonable control and act of God will be considered by the Commission at the time of truing up operation of this Order.

NEEPCO Hydro: Availability in Million Units (MU)

Stations	Actual 2006-07	Filed 2007-08	Approved 2007-08
Doyong	80.42	83.84	80.94
Kopili-1	395.78	470.06	419.70
Kopili-1 (Free share)		57.61	51.85
Khandong	86.62	141.90	126.26
Khandong (Free Share)		16.49	14.84
Ranganadi	431.62	551.378	533.26
Kopili-2	44.74	36.34	32.72
Kopili-2 (Free share)		5.13	4.62
Total	1039.10	1362.75	1264.20

NEEPCO Thermal:

In the filing, availability from NEEPCO thermal stations are considered at 85% PLF as per CERC regulation norms. Although actual availability from 291 MW AGBPP station was slightly less than the approved for FY 2006-07, the Commission has taken 80% PLF, and the full fixed cost recovery is considered at 80% PLF, for FY2007-08.

NEEPCO Thermal: Availability (in MU)

Stations	Actual 2006-07	Filed 2007-08	Approved 2007-08
AGBPP	1035.26	1089.96	1154.44

Stations	Actual 2006-07	Filed 2007-08	Approved 2007-08
AGTPP	300.88	250.67	273.49
Total	1336.14	1340.63	1427.93

NHPC : Hydel:

NHPC has one hydro station in this region. In the filing the availability was shown as per design energy with approved Tariff of CERC. An increased availability to the tune of 18% was noticed during 2006-07, but the Commission considered the design energy as normative availability for 2007-08.

NHPC – Loktok: Availability (in MU)

Stations	Actual 2005-06	Filed 2007-08	Approved 2007-08
Loktok	147.59	109.56	109.41

IPP: - DLF Power Ltd.:

DLF Power Ltd, an IPP having long term PPA with ASEB has two stations, one at Adamtilla having 9MW capacity and another at Banskandi having 15.5 MW. ASEB filed petitions before the Commission on 27.02.2007 in the matter of filing of details of finalisation of Annual Tariff of Adamtilla and Banskandi CPP for the FY 2005-06 and in the matter of filing of details of finalization of Annual Tariff for Adamtilla and Banskandi CPP for the FY2006-07. The petitions are stated to be in pursuance of the judgment dated 20.05.2006 of the Commission in disposing case No. 19/2005 filed by ASEB. Earlier ASEB filed before the Commission, No. 19/2005 praying for a direction to M/s. DLF Power Limited to file petition for tariff and ARR considering change in law, regulations and Government of India guidelines in view of enactment of the Electricity Act, 2003, where all tariff fixation power is vested on AERC as per section 86(1)(a) of the Act. Meanwhile, M/s DLF Power Ltd. filed a petition before the Hon'ble Delhi High Court under Arbitration and Conciliation Act, 1996 No. 136/2005, along with a separate petition to stay the proceedings before the Commission.

The Commission participated in the case as respondent giving its opinion before the Hon'ble Delhi High Court.

The Commission in its order dated 20.05.2006, directed ASEB to provisionally approve Annual Tariff for DLF stations strictly as per the PPA and to file the same before the Commission along with Annual Revenue requirements and all relevant data. It was also directed that if the parties have any dispute in regards to the fixation of Annual Tariff for DLF, the parties may approach the Commission, if they desire. ASEB earlier filed information before the Commission for FY2005-06 as actual and estimates for FY 2006-07 which the Commission considered as a part of power purchase cost of ASEB Trader. In the Tariff Order FY 2006-07 (page 149) the Commission has made observations on the matter. As per the Tariff Order for FY 2006-07, the ARR for M/s DLF Power Ltd. was considered as per filing of ASEB for FY 2005-06 which the Commission approved for FY2005-06 and considered estimates for FY 2006-07. In the order dated 19.06.2007 the Commission stated that there is no case for entertaining the petition for finalization of cost of FY 2005-06. It further stated that while ASEB has filed petition for fixation of tariff for DLF stations for FY2006-07, some important data are missing and ASEB was asked to submit the required information within 13th March, 2007 along with the ARR of ASEB instead of separately filing petition for power purchase for DLF plants. In response to that order, ASEB has submitted the required information to the Commission through their revised petitions on 30.03.2007. The Commission vide its letter dated 22nd June, 2007 directed ASEB to serve a copy of the tariff petition filed by ASEB for FY2007-08 to FY 2009-10 to M/s DLF Power Ltd.

M/s DLF vide its letter dated 13th July, 2007 informed the Commission that ASEB has submitted tariff petition for FY 2007-08 to FY 2009-10 without doing any joint exercise with them. ASEB has confirmed vide its letter dated 14.08.2007 that the tariff petition submitted by ASEB for FY 2007-08 to FY 2009-10 have been served to M/s DLF Power Ltd. ASEB also informed that a meeting was held on 30.11.2006 between ASEB and M/s DLF Power Ltd. on fixation of Annual Fixed Charge for FY 2005-06 but no fruitful result have been achieved. However, ASEB still expects to sort out the matter amicably.

M/S DLF Power Ltd. has not responded before the Commission on the filing by ASEB seeking approval of Annual tariff for their stations for FY2006-07 and FY2007-08. M/s DLF Power Ltd. however insisted on the arbitration proceedings as per the PPA and

referred to the pending case before the Hon'ble Delhi High Court for settlement of Disputes. The Commission after prudent check of the filing approves the claim of the petition in principle. However, considering terms of the PPA, the energy availability has been considered at the rated PLF.

DLF Stations:

Stations	Actual 2006-07	Filed 2007-08	Approved 2007-08
Adamtilla	24.00	50.82	50.96
Baskandi	79.65	90.20	90.45
Total	103.65	141.02	141.41

Power from other sources:

MeSEB:

ASEB is compelled to purchase power from MeSEB for an area located within LAEDCL from a MeSEB substation. It is due to the reason that ASEB/ DISCOMs network from existing Grid is not extended to the region. The power purchase is done at Tariff Rate of MeSEB. The Commission accepts the claim and approved the same.

MeSEB: (in MU)

Source	Actual 2006-07	Filed 2007-08	Approved 2007-08
MeSEB	9.03	7.80	7.80

NTPC :

ASEB received power from three NTPC power stations namely Farraka, Kahalgaon and Talcher on the share allocation basis of 2.82%, 1.37% and 1.72% respectively in the year FY 2006-07. The allocations from these stations vary in peak and off-peak period. During the year FY 2006-07, ASEB received 523.150MU from all the three stations.

Depending on earlier figures, The Commission has approved 530.70 MU of power from NTPC for FY 2007-08

Source	Actual 2006-07	Filed 2007-08	Approved 2007-08
NTPC	523.15	530.70	530.70

Inter State Trader(s):

Considering full availability of all allotted sources from APGCL, CSGS and IPP, the Commission expects that the State will experience a demand surplus situation in terms of energy all throughout the year. In the truing up exercise, the factors which are beyond the reasonable control of utilities will be considered and the resulting increase of cost in ARR will be considered as pass through. With this background, in absence of any reliable prediction, the Commission considered normative availability from allocated stations. Accordingly, surplus & deficit scenario for FY 2007-08 is as below:

	In MU		
	Actual 2006-07	Filed 2007-08	Approved 2007-08
Availability	3826.55	4684.79	4677.69
Requirements	4585.00	4507.65	4127.43
Shortage	758.45		
Surplus (Export)	227.01	177.14	550.26
Deficit (Import)	708.74	0	0
Net Surplus/ deficit.	(481.73)	177.14	550.26

Station-wise approved Power purchase Cost for FY2007-08

Cost of power purchase is the most important item of expenditure for ASEB. The Commission examines in detail the projected availability of power from different sources and the requirement of sales. In the ARR, power purchases that are reckoned are only from those sources which have long-term contracts with ASEB. The rates of power purchases from

individual generators are on the basis of their respective agreements in two part tariff structure and ABT where applicable. As of now, the entire power is purchased by ASEB on behalf of the DISCOMs. The detailed analysis of power purchase cost has been carried out by the Commission placed at **Annexure-XVII**. A summary of the approved power purchase cost is given below:

Capacity allocation and Power Purchase Cost approved for the year 2007-08										
Name of the Generators	ASEB Capacity	Installed Capacity	Allocated Capacity	Forecast MU	Fixed Costs	Energy charges Var. cost	Total Cost (FC+VC)	Fixed Cost	Variable Cost	Total Cost
	Share%	MW	MW		Rs. cr	Rs. cr	Rs. cr	Rs./kWh	Rs./Kwh	Rs./Kwh
Kopili I HEP	55.19%	200	110.38	471.55	32.16	0.00	32.16	0.68	0.00	0.68
Kopili II HEP	48.35%	25	12.09	37.33	5.81	0.00	5.81	1.56	0.00	1.56
Khandong HEP	58.01%	50	29.01	141.13	11.33	0.00	11.33	0.80	0.00	0.80
Ranganadi HEP	45.05%	405	182.45	533.25	103.68	0.00	103.68	1.94	0.00	1.94
Doyang HEP	45.43%	75	34.07	80.94	26.08	0.00	26.08	3.22	0.00	3.22
Loktak HEP (NHPC)	31.07%	105	32.62	109.41	15.28	0.00	15.28	1.40	0.00	1.40
Total Hydel		860	400.62	1373.62	194.33	0.00	194.33	1.41	0.00	1.41
AGBPP	58.20%	291.00	169.36	1154.44	159.78	81.96	241.75	1.38	0.71	2.09
AGTTP	46.80%	84.00	39.31	273.49	28.16	22.97	51.13	1.03	0.84	1.87
NTPC	*	*	*	530.70	0.00	84.91	84.91			1.60
Total Thermal		375.00	208.67	1958.63	187.94	189.85	377.79	0.96	0.97	1.93
Total CSGS				3332.25	382.27	189.85	572.12	1.15	0.57	1.72
Mseb				7.80	2.48	0.00	2.48	3.18	0.00	3.18
DLF				141.41	21.36	9.54	30.90	1.51	0.67	2.18
Total available excluding APGCL				3481.46	406.11	199.39	605.50	1.17	0.57	1.74
APGCL				1329.52	129.00	106.38	235.38	0.97	0.80	1.77
Total availability				4810.98	535.11	305.77	840.88	1.11	0.64	1.75
Trading Purchases				0.00	0	0.00	0.00	0.00	0.00	0.00
Gross Total				4810.98	535.11	305.77	840.88	1.11	0.64	1.75
Less PGCIL Transmission Loss-4.0%				133.29					0.00	0.00
Energy available after loss in PGCIL				4677.69	535.11	305.77	840.88	1.14	0.65	1.80

The Commission arrived at a figure of 3332.25 MU as power available from CSGS Stations located in NER at a cost of Rs. 572.12 cr with an average rate of Rs 1.72 per unit.

In addition to this 3332.25 MU from CSGs, 7.8MU from MeSEB, 141.41MU from DLF, 1329.52MU from APGCL shall be purchased at an average rate of Rs.3.18 per unit, Rs.2.18 per unit, Rs. 1.77per unit respectively. Due to surplus situation, there may be no need for trading purchase during 2007-08.

The Commission allowed a transmission loss of 133.29MU, i.e., @4% of 3332.25MU, in the PGCIL (CTU) network. This loss will be reviewed and allowed at actuals at the time of trueing up exercise.

The Commission approves power purchase cost of Rs.840.88cr to purchase 4392.35MU, as below:

ARR Element (Rs.cr)	FY2007-08 (Appvd.)		FY2007-08 (Petition.)	
	Approved		Filed	
Power Purchase-APGCL		235.38		286.91
Fuel Cost	106.38		115.54	
Fixed Cost	129.00		171.37	
Purchase - Others		605.50		566.85
Purchase Others-Variable Cost	199.39		202.94	
Purchase Others-Fixed Cost	406.11		363.91	
Total Power Purchase Cost		840.88		853.76

As regards energy costs for DISCOMs, the methodology adopted is to take the total energy cost, commonly known as Bulk Supply Tariff (BST).

In addition to BST, the DISCOMs are liable to bear the transmission cost in the form of transmission charges and SLDC cost in form of SLDC charges which are separately notified in the Tariff order of AEGCL.

PGCIL Charges

In view of the implementation of Open Access, the Commission decides to deduct PGCIL charges from the ARR of ASEB, and charge them separately with the ARR of AEGCL while calculating transmission charges. As such, this component is not considered with the ARR of ASEB.

NERLDC Charge

In view of the implementation of Open Access, the Commission decides to deduct NERLDC charges from the ARR of ASEB, and charge them separately with the ARR of AEGCL while calculating SLDC charges. As such, this component is not considered with the ARR of ASEB.

Wheeling Charges to AEGCL

In view of the implementation of Open Access, the Commission decides to deduct Wheeling Charges to AEGCL from the ARR of ASEB, and charge them separately with the ARR of AEGCL while calculating transmission charges. As such, this component is not considered with the ARR of ASEB.

SLDC Charges

In view of the implementation of Open Access, the Commission decides to deduct SLDC charges from the ARR of ASEB, and charge them separately with the ARR of AEGCL while calculating SLDC charges. As such, this component is not considered with the ARR of ASEB.

Employees Cost

ASEB have claimed an amount of Rs. 0.53 cr as employees cost. The Commission fully allowed this amount.

Administration and General Expenses

ASEB have claimed an amount of Rs. 1.07 cr as Administration and General Expenses. The Commission fully allowed this amount.

Interest on Working Capital Loan

Interest on working capital has been estimated based on the AERC (Terms and Conditions for Determination of Tariff) Regulations, 2006. The Commission allowed interest on working capital @9.5%.

Working Capital and Interest (Rs. cr)

Receivable for two month (60days)	0.20
O&M one month (Salary + A&G Expenses)	0.13
Total Requirement of Working Capital	0.33
Interest on Working Capital @9.5%p.a	0.03

Past Period Fuel & Power Purchase Cost Adjustment

The Commission carried out a detailed component-wise analysis of the **Past Period Fuel & Power Purchase Cost Adjustment** as claimed by the Petitioners. The Commission analysed the claim on the basis of actual data made available including additional information, the AERC (Terms and Conditions for Determination of Tariff) Regulations, 2006, the Tariff Order of the Commission for the FY 2006-07, and other related documents. Based on a detailed analysis, the Commission arrived at a figure of Rs. 216.22 cr after considering actual power purchase cost, prior period amount and an amount against truing up of Tariff order for 2005-06, the details of which are given below. The Commission approves an amount of Rs. 72.07 cr for the FY 2006-07 in the ARR calculation of FY2007-08 being one third of Rs 216.22 cr. The balance amount is kept as Regulatory Assets and will be adjusted in the ARR of ASEB in FY 2008-09 and 2009-10 after prudent comparison of the approved T&D loss figures of the Tariff Order for FY 2006-07 with that of audited figures of 2006-07. However, this figure shall be reviewed by the Commission in next year, as soon as the audited accounts of the entities for FY2005-06 & FY2006-07 are made available to the Commission by the respective entities. A summary of the analysis is given below:

PARTICULARS	AERC approved 2006-07	Actual revised est. 06-07	Difference (as in petition)	Allowed	Remarks
Income					
Sale of electricity	595.03	635.18	40.15	40.15	at actual / Calculated at actual / estimate included with PP cost
Trading Sales	111.44	34.31	(77.13)	(77.13)	
UI	-	51.73	51.73	51.73	
Total Revenue	706.47	721.22	14.75	14.75	

Expenditure					
Power Purchase Cost	650.91	890.55	239.64	239.64	See Note 2
PGCIL & NERULDC Charges	101.88	106.70	4.82	4.82	See Note 3
Fuel Cost	115.65	105.89	(9.76)	(9.76)	as approved
Total	752.79	1,103.14		234.70	
Less: Rebate on power purchase	8.60	12.33	(3.73)	(3.73)	as approved
Total Expenditure	761.39	1,115.47	230.97	230.97	at actual
Surplus/(Shortfall) for FY 2006-07	(54.92)	(394.25)	216.22	72.07	(1/3rd of Rs. 216.22 cr. allowed)

Note: Actual Figs. for Rebate on power purchase required to be obtained.

Note2: Actual power purchase cost is inclusive of Power purchase cost during the FY 06-07 (Rs. 816.65 cr), prior period amount of Rs. 62.79cr and the amount against truing up of T.O 2004-05 of Rs 11.11 cr

NOTE 3: AEGCL has paid an excess amt of Rs. 4.82 cr as PGCIL & NERULDC charges and same shall be reimbursed to AEGCL by ASEB.

Special Charges for Past Terminal Benefits

The Commission decides to deduct Special charge on BST from the ARR of ASEB, and load them separately with the ARR of AEGCL while calculating Transmission Charges. As such, this component is not considered with the ARR of ASEB.

Miscellaneous Receipt: (Trading Income)

The Commission has prepared an estimate of the month wise total sales to each DISCOMs and the availability of the generation contracted by the ASEB Trader as given in the table below:

Statement of Monthly Surplus and Deficit (MU) for FY 2007-08				
Month	Total Availability	Total Requirement	Deficit	Surplus
April, 2007	358.559	271.47		87.094
May, 2007	414.441	324.78		89.66
June, 2007	418.751	370.42		48.328
July, 2007	471.447	409.86		61.588
August, 2007	452.487	407.01		45.479

Statement of Monthly Surplus and Deficit (MU) for FY 2007-08				
Month	Total Availability	Total Requirement	Deficit	Surplus
September, 2007	405.273	364.40		40.871
October, 2007	413.480	369.22		44.264
November, 2007	344.918	319.12		25.800
December, 2007	357.925	350.79		7.138
January, 2008	354.808	323.16		31.647
February, 2008	328.809	290.20		38.608
March, 2008	356.789	327.01		29.776
Total	4677.69	4127.43		550.26

The Commission estimates that an excess **550.26MU** will be available for export. The expected income from export sales is estimated to be Rs. **172.92** cr @ Rs.3.14/kwh (**Annexure-XVII**). This amount is shown as miscellaneous receipt including the Trading Income.

Rebate on Power purchase

ASEB in their petition has not shown any amount as rebate on power purchase. As such the Commission has not considered any amount for the same. The same will be considered on actuals at the time of Truing up operations.

Approved ARR and Bulk Supply Tariff

The approved ARR for the ASEB Trader is Rs. 914.14 cr.

The Commission has the onerous task of balancing the interests of the consumers and at the same time regulating the Licensees so that they give efficient services to the consumers of the State. Fixation of tariff is a key tool that the Commission uses to achieve the above objectives. The Commission regulates the Transmission & Bulk Supply Tariff (payable by the Distribution and Retail Supply licensees to the Transmission and Bulk Supply licensees)

as well as the Retail Supply Tariff (RST) which reflects the principles of equity and cost causation by consumer groups on one hand and financial viability of the licensees on the other.

In doing so, the Commission takes into account the fact that historical factors which have shaped the DISCOMs stand in the way of uniform bulk supply tariff. The area of supply vested in each of the Distribution Licensees as per the Transfer Scheme varies significantly from others, among other things, in terms of consumer mix (i.e. the proportion of different consumer categories), losses and cost structure. The differences in consumer mix between DISCOMs result in differences in cross-subsidy available to the different DISCOMs. Similarly different losses and different cost structures of each Distribution Licensee affect the financial viability differently.

Sec 62 (3) of the Electricity Act gives an option to the Commission to fix differential retail tariffs. The Commission is seized with the requirement of rebalancing the surplus and deficit in cross-subsidy available with DISCOMs to ensure that the retail tariffs are the same throughout the State.

The differential BST would ensure that all the DISCOMs would completely cover their revenue requirement and the DISCOMs with a higher proportion of subsidising consumers transfer their surplus revenue to those DISCOMs who are disadvantageously placed on account of poor subsidising sales. This can be reflected as a financial transfer between DISCOMs operated through a pool or incorporated as a differential in BST charged to DISCOMs. The Commission has preferred to adopt the principle of charging differential BST so that the DISCOMs operate as purely commercial entities realising their entire expenditure and be made responsible for any shortfall directly rather than falling back to an external pool of resources. This arrangement would also satisfy a key principle of the Electricity Act (sec 61 (b)) that “generation, transmission, distribution and supply of electricity are conducted on commercial principles.” The Commission noted the proposal of the Govt. of Assam to make one DISCOM and hopes that execution of proposal will remove the disadvantages arising out of implementation of the Differential Tariffs in the near future.

Based on the Commission's approved ARR for ASEB, the AVERAGE bulk supply tariff is Rs.2.08 per unit. The gap between the revenues at uniform Retail Tariffs and the costs of each DISCOM is bridged by the power purchase price which is translated into a BST for the DISCOMs. This ensures that each of the different licensees recover their costs in full. Table below details the calculation of the differential Bulk Supply Tariff for the DISCOMs.

Table on Schedule of Bulk Supply Tariff

		Total	LAEDCL	CAEDCL	UAEDCL
Total ARR (Uniform BST)	Rs. cr	1284.52	526.21	373.48	384.83
Costs-Other than Power Purchase	Rs. cr	370.38	147.29	120.61	102.48
Power Purchase	In MU	3875.65	1614.01	1060.01	1201.63
Power Sales to Consumers	In MU	2904.93	1265.38	778.58	860.97
Average Cost (Uniform BST)	Rs./Unit	4.42	4.16	4.80	4.47
Revenue from Sale of Power (Differential BST)	Rs. cr	1284.52	559.54	344.28	380.71
Cash Available for Power Purchase	Rs. cr	914.14	412.25	223.67	278.23
Approved BST (Differential BST)	Rs./Unit	2.36	2.55	2.12	2.32
% Difference with Average BST		-	8.05	11.32	1.70

The table below shows a comparison between the two options:-

	Total Assam	LAEDCL	CAEDCL	UAEDCL
Revenue from Tariffs with Differential BST- Rs. cr	1284.52	559.54	344.28	380.71
Total ARR (Uniform BST)- Rs. cr	1284.52	526.21	373.48	384.83

	Total Assam	LAEDCL	CAEDCL	UAEDCL
Revenue Gap with Uniform BST - Rs. cr	-	33.33	(29.20)	(4.12)
Revenue Gap with Differential BST - Rs. cr	-	-	-	-
Average Cost of Supply at Uniform BST – Rs. /kWh	4.42	4.16	4.80	4.47
Average Cost of Supply at Differential BST – Rs. /kWh	4.42	4.42	4.42	4.42

In a Single Buyer Market, a differential BST may be used to ensure that each DISCOM covers its costs and earns a fair return under a uniform retail tariff policy. This is because each DISCOM will have a different cost structure and consumer mix. Several states in India have adopted this mechanism so that DISCOMs with a large rural population have sufficient funds to cover their costs and make a reasonable return.

The Commission has studied the implications of applying a uniform versus differential BST to the three DISCOMs. The Commission has decided to implement a differential BST until the consumer mix and business performance of each DISCOM improves on a rational and significant manner or until Govt. of Assam implement the concept of single DISCOM.

SALES PROJECTIONS, REVENUES AND REVENUE GAP

The detailed analysis of Sales Projections, revenues and revenue gap is made in Chapter 7, DISCOMs.
