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COMMENTS

ON

DRAFT TARIFF REGULATIONS

FOR

TARIFF PERIOD 2009 -14

PRESENTED BY

P.K.BORAH , GM (COMML.)

NORTH EASTERN ELECTRIC POWER CORPORATION LIMITED

DRAFT REGULATIONS - A MAJOR SHIFT FROM FUNDAMENTALS OF ABT

- TARIFF SYSTEM IN VOGUE IS ABT.
- THE DRAFT REGULATIONS DRIFTING FROM ABT.
- THE DRAFT REGULATIONS PROPOSE A HYBRID SYSTEM OF ABT AND SPT.
- THE SANCTITY OF ABT NOT MAINTENABLE IN TOTO BY THE DRAFT REGULATIONS.
- FOR HYDRO GENERATING STATIONS, CAPACITY INDEX REPLACED BY PLANT AVAILABILITY FACTOR.
- PLANT AVAILABILITY FACTOR CAN NOT BE THE YARD STICK FORACTORPERFORMANCE EVALUATION OF HYDRO GENERATING STATIONS.

  WHY ? EXPLAINED IN SUBSEQUENT SLIDES.

BASIS FOR CONCEPTUALISATION OF HYDRO POWER PROJECTS

HYDRO POWER PROJECTS ARE DEVELOPED NOT ONLY FOR DELIVERY OF PEAK POWER - BUT ALSO FOR :

- GENERATION OF MONTH-WISE DESIGN ENERGY.
- DELIVERY OF SOME QUANTUM OF FIRM POWER ROUND THE YEAR.
- DELIVERY OF VAIABLE QUANTUM OF SECONDARY POWER DURING MONSOON.
- DELIVERY OF POWER TO THE EXTENT OF INSTALLED CAPACITY FOR FEW MONTHS DURING MONSOON.

BASIS FOR CONCEPTUALISATION OF HYDRO POWER PROJECTS

INSTALLED CAPACITY Vs CAPACITY UTILISATION :

- INSTALLED CAPACITY IS DECIDED ON THE BASIS OF MAXIMUM EXPECTED WATER POWER.
- ACTUAL CAPACITY UTILISATION VARIES OVER THE YEAR DEPENDING ON REAL-TIME AVAILABILITY OF WATER.
- CAPACITY UTILISATION IS EXPECTED TO BE HIGH DURING MONSOON.
- CAPACITY UTILISATION IS BOUND TO BE LOW DURING DRY SEASON.

CONCEPTUALISATION OF DOYANG HYDRO ELECTRIC PROJECT (75MW)

DOYANG HYDRO ELECTRIC PROJECT WAS CONCEPTUALISED ON THE BASIS OF THE FOLLOWINGS :

- MAXIMUM EXPECTED POWER : 75 MW.
- INSTALLED CAPACITY = MAXIMUM EXPECTED POWER = 75 MW.
- FIRM POWER ROUND THE YEAR : 16 MW.
- ANNUAL DESIGN ENERGY : 227.24 GWH.
- ANNUAL CAPACITY UTILISATION : 34.50 %

CONCEPTUALISATION OF DOYANG HYDRO ELECTRIC PROJECT (75MW)

POWER POTENTIAL STUDY OF DOYANG HYDRO ELECTRIC PROJECT :

MONTH	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL / AVERAGE
DESIGN ENERGY	11.52	12.79	22.90	14.28	55.80	31.97	20.01	11.52	11.90	11.90	10.75	11.90	227.24
FIRM POWER	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
SECONDARY POWER	0.00	1.20	15.80	3.20	59.00	28.40	10.90	0.00	0.00	0.00	0.00	0.00	9.88
TOTAL POWER	16.00	17.20	31.80	19.20	75.00	44.40	26.90	16.00	16.00	16.00	16.00	16.00	25.88
CAPACITY UTILISATION	21.33	22.93	42.40	25.60	100.00	59.20	35.87	21.33	21.33	21.33	21.33	21.33	34.50

POWER EQUATION OF A HEP

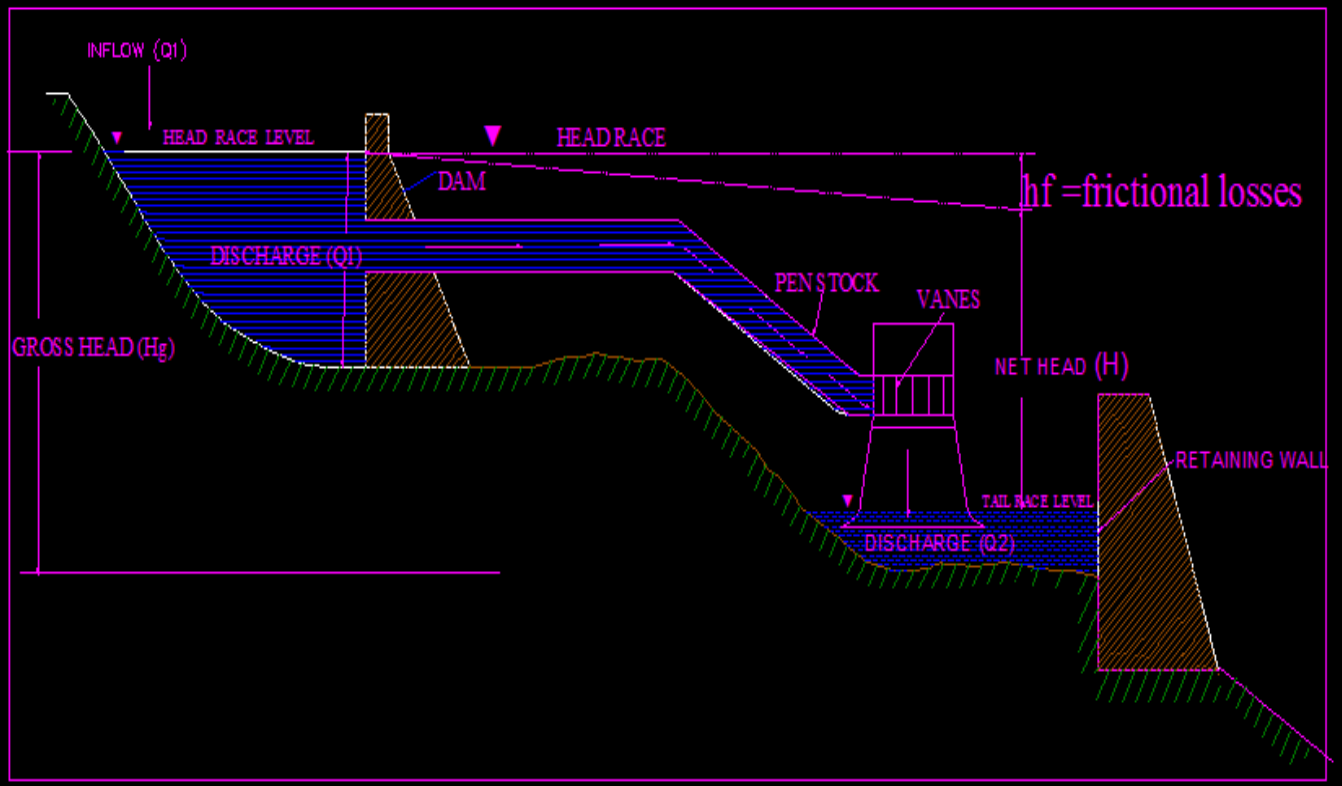


FIG: A TYPICAL HE DAM PROJECT WITH FRANCIS TURBINES

POWER EQUATION OF A HEP

POWER OUTPUT DEPENDS PRIMARILY ON NET HEAD :

$P = \rho g Q H$

Where, Q is Discharge & H is Net Head.

That is,

$P \alpha H$

Also,

$P \alpha Q$

Again,

$Q = \pi D B \sqrt{2gH}$

Where, D is Diameter of Runner & B is Breadth of Runner.

That is,

$Q \alpha H$

So, Decrease in Net Head has two-fold affect on Power output.

POWER EQUATION OF A HEP

GUARANTEED PERFORMANCE OF UNITS OF DOYANG HEP :

- AT MAXIMUM NET HEAD OF 80.5 M.
  P = ηρgQH/1000
  = 0.919*1000*9.81*35.9*80.5/1000
  = 26.0 MW

- AT DESIGN NET HEAD OF 67.0 M.
  P = ηρgQH/1000
  = 0.914*1000*9.81*43.3*67/1000
  = 26.0 MW

- AT MINIMUM NET HEAD OF 49.0 M.
  P = ηρgQH/1000
  = 0.897*1000*9.81*36.6*49/1000
  = 15.75 MW

ACTUAL OPEATING DATA OF DOYANG HEP (75 MW)

YEAR : **2006- 07** **FRL:** **333.00** **M** **MDDL :** **306.00** **M** **TWL:** **252.50/** **261.20** M

Month	Initial Level	Final Level	Av. Level	Av. Net Head	Design Peak Power	Actual Peak Power	Shortfall Peak Power	Design Energy	Actual Energy	Shortfall Energy	Design Firm Power	Actual Firm Power
	M	M	M	M	MW	MW	MW	GWH	GWH	GWH	MW	MW
Apr	306.67	306.20	306.44	47.11	16.00	19.47	**-3.47**	11.52	1.90	9.62	16.00	*** 0.21**
May	306.20	308.00	307.10	47.74	17.20	16.68	0.52	12.79	2.45	10.34	16.00	*** 1.21**
Jun	308.00	311.90	309.95	50.45	31.80	46.37	**-14.57**	22.90	18.62	4.28	16.00	20.06
Jul	311.90	324.05	317.98	58.07	19.20	58.76	**-39.56**	14.28	39.42	**-25.14**	16.00	45.64
Aug	324.05	316.20	320.13	60.11	75.00	62.11	12.89	55.80	39.22	16.58	16.00	44.95
Sep	316.20	318.25	317.23	57,36	44.40	52.18	**-7.78**	31.97	34.62	**-2.65**	16.00	41.56
Oct	318.25	318.00	318.13	58.21	26.90	60.50	**-33.60**	20.01	19.81	0.20	16.00	* 19.06
Nov	318.00	316.76	317.38	57.50	16.00	59.27	**-43.27**	11.52	6.81	4.71	16.00	*** 2.05**
Dec	316.76	314.85	315.81	56.01	16.00	40.37	**-24.37**	11.90	5.75	6.15	16.00	*** 2.68**
Jan	314.85	312.31	313.58	53.89	16.00	36.46	**-20.46**	11.90	5.39	6.51	16.00	*** 2.69**
Feb	312.31	311.10	311.71	52.11	16.00	32.26	**-16.26**	10.75	3.80	6.95	16.00	*** 1.62**
Mar	311.10	308.85	309.98	50.47	16.00	32.43	**-16.43**	11.90	4.26	7.64	16.00	*** 1.67**
TOTAL								**227.24**	**182.05**	**45.19**		

*Generation not possible at t load.

ACTUAL OPEATING DATA OF DOYANG HEP (75 MW)

YEAR : **2007-08** **FRL :** **333.00** **M** **MDDL :** **306.00** **M** **TWL:** **252.50/** **261.20** M

Month	Initial Level	Final Level	Av. Level	Av. Net Head	Design Peak Power	Actual Peak Power	Shortfall Peak Power	Design Energy	Actual Energy	Shortfall Energy	Design Firm Power	Actual Firm Power
	M	M	M	M	MW	MW	MW	GWH	GWH	GWH	MW	MW
Apr	308.35	307.40	307.88	48.47	16.00	24.00	**-8.00**	11.52	2.96	8.56	16.00	*** 1.11**
May	307.40	309.00	308.20	48.78	17.20	32.21	**-15.01**	12.79	11.28	1.51	16.00	*** 11.14**
Jun	309.00	310.80	309.90	50.40	31.80	47.80	**-16.00**	22.90	23.34	**-0.44**	16.00	26.44
Jul	310.80	323.65	317.23	57.36	19.20	61.62	**-42.42**	14.28	46.10	**-31.82**	16.00	54.26
Aug	323.65	324.50	324.08	63.86	75.00	69.23	5.77	55.80	51.85	3.95	16.00	61.04
Sep	324.50	321.15	322.83	62.68	44.40	70.55	**-26.15**	31.97	51.83	**-19.86**	16.00	63.17
Oct	321.15	320.80	320.98	60.92	26.90	68.27	**-41.37**	20.01	40.93	**-20.92**	16.00	46.48
Nov	320.80	310.20	315.50	55.72	16.00	57.61	**-41.61**	11.52	12.82	**-1.30**	16.00	*** 10.60**
Dec	310.20	317.36	313.78	54.08	16.00	41.47	**-25.47**	11.90	7.63	4.27	16.00	*** 5.07**
Jan	317.36	315.54	316.45	56.62	16.00	30.07	**-14.07**	11.90	5.71	6.19	16.00	*** 3.92**
Feb	315.54	311.48	313.51	53.83	16.00	39.30	**-23.30**	10.75	7.42	3.33	16.00	*** 6.13**
Mar	311.48	308.27	309.88	50.37	16.00	35.54	**-19.54**	11.90	6.26	5.64	16.00	*** 3.97**
TOTAL								**227.24**	**268.13**	**-40.89**		

*Generation not possible at this load.

PERFORMANCE EVLUATION OF HYDRO POWER PROJECTS

PLANT AVAILABILITY FACTOR TO BE BASED ON WHAT ?

INSTALLED CAPACITY ? or **MAXIMUM AVAILABLE CAPACITY ?**

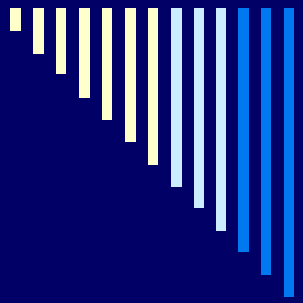
- INSTALLED CACAPACITY DOES NOT TAKE THE REAL - TIME AVAILABILITY OF WATER INTO ACCOUNT.
- MAXIMUM AVAILABLE CAPACITY TAKES THE REAL - TIME AVAILABILITY OF WATER INTO ACCOUNT.
- THE REAL - TIME AVAILABILITY OF WATER IS BEYOND THE CONTROL OF THE GENERATOR.

SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- CONSIDERATION OF ACTUAL GENERATION AGAINST THE INSTALLED CAPACITY FOR PERFORMANCE EVALUATION OF A GENERATOR IS NOT LOGICAL. IT AMOUNTS TO DE – LINKING OF HYDROLOGY FROM HYDRO POWER GENERATION.
- FOR HYDRO GENERATING STATIONS :

$$PAF = \frac{DC}{IC} \text{ SHOULD BE REPLACED BY } CI = \frac{DC}{MAC}$$

- THE ENTIRE AFC SHOULD BE RECOVERABLE ON THE BASIS OF CI – NOT PARTIALY ON THE BASIS OF PAF AND PARTIALY ON THE BASIS OF ENERGY GENERATION SO AS TO MAINTAIN THE SANCTITY OF ABT.



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OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- RG 3 (13) CUT OFF DATE
- RG 3 (22) INSTALLED CAPACITY
- RG 3 (30) PLANT AVAILABILITY FACTOR
- PROPOSED RG 3 (45) ABMORMAL O & M
- RG 4 (2) PARTIAL COMMISSIONING OF UNITS - COMMON FACILITIES SHOULD NOT BE APPORTIONED FOR DETERMINATION OF TARIFF.
- FOR MULTI PURPOSE HYDRO PROJECT , HOW TO REALISE CAPITAL COST ATTIBUTABLE TO NON-POWER COMPONET.
- FOR MULTI-PURPOSE HYDRO PROJECT , HOW TO APPORTION THE COST OF DAM AND OTHER COMMOM FACILITY.
- RG 6(5)(6)(7) AVERAGE OF THE MONTHLY PLR OF SBI FOR A YEAR SHOULD BE CONSIDERED FOR CALCULATION OF SIMPLE INTEREST .

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- RG 8(1) © ASSENTS TEMPORARILY NOT IN USE MAY BE USED AT ANY POINT OF TIME, AS SUCH SHOULD NOT BE DE CAPITALIZED.
- RG 8 (2) FINAL COST APPROVED BY THE GOVT. OF INDIA SHOULD BE THE BASIS FOR TARIFF CALCULATION. ADDITIONAL CAPITALIZATION, BEYOND APPROVED COST SHOULD ALSO BE ALLOWED.
- RG 9 (iii) INITIAL SPARES SHOULD BE ON THE BASIS OF PERCENTAGE OF FINAL APPROVED COST INSTEAD OF ORIGINAL APPROVED COST. FIRTHER, THE PERCENTAGE SHOULD BE 2.5 % INSTEAD OF 1.5 % FOR HYDRO GENERATING STATIONS
- RG 10 (I) CAPITALIZATION IS PROPOSED FOR BUILDING UP OF ANY ASSETS OR FOR INCURRING ANY FIXED EXPENDITURE TO MEET THE LAW AND ORDER PROBLEM ETC. AND THIS SHOULD BE ALLOWED BEYOND THE CUT OFF DATE AS WELL AS OVER AND ABOVE THE APPROVED CAPITAL COST.
- RG 10 (III) ADDITIONAL CAPITALIZATION MAY BE ALLOWED FOR THE WORKS TAKEN UP AFTER COD AND DURIMG USEFUL FIFE OF THE PLANT PROVIDED IT ADDS EFFICIENCY IN OPERATION AND REDUCTION IN OUTAGES..

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- **RG 10 (2) THE EXPENDITURE TOWARDS REHABILITATION & RESETTLEMENT (R&R) AND ENVIRONMENT MANAGEMENT PLAN (EMP) AND SPECIAL SECURITY INFRASTRUCTURE CONTINGENT TO NEW UNFORESEEN SITUATION COMING UP AFTER THE CUT OFF DATE SHOULD BE CONSIDERED EVEN IF IT IS NOT THERE IN THE ORIGINAL SCOPE OF WORK AND APPROVED COST OF THE PROJECT.**
- **RG 11 (1) RENOVATION & MODERNIZATION MAY BE ALLOWED NOT ONLY FOR THE EXTENSION OF LIFE BEYOND THE USEFUL LIFE OF THE GENERATING STATION, BUT ALSO FOR WORKS CARRIED OUT TOWARDS REDUCTION OF OUTAGE AND INCREASE IN RELIABILITY AND ALSO FOR REPLACEMENT OF EQUIPMENTS WHICH ARE BEING PHASED OUT BY THE OEM.**
- **RG 11(1) (ii) FOR THE PURPOSE OF R&M WORKS ,THE USEFUL LIFE OF GAS BASED GENERATING STATIONS SHOULD BE CONSIDERED AS 15 YEARS, AS SPELT OUT IN THE EXPLANATORY MEMORANDUM BUT MISSING FROM THE DEPRITIATION TABLE UNDER RG 17.**

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- RG 11 (4) FROM THE EXPLANATORY MEMORANDUM , IT IS UNDERSTOOD THAT THE SPECIAL ALLOWANCE OF RS.5 LAKHS/MW/YEAR DURING THE TARIFF PERIOD 2009-14 ARE BASED ON DATA FOR THERMAL POWER STATIONS (COAL BASED). IT IS SUGGESTED THAT SEPARATE NORMS BE SPELT OUT FOR GAS BASED POWER STATIONS.
- RG 12 (1) SALE OF INFIRM POWER DEDUCTION OF REVENUE EARNED FROM SALE OF INFARM POWER FROM THE CAPITAL COST OF THE PROJECT IS NOT JUSTIFIED AS IT AFFECT THE RECOVERY OF INTEREST ON LOAN CAPITAL, INTEREST ON WORKING CAPITAL ,DEPRECIATION AND RETURN ON EQUITY. SINCE AFC ARE RECOVERED FROM BENEFICIRIES ONLY FROM COD, BENEFITS FROM THE PROJECT IS NOT ACCRUABLE TO THE BENEFICIRIES, BUT TO THE GENERATING COMPANY AS IT SUFFERS LOSS DUE TO NON-DECLARATION OF COD RIGHT FROM THE DATE OF COMMERCIAL OPERATION.
- RG 15 RETURN ON EQUITY : RETURN ON LONG TERM INVESTMENT NOW FATCHES ARROUND 20 % RETURN. IN VIEW OF GEOGRAPHICAL LOCATION AND LAW & ORDER PROBLEM IN NORTH EAST , ROE MAY BE INCREASED TO 30 % .
  FURTHER,OPPORTUNITY COST IS REQUIRED TO BE BUILT UP IN EQUITY COMPONENT OF THE CAPITAL COST.

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- RG 17 DEPRECIATION : ONE ASPECT IS APPLICABLE TO THE GENERATING COMPANY OPERATING IN THE NORTH EASTERN REGION IS THE AMORTIZATION OF LEASE HOLD LAND OVER THE PERIOD OF LEASE. AS LAND IS NOT TO BE INCLUDER WHILE CALCULATING THE DEPRECIATION, THERESHOULD BE A SEPARATE PROVISION FOR RECOVERING THE COST OF LEASE HOLD LAND WHICH THR GENERATING COMPAMY HAS TO RE-INCUR AT THE END OF THE INITIAL LEASE PERIOD.

- RG 18 INTEREST ON WORKING CAPITAL : FOR COMPUTATION OF IWC, O&M COST OF ONE MONTH NEED ALSO TO BE CONSIDERED.FURTHER RECEIABLES EQUIVALENT TO SIXTY DAYS NEED TO BE CONSIDERED, AS PAYMENT BY THE BENEFICIRIES ARE REGULATED BY TRIPARTITE AGREEMENT, WHERE SURCHARGE ARE LEVIED ONLY AFTER SIXTY DAYS OF BILLING IN THE EVENT OF NON PAYMENT.
- RG 19 (C) OPERATION & MAINTENANCE EXPENSES :

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- **RG 19 (C) From Clause Nos. 14.1.33 to 14.1.36 of the Explanatory Memorandum, it is noted that Hon'ble Commission has not escalated the average normalised O&M expenses for the years 2004-05 to 2006-07 4(four) times to arrive at the normalized O&M expenditure for the year 2009-10, without the impact of pay revision. Further, Hon'ble Commission has not factored the 45% increase in the employee cost for arriving at the normalized O&M expenses for the year 2009-10, with pay revision.**

- **RG 19 (F) The example given against the methodology for arriving at the O&M expenses for the year 2009-14, as given in Clause Nos. 14.2.2.8 to 14.2.2.9 of the Explanatory Memorandum does not match with what has been spelt out in the draft Regulation 19(F)(ii) & (iii). The draft Regulation stipulates that the 45% increase in the employee cost on account of pay revision will be factored into the O&M expenses of the base year 2008-09, whereas in the example of the Explanatory Memorandum, the 45% increase in the employee cost has been factored into the O&M expenses of the year 2009-10 only. Hon'ble Commission may kindly amend the example in line with the Regulation.**

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- RG 19 (e) It is observed that separate unit wise compensation allowance is not provided for Gas based Power Stations. The Commission may consider the same.
- RG 19 (f) (iii) The escalation rate of 5.17 % for Hydro , Thermal and Gas based Power Station may be increased beyond 6 % as the inflation rate at present is much higher that was prevailing at the beginning of the current tariff period.
- RG 21 (2) (ii) Recovery of Fixed Charge : For Gas based Power Station it may not be possible to declare the ex-bus capacity for peak 8 hours as there may be sudden short supply of fuel gas.
- RG 21 (3) Capacity Charge for Hydro Generating Station ; The reasons said to have been influenced the Hon'ble Commission to propose a change in the existing norm on recovery of AFC of Hydro Generating Station is basically towards equitable sharing of risk of failure hydrology between the Generating Company and the beneficiaries. However, it is seen in the Draft regulation that the entire hydrological risk has been transferred to the Generating Company.
- Formula for computation of PAFM and PAFY for Hydro Station is not available in the Regulation.

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- The concept of Maximum Available Capacity for Hydro Project need to be retained in calculation of PAFM & PAFY for Hydro Station. This is required because without the availability of sufficient reservoir water level and water inflow in the reservoir , it will not be possible to generate to the extent of Installed Capacity continuously for 3 Hours.
- The Hon'ble Commission has also appreciated that Hydro Generating Station may not be able to operate at 100 % Installed Capacity through out the year

  and allowed demonstration of Installed Capacity when the reservoir level and inflow are adequate. The proposed norms on recovery of Capacity Charge is thud contradictory to what has been said in Regulation 3 (14).

- Generating Companies has no control over rainfall in the catchments area that determines the actual generation. Further, during lean season rainfall in scanty and 80 /85 % PAF is not maintainable.
- 3 Hours peaking capability was never a prime consideration for planning and design of Hydro Stations

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- Govt. of India has specified a numbers of incentives for hydro power developers in the policy document of August 1998. Among various incentives, one is attributing to the beneficiaries the loss of generation on account of failure of hydrology . Implementation of the regulation shall frustrate the policy and shift the risk of hydrology to the Generator.
- RG 22 (2) (b) From the formula it is seen that the Energy Charge Rate (ECR) for Hydro Station is not the rate for ex- power plant energy , but ex-power plant saleable energy. If so. The same may be specified and in the formula for Energy Charge the word "scheduled energy" should be replaced by "saleable scheduled energy".
- It is suggested that for equitable sharing of the failure of hydrology, the generating Company may be required to bear only 50 % of the charge of Energy falling short from design energy due to failure of monsoon.
- RG 23 Incentive : Under clause no . 18.5 of the explanatory Memorandum, it is mentioned that "As regard Target availability norms for payment of incentive is concerned, the same shall be 85 % during peak hours over the year for all small gas turbine stations including Assam as well as Agartala GPS of NEEPCO.
- .

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

Achievement of *85% target Availability norms is not possible for AGBPP and AGTP for the reasons detailed in submission.

- RG 24 (Unscheduled Interchange 'UI' Charges) As per the present draft norms, it is not clear whether the present UI norms made effective from 07.01.2008 will be applicable in the next tariff period. The norms need to be revised as this is based on the unrealistic schedule for Hydro Generators . For Thermal power Stations, capping of UI rate for receivable may be withdrawn and payable and receivable may be made at par in terms of UI rate.

- RG 26 (I) NAPAF of AGTP : NAPAF of Agartala GPS may be specified as 80 % instead of 85 % because of the reasons specified in the submission.
- RG 26 (ii) Gross Station Heat Rate of AGTP : Gross Station Heat Rate of AGTP may be specified as 3580 instead of 3500 because of the reasons specified in the submission
- RG 26 (iv) Auxiliary Energy Consumption; Aux for AGTP may be allowed as 2% and for AGBPP 4 %

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- **RG 27 (1) (I) NAPAF and CCAF: The NAPAF of Ranganadi HEP has been fixed at 85%, which ids contrary to Clause No. 24.4 (vii) of the Explanatory memorandum where the Hon'ble Commission has agreed that the availability of Hydro generating Stations of NEEPCO has been between 57 % and 80 %.**

- **RG 26 (I) NAPAF of AGTP : NAPAF of Agartala GPS may be specified as 80 % instead of 85 % because of the reasons specified in the submission.**
- **RG 26 (ii) Gross Station Heat Rate of AGTP : Gross Station Heat Rate of AGTP may be specified as 3580 instead of 3500 because of the reasons specified in the submission**
- **RG 26 (iv) Auxiliary Energy Consumption; Aux for AGTP may be allowed as 2% and for AGBPP 4 %**

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- **RG 30 Scheduling : The Hon'ble Commission may review the present Scheduling norms in respect of Hydro Generating Stations in view of various difficulties faced during operation of hydro Stations with the present methodology which has been explained in detailed in the submission.**

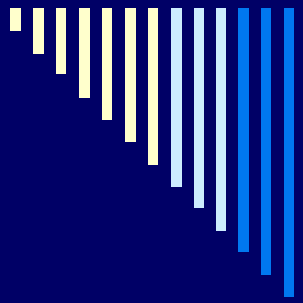
- **RG 32 Billing & Payment of Fixed and Capacity Charges : It has been specified that the surrendered share of any beneficiary shall be re-allocated for the specified period by the Central Government to other states within or outside the region . It is suggested that the specific period of allocation may be at least one year. Moreover , in the event of allocation of share outside the region, the incremental transmission loss will reduce the recoverable cost of capacity charge and energy charge from the new beneficiary.**
- **RG 29 Tax on Income : In respect of Generator, it is proposed that Tax on Income from net UI income and incentives may be allowed to be recovered from the beneficiaries because this is earned form the core business of Generation ..**

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- **Other Points : Stabilization Period : Relaxed norms during Stabilization period may be incorporated by defining the Stabilization period after COD in respect of both Hydro and Thermal Power Stations.**
- **Other Points : Deemed Generation : The Hon'ble Commission has withdrawn the concept of Deemed Generation in the Draft Tariff regulation, 2008 proposed for the Tariff period 2009-14. The Commission has not addressed the issue of loss of generation and failure to achieve Design Energy /PAFM due to break down of Transmission System and other factors , which are beyond the control of Generating Company.**
- **Other Points : Abnormal O&M : Abnormal O&M expenses made against smooth and efficient operation of Generating Stations and to addressed the extra ordinary situations, should be allowed to be reimbursed . This is required specially in insurgent infested North Eastern States , where providing additional security for protection of the plants and equipment has became an absolute necessity.**

OTHER SUGGESTIONS ON TARIFF REGULATIONS FOR 2009 - 14

- **Other Points : Filing Fee /Publication Charge/Finance Charges/ Service Tax: These charges may be allowed to be pass through.**
- **Other Points : Application Fee : It is proposed that a provision of payment of Application fee may be kept in the fee structure where either the Generator / transmission license or the beneficiary cam approach to the CERC seeking any clarification in respect of any of the clauses of the notified Regulations during the tenure of the Regulation in the event such clarification is required.**
- **Other Points : Tariff of Joint Venture Company : Fixation of Tariff of Joint venture Generating Companies may be incorporated in the Regulations.**



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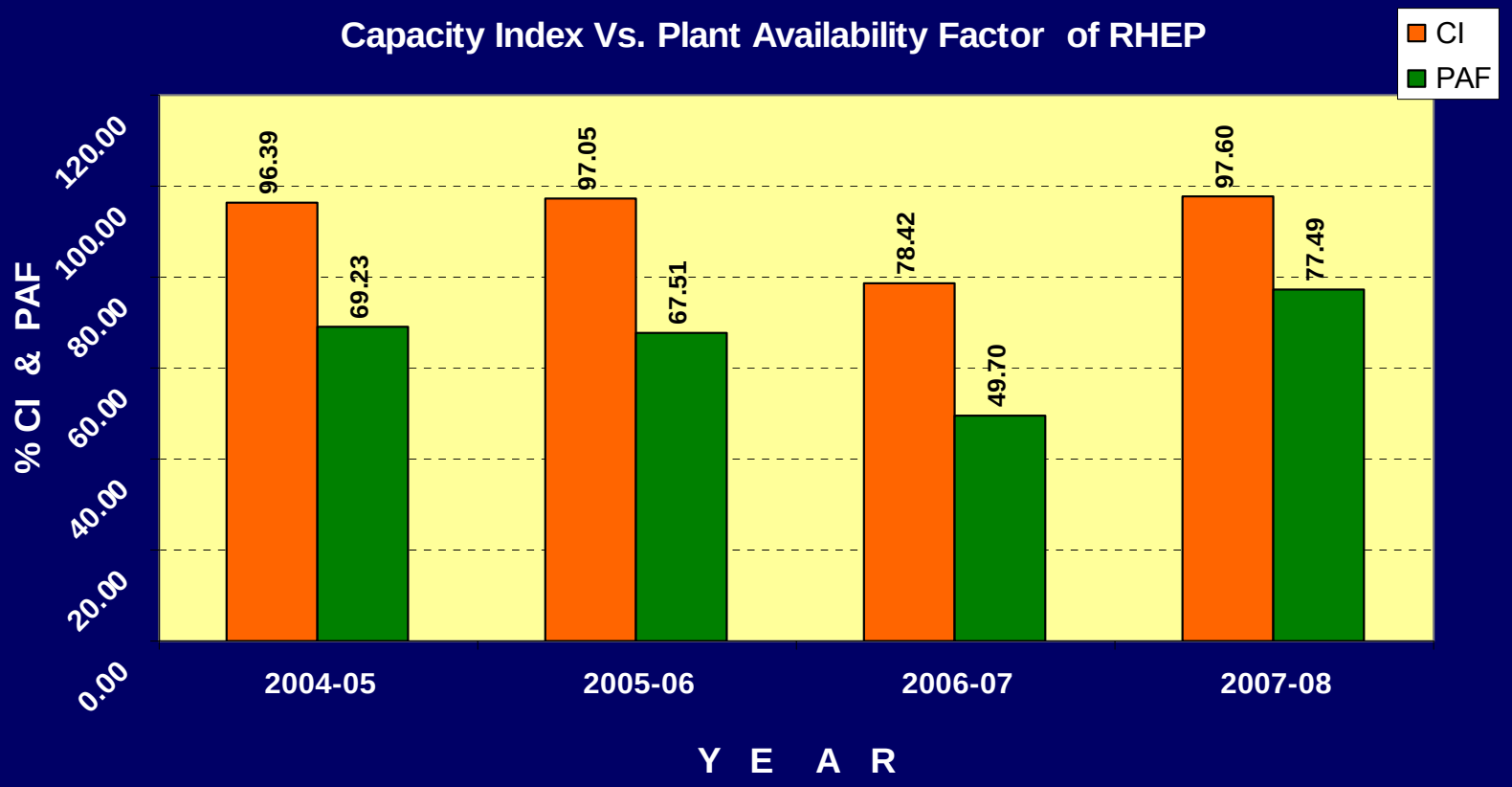
Capacity Index Vs. Plant Availability Factor of RHEP
CI
PAF
% CI & PAF
120.00
100.00
80.00
60.00
40.00
20.00
0.00
96.39
69.23
97.05
67.51
78.42
49.70
97.60
77.49
2004-05
2005-06
2006-07
2007-08
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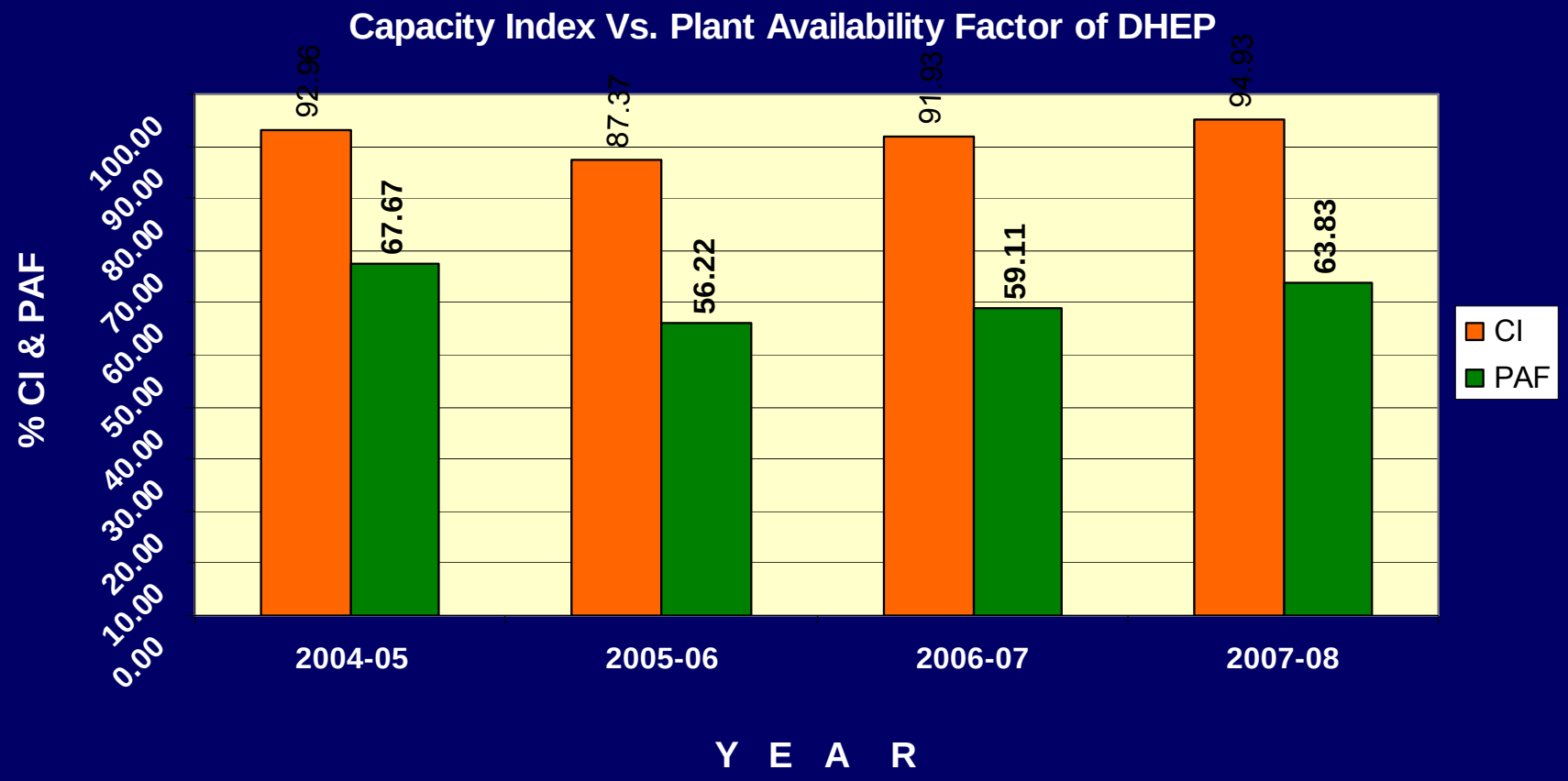
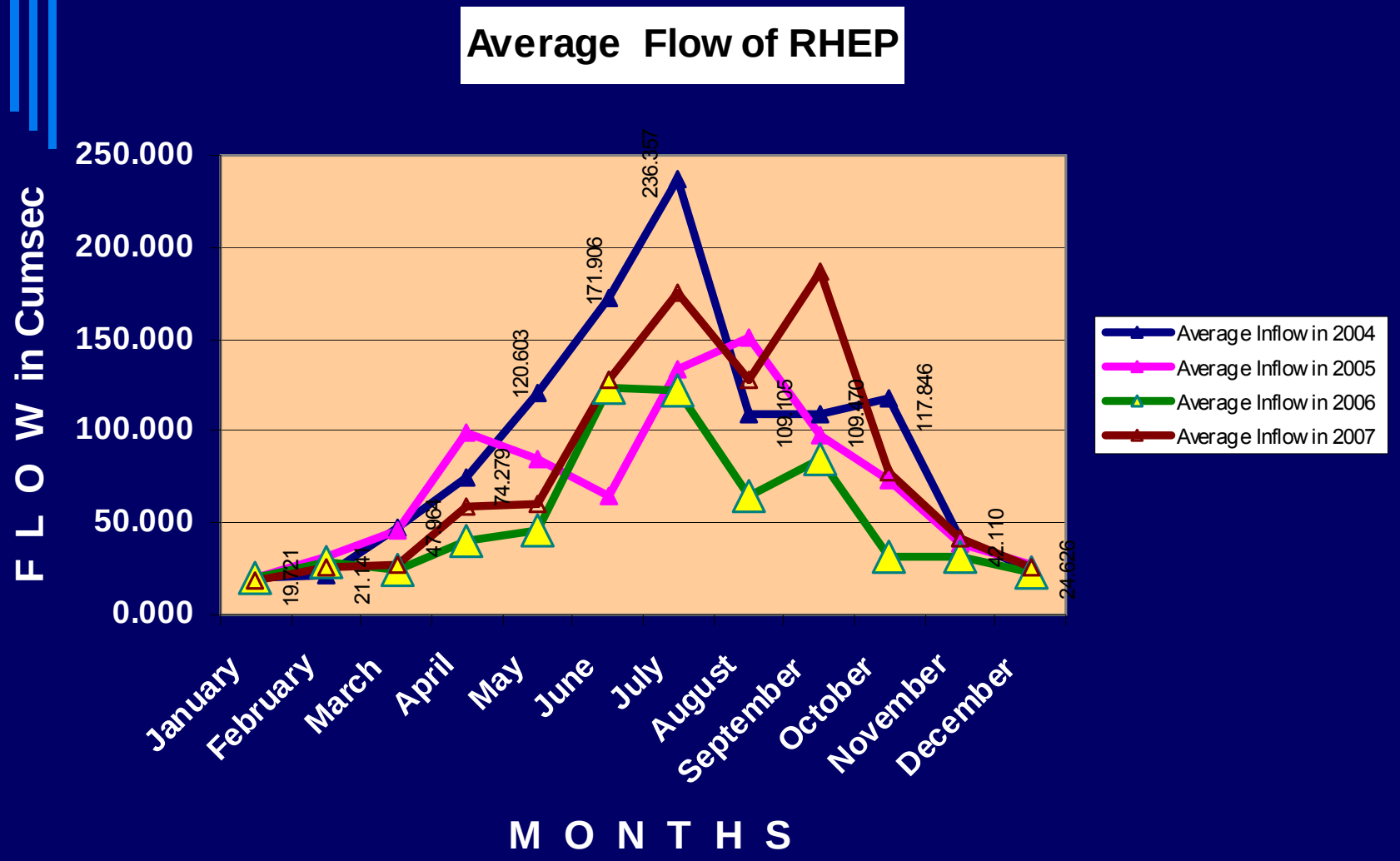
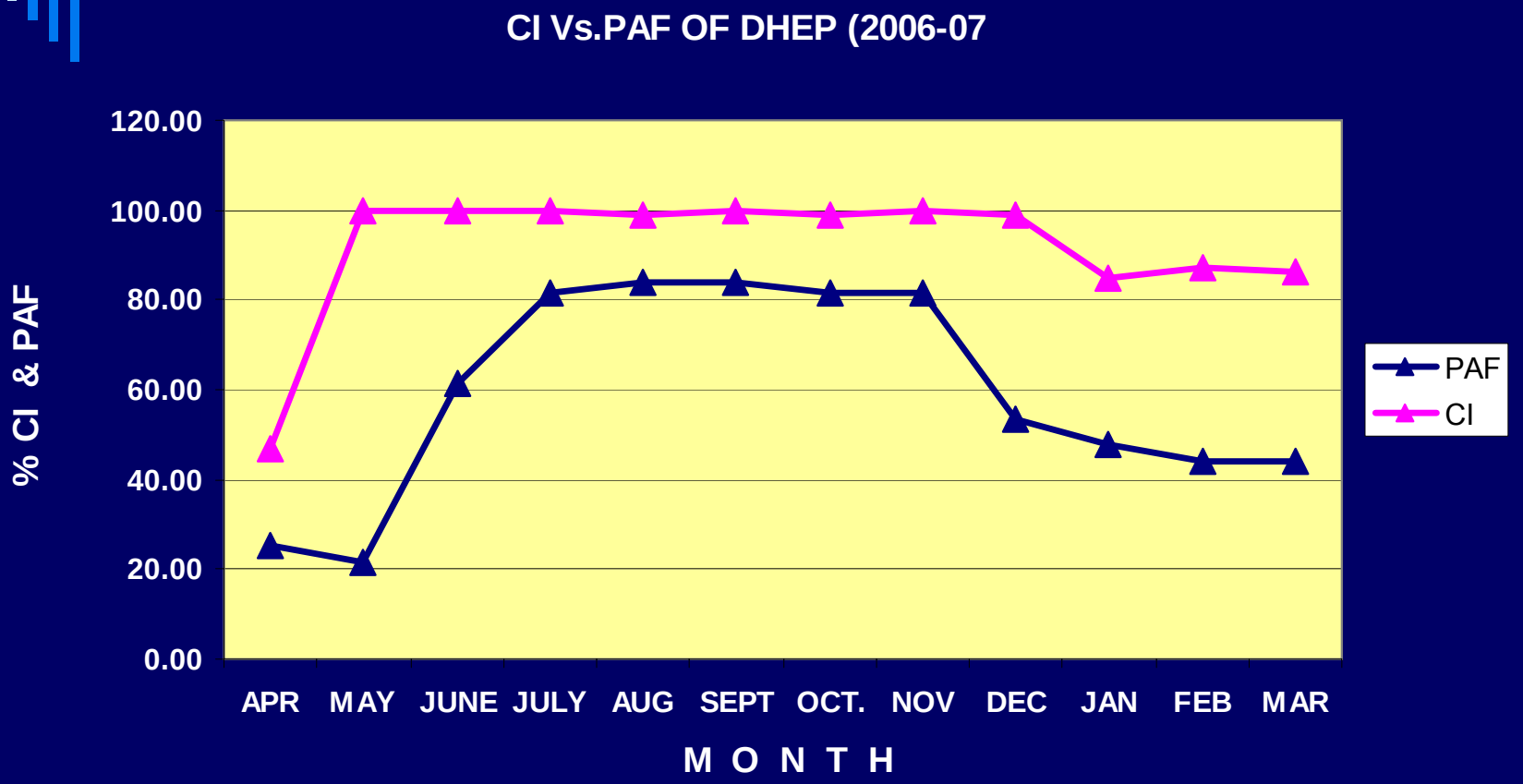
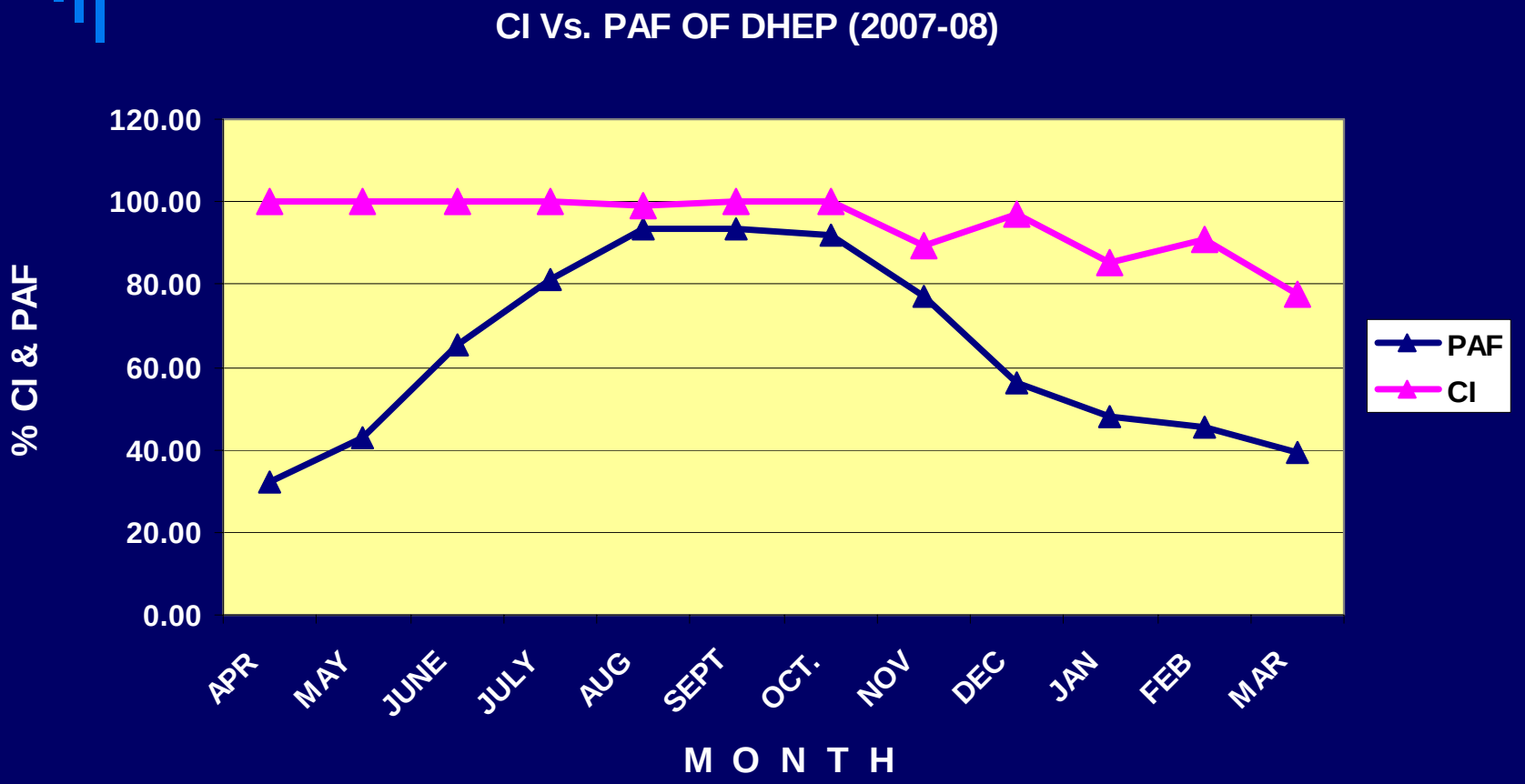
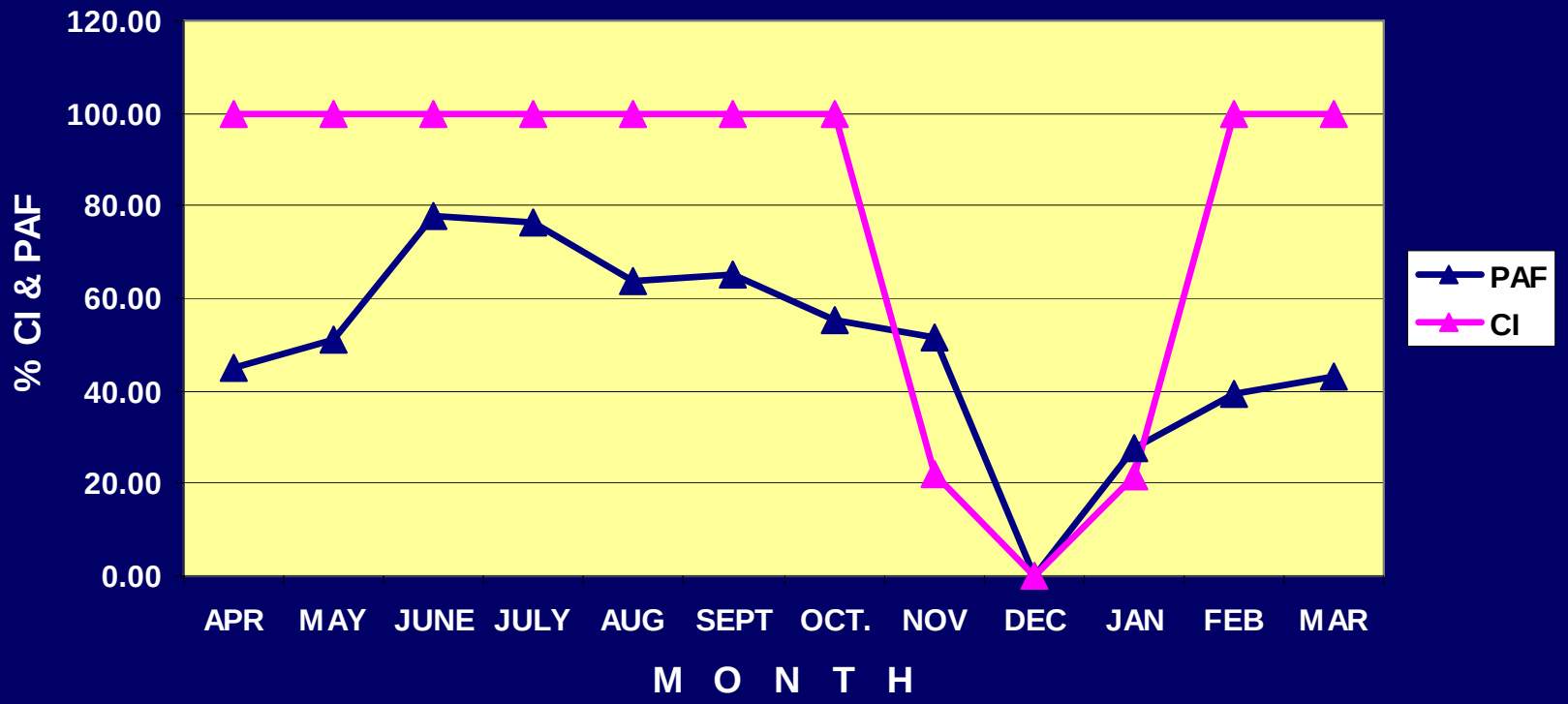

Capacity Index Vs. Plant Availability Factor of DHEP
% CI & PAF
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
92.96
67.67
87.37
56.22
91.93
59.11
94.93
63.83
2004-05
2005-06
2006-07
2007-08
Y E A R
CI
PAF

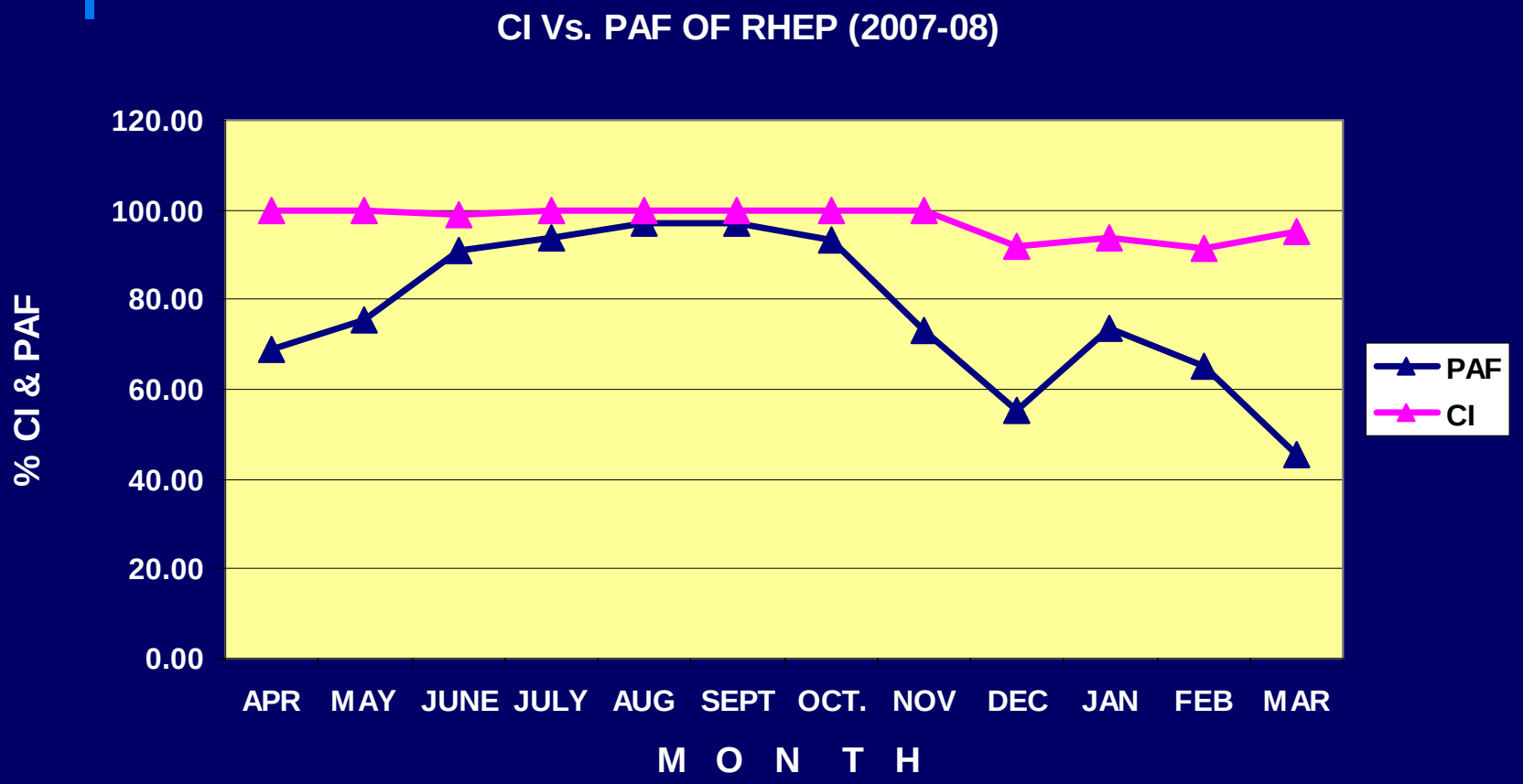

Average Flow of RHEP
F L O W in Cumsec
250.000
200.000
150.000
100.000
50.000
0.000
236.357
171.906
120.603
74.279
109.105
109.170
117.846
42.110
24.626
January
February
March
April
May
June
July
August
September
October
November
December
M O N T H S
Average Inflow in 2004
Average Inflow in 2005
Average Inflow in 2006
Average Inflow in 2007


CI Vs.PAF OF DHEP (2006-07
120.00
100.00
80.00
60.00
40.00
20.00
0.00
% CI & PAF
APR
MAY
JUNE
JULY
AUG
SEPT
OCT.
NOV
DEC
JAN
FEB
MAR
M O N T H
PAF
CI


CI Vs. PAF OF DHEP (2007-08)
% CI & PAF
120.00
100.00
80.00
60.00
40.00
20.00
0.00
APR
MAY
JUNE
JULY
AUG
SEPT
OCT.
NOV
DEC
JAN
FEB
MAR
M O N T H
PAF
CI

CI Vs. PAF OF RHEP (2006-07)




CI Vs. PAF OF RHEP (2007-08)
% CI & PAF
120.00
100.00
80.00
60.00
40.00
20.00
0.00
APR
MAY
JUNE
JULY
AUG
SEPT
OCT.
NOV
DEC
JAN
FEB
MAR
M O N T H
PAF
CI