

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 225/MP/2017

Coram:

**Shri P.K.Pujari, Chairperson
Dr. M.K. Iyer, Member**

Date of Hearing: 23.10.2018

Date of Order: 05.11.2018

In the matter of

Petition under section 94 (1) (f) of the Electricity Act, 2003 read with related provisions of Regulation 103 (1) of the Central Electricity Regulatory Commission (Conduct of Business) (Amendment) Regulations, 2013 seeking compensation for loss of Capacity Charge on account of inadequate availability of fuel gas under provisions of Regulation 54 (Power to Relax) of the Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2014 in respect of the Assam Gas Based Power Plant (AGBP).

And

In the matter of

North Eastern Electric Power Corporation Limited,
Brookland Compound, Lower New Colony,
Shillong -793003, Meghalaya.

.....Petitioner

Vs

1.Assam Power Distribution Company Limited,
Bijulee Bhawan, Paltan Bazar,
Guwahati - 781001

2.Meghalaya Power Distribution Corporation Limited,
Short Round Road, Lumjingshai, Shillong - 793001

3.Tripura State Electricity Corporation Limited,
“Bidyut Bhawan”, Banamalipur, Agartala - 799001

4. Power & Electricity Department,
Govt. of Mizoram, Power House Complex,
Electric Veng, Aizawl - 796001.

5. Manipur Power Distribution Company Ltd.,
Government of Manipur
Keishampet, Imphal - 795001.



6. Department of Power,
Government of Arunachal Pradesh,
Bidyut Bhawan, Itanagar - 791111.

7. Department of Power,
Government of Nagaland,
Kohima - 797001.

8. North Eastern Regional Power Committee,
NERPC Complex, Dong Parmaw,
Lapalang, Shillong - 793006.

9. North Eastern Regional Load Despatch Centre,
Dongtieh, Lower Nongrah, Lapalang,
Shillong - 793006.

....Respondents

Parties present:

Shri M.G Ramachandran, Advocate, NEEPCO
Ms. Ranjitha Ramachandran, Advocate, NEEPCO
Shri Shubham Arya, Advocate, NEEPCO
Shri Sunil Sharma, Advocate, APDCL
Shri Avijit Roy, Advocate, APDCL

ORDER

The Assam Gas Based Power Plant (hereinafter referred to as AGBP) of North Eastern Electric Power Corporation Ltd. (hereinafter referred to as NEEPCO) is a Combined Cycle Gas Based Power plant having installed capacity of 291 MW and is located at “Bokuloni Village in Dibrugarh District of the State of Assam” .

2. The Power Plant uses Natural Gas as its fuel. The Natural Gas from the oil fields of Assam is received at a pressure of about 5.5 Kg/cm² and is fed to a Gas Booster Station to increase the pressure to about 21 Kg/cm² before being fed to the Gas Turbines. The Power Station consists of six Gas Turbines each of 33.5 MW capacity and three Steam Turbines each of 30 MW Capacity. The exhaust of each Gas Turbine is fed into a Waste Heat Recovery Boiler. The steam from two such boilers



is used to run one Steam Turbine Generator set. Thus, there are three Combined Cycle Modules. The dates of commercial operation of individual units and the Generating Station as a whole and the corresponding unit capacities are indicated in the table below:

Unit No.	Date Of Commercial Operation	Unit Capacity
GT - 1	1.5.1995	33.5 MW
GT - 2	1.5.1995	33.5 MW
GT - 3	1.7.1995	33.5 MW
GT - 4	1.8.1995	33.5 MW
GT - 5	1.4.1997	33.5 MW
GT - 6	1.4.1997	33.5 MW
ST - 1	1.4.1999	30 MW
ST - 2	1.4.1999	30 MW
ST - 3	1.4.1999	30 MW
Generating Station	1.4.1999	291 MW

3. NEEPCO could not achieve Normative Target Availability of the station of 72% during the period from July, 2016 to March, 2017 due to inadequate gas supply by the Oil India Limited (OIL). The short supply of gas continued beyond March, 2017 also. As a result of short supply of gas, the petitioner has under recovered Capacity charges of Rs. 40.86 Crore during the period from 1.7.2016 to 31.3.2017.



4. The Petitioner, NEEPCO has filed the present Petition seeking the following reliefs:

(a) To consider the actual PAF (ignoring the loss of availability due to reasons attributable to the Petitioner) achieved by AGBP during the period 01.07.2016 to 31.03.2017 as the NAPAF for this period to allow recovery of loss of Capacity Charge due to inadequate availability of fuel gas, which is beyond the control of the Petitioner ;

(b) Allow the same relaxation for future periods beyond 31.03.2017 whenever losses are incurred due to inadequate fuel supply;

(c) Pass any such other and further reliefs as this Hon'ble Commission deems just and proper in the nature and circumstances of the present case.

5. The Petitioner in the present Petition has submitted the following:

(a) Regulation 36 (A)(d) under Chapter-8 (Norms of Operation) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the 2014 Tariff Regulations) stipulates that the Normative Annual Plant Availability Factor (NAPAF) for the Assam Gas Based Power Station (AGBP) shall be 72 %.

(b) The Petitioner has submitted that due to inadequate supply of fuel gas to the Plant by the gas supplier, Oil India Limited (OIL), it has been practically impossible to achieve the NAPAF of 72%. It is submitted that in order to achieve the stipulated NAPAF quantum of gas required is 1.38 to 1.4 MMSCMD whereas OIL has a maximum capacity to supply 1.40 MMSCMD only. Therefore, the Fuel Purchase Agreement (FPA) with OIL stipulates an agreed quantum of 1.4 MMSCMD.

(c) Although the FPA stipulates the agreed quantum of supply as 1.4 MMSCUMD, OIL has been unable to supply this quantum on regular basis on account of various



reasons. The disruption in supply of gas commenced in July 2016 and is continuing till date. The monthly average quantum of supply during this period ranges from 0.9 MMSCUMD to 1.18 MMSCUMD. The achievable PAF with availability of gas in this range is 46 % to 60 %. The actual monthly PAF achieved during this period is shown in the **Table-1** below. The loss of availability shown considers only the loss due to inadequate fuel supply, excluding the loss due to other factors attributable to the Petitioner.

Month	Generation required to achieve NAPAF (72 %) (MU)	Actual gen. (MU)	Total Loss of generation due to all factors (MU)	Loss of generation for gas compressor tripping /Shutdown (MU)	Loss of generation for other Forced Outages (MU)	Loss of generation due to shortage of gas (MU)	Percentage Loss of Generation due to gas shortage (G/D %)
A	B	C	D	E	F	G	H
Jul-16	155.88288	141.09	14.79	1.53	2.43	10.8306	73.2117
Aug-16	155.88288	122.71	33.18	0.23	0.53	32.4083	97.6869
Sep-16	150.8544	92.18	58.68	0.50	0.00	58.1790	99.1547
Oct-16	155.88288	146.38	9.51	1.32	3.43	4.7599	50.0762
Nov-16	150.8544	120.81	30.05	0.00	0.33	29.7183	98.8987
Dec-16	155.88288	118.56	37.33	1.22	0.02	36.0873	96.6787
Jan-17	150.8544	132.21	18.65	0.00	0.29	18.3566	98.4417
Feb-17	140.79744	116.90	23.90	0.21	0.28	23.4035	97.9371
Mar-17	155.88288	130.64	25.25	0.00	0.16	25.0860	99.3654
TOTAL	1372.78	1121.46	251.32	5.02	7.47	238.8295	95.0317

Copies of the monthly fuel supply statements from July 2016 to March 2017, signed jointly by OIL and the gas transporter, Assam Gas Company Limited have been furnished.

(d) The matter of inadequate gas supply has been taken up with OIL on several occasions. The Ministry of Power, Government of India has also taken up the issue with the Ministry of Petroleum & Natural Gas and requested for early restoration of supply to the agreed quantum. The Petitioner had also preferred a claim on OIL under provisions of Article 7.3 of the FPA for compensation for failure to supply the Minimum Guaranteed Quantum. However, OIL had served a Notice of Force Majeure Conditions in respect of the disruption of gas supply. Despite the Petitioner's



contest to this notice, OIL refused to withdraw the same. OIL cited low production of gas on account of technical down hole problems in a number of high producing wells coupled with closure of wells due to miscreant activities and frequent bandhs/strikes by various organizations which resulted in impairment / loss of productivity of the reservoir as reasons for inadequate supply to the power station. Copies of correspondences in this respect with OIL, Ministry of Power, Ministry of Petroleum & Natural Gas have been submitted.

(e) The month wise losses in terms of recovery of AFC on account of loss of plant availability due to inadequate fuel availability during the period in question is tabulated below:

Month	100% Capacity Charge (Rs. crore)	PAFM (%)	Capacity Charge Recovered (Rs. Crore)	Loss of capacity charge attributable to all factors(B-D) (Rs. Crore)	Percentage Loss of Generation due to gas shortage (Col H of Table-1)	Loss of Capacity Charge due to gas shortage (E*F) (Rs. crore)
A	B	C	D	E	F	G
Jul-16	26.3978	68.68	24.6876	1.7102	73.2117	1.2520
Aug-16	26.3978	58.69	21.0546	5.3432	97.6869	5.2196
Sep-16	25.5462	43.72	15.8743	9.6719	99.1547	9.5902
Oct-16	26.3978	67.49	24.2937	2.1041	50.0762	1.0536
Nov-16	25.5462	56.73	20.4563	5.0899	98.8987	5.0339
Dec-16	26.3978	54.13	19.4212	6.9766	96.6787	6.7449
Jan-17	26.3978	60.27	21.6693	4.7285	98.4417	4.6548
Feb-17	23.8432	59.15	21.3741	2.4691	97.9371	2.4181
Mar-17	26.3978	59.79	21.4914	4.9064	99.3654	4.8752
Total	233.3223		190.3225	42.9998	95.0317	40.8634

(f) It is evident from above that the Petitioner has lost Capacity Charges to the tune of Rs. 40.8634 crore during the period from July 2016 to March 2017 due to external factors beyond its control. Therefore, the Petitioner has submitted that the Commission takes cognizance of the matter as narrated above and allow compensation of the losses incurred by considering the actual PAF (excluding the loss of availability due to reasons attributable to the Petitioner) achieved during the period in question as the Normative PAF for the period.



(g) The Petitioner submitted that the Commission may be pleased to exercise its powers under Regulation 44 (Power to Relax) of the Tariff Regulations, 2014 to relax the norms of operation for the period in question by considering the actual PAF (excluding the loss of availability due to reasons attributable to the Petitioner) as the Normative PAF for the period to enable the Petitioner to recover the losses incurred due to reasons beyond its control.

Submissions of the Respondents

6. The Respondent No.1, Assam Power Distribution Company Limited (APDCL), vide its affidavit dated 10.04.2018 has mainly submitted the following:

(a) Initially the plant availability factor for AGBP for realization of full fixed charges was @ 80% during 2001-2004 period as per CERC Regulations' 2001 which continued till 2004-2009. However, during 2009-14 period, based on the submissions of the Petitioner, the CERC has decreased the plant availability factor NAPAF from earlier 80% to 72% due to less availability of fuel gas at the time of fixation of CERC tariff regulation of 2009.

(b) It requires gas quantum of around 1.38 MMSCUMD to 1.4 MMSCUMD to achieve the NAPAF @ 72% and OIL has also maximum capacity to supply is 1.4 MMSCUMD which implies that fuel gas availability is within the required range of 1.38 - 1.4 MMSCUMD. It is, however, worth mentioning that since inception the AGBP Project has this problem of inadequate gas on inherent basis for which Beneficiary States are in no way responsible. Prima facie it appears that the Petitioner Company has failed to conceive the exact requirement of fuel gas in commensuration with the installed capacity of the Project. As per prevalent MoP Regulations at that time the Operating Norms of Plant Load Factor (PLF) was 80%.



So fuel gas arrangement should have been made like that considering 80% PLF. As such the reason of this inadequacy is totally attributable to the Petitioner.

(C) The arrangement of the adequate fuel gas is the sole responsibility of the Petitioner. Because the fuel supply is being governed by a separate bilateral Fuel Purchase Agreement (FPA) signed in between the Petitioner and Oil India Limited (OIL) and the Beneficiaries are not a party to it. The Petitioner should have considered the installed capacity of the project while fixing the requirement of the quantity of fuel gas at the time of signing of the FPA.

(d) The NAPAF norm @72% adopted by the Commission during 2009-14 is continuing in the 2014-19 period. The submission of the Petitioner that there is further decrease of supply of fuel gas by OIL to AGBP and therefore the petitioner is not in a position to maintain the stipulated NAPAF is not tenable. Such burdens should not be passed on to the beneficiaries for any lapses which are attributable to the Petitioner/Fuel Supplier. The Respondent, therefore, is of the opinion that now time has come to think of other options like de-rating of the AGBP project capacity from its installed capacity of 291 MW to a level in commensuration with the available gas based on the submission of the Petitioner, at least till the adequate quantum of gas is made available.

(e) The Respondent States have been penalized so far for such reasons attributable to the other Parties than Respondent. Moreover, since the load demand of the Respondent APDCL is always there, so APDCL has been facing double financial burden; while as per prevailing Regulation it is paying the full fixed charges on the basis of installed capacity of 291 MW on availability of 72% PAFM (i.e. effective capacity available is around 210 MW) to the Petitioner and in parallel to this, to



meet up such shortfall in quantum, it has been purchasing proportionate share from other sources at higher tariff to meet the demand.

(f) The Respondent is to perform through so many stringent regulatory norms and is accountable to all authorities as well as public for rise of a single penny or distribution loss. After signing of Reforms and UDAY agreements it becomes more difficult to operate for Distribution Licensee like APDCL. The Respondent, therefore, is of the opinion that the Petitioner should take up the issue of compensation with OIL, rather than burdening the DISCOM which is already overburdened with fund crunch.

(g) Any further decrease in NAPAF shall increase the financial burden to the ultimate general consumers. This seems to be against the tariff principles enumerated under section 61(b), (c), (d) and (e) of the Electricity Act 2003. Therefore, the Commission is requested to take a judicious decision in this regard either by advising the Petitioner to settle with the fuel supplier (OIL) or to de-rate the Project capacity from its installed capacity of 291 MW to a level in commensuration with the available gas and not to pass on any financial burdens to the Respondent which are not attributable to it.

(h) The submission of the Petitioner is not at all tenable. Simply writing letters to OIL or Ministry of Power does not solve this issue. The Petitioner is aware that there is shortage of gas for AGBP Plant of the Petitioner but some other Buyers are getting full quantum of gases from OIL as stated by the Petitioner itself. The Petitioner should initiate legal action either for realization of compensation or to get increase of fuel quantum to its adequate level to avoid de-rating of capacity of the Project. The extract copy of Page 12 and 14 of FPA furnished with the Petition



do not cover the full contents of the compensation/ Force Majeure clauses, not to speak of the full volume of the FPA.

(i) In the bilateral Power Purchase Agreement (PPA) signed by the Respondent with the Petitioner there is no such provision for recovery of loss due to inadequate fuel supply by a third party. A copy of the PPA has been enclosed.

(J) The Respondent noted the submission of the Petitioner. Under the 2014 Tariff Regulations 'Power to Relax' clause is under section 54 (not section 44 as mentioned in the Petition). On the basis of above submissions, it appears that the 'Power to Relax' clause should not be applied particularly in this fag end of the tariff block.

Rejoinder of the Petitioner to the replies of Respondents

7. In response to the above replies, the Petitioner has filed its rejoinder and has mainly submitted the following:

(a) Oil India Limited (OIL) has a maximum capacity to supply 1.4 MMSCUMD and therefore, the Fuel Purchase Agreement (FPA) was for this quantum of gas. However, this statement does not in any way imply availability of the same quantum, as delivered at Assam Gas Based Power Plant of the Petitioner. OIL is unable to supply the agreed quantum.

(b) The contention of APDCL that the Petitioner failed to assess the exact requirement of gas is factually incorrect. The fact is that the power station was conceived prior to the Commission having increased the PLF with the introduction of ABT vide order dated 21.12.2000. Therefore, the formulation of project report, design parameters, plant configuration, determination of tariff and assessment of fuel requirement was based on the Government of India regulations in force at the



time which envisaged 6000 hours of operation annually i.e 68.49 % PLF. However, after the advent of ABT and the Commission's Tariff Regulations stipulating various norms of operation viz. NAPAF etc., an additional allocation of 0.4 MMSCUMD was arranged after vigorous persuasion with the concerned authorities.

(c) The Petitioner re-iterates that the fuel shortage is on account of Force Majeure reasons claimed by OIL and not for any reason attributable to the Petitioner. The background for the determination of plant capacity and requirement of fuel has been elucidated and the Respondent is also well aware of the same. The Petitioner's claims are all backed by facts and evidence on record. Therefore, the Respondent's contention that the claims are not tenable is not justified. The Petitioner's bills raised on the Respondent are in keeping with the prevalent Tariff Regulations formulated by the Commission and hence the Respondent's complaint regarding payment of fixed charges is neither reasonable nor relevant in the context of the Petition. Further, it is not open for the Respondent to claim any alternate substantive relief, such as de-rating of the capacity of the Assam Gas Power Plant, in the present proceedings.

(d) Adequate fuel is not available due to technical and other reasons which are force majeure in nature. Contrary to the Respondent's statement, the extract of the FPA as submitted adequately covers the matter under consideration in the Petition. Further, as mentioned hereinabove, the issue of de-rating constitutes a separate cause of action and cannot be raised by the Respondent in the relaxation Petition filed by the Petitioner. The petitioner has attached a copy of the FPA.



(e)The reference to the PPA made by the Respondent is out of the context of this Petition. In any event, both the parties are bound by the Regulations notified by this Commission and this is recognized in the PPA entered into. If in exercise of its power under Regulation 54, this Commission deems it fit to relax the normative availability, the same shall be applicable on the Respondent as well.

(f) The Petitioner is exercising all options to mitigate the loss on account of fuel shortage. That does not however mean, that it shall not be entitled to claim the relief prayed for. The Petitioner as a prudent utility is taking up the issue of non-supply of gas by OIL and therefore, making efforts against OIL to procure the maximum quantum of gas. Such a step cannot be considered to be inconsistent or contradictory to the claim of the Petitioner for relief on account of non-availability of Gas. It is well settled that when there is a claim of Force Majeure, it is necessary for the party affected by such force majeure to take steps to mitigate the same. Accordingly, the steps taken by the Petitioner qua OIL cannot be held against the Petitioner in regard to the claim for Force Majeure.

(g) The typographical error mentioning “Regulation 44” instead of “Regulation 54” is regretted. The Commission may kindly condone this error. Such inadvertence cannot be a ground for denying the Petitioner the relief prayed for.

Submissions during the hearing

8. Learned Counsel for the Petitioner submitted the following during the hearing of the Petition on 3.5.2018:



(a) Due to inadequate supply of fuel gas by Oil India Limited (OIL), it has become impossible to achieve NAPAF of 72% as specified in the 2014 Tariff Regulations.

Though the FSA with OIL stipulates an agreed quantum of 1.4 MMSCUMD, OIL has been unable to supply this quantum on regular basis for various reasons since July, 2016. He also referred to communication dated 1.9.2016 of OIL and submitted that OIL had served notice of Force Majeure conditions in respect of disruption of gas supply.

(b) On a specific query by the Commission if there was any back to back agreement with the Respondent based on the FSA with OIL, the learned counsel for the Petitioner replied in the negative. He however submitted that the source of supply of gas to the generating station has been identified under the FSA and the Respondents are also aware of the same. He accordingly submitted that the FSA inherently form part of the PPA as no alternative source of supply of gas to the generating station is available.

9. Learned Counsel for the Petitioner submitted the following during the hearing of the Petition on 26.7.2018:

(a) Due to inadequate supply of fuel gas by Oil India Limited (OIL) for the period from July, 2016 to March, 2017, it was impossible for the Petitioner to achieve NAPAF of 72% as specified under Regulation 36(A)(d) of the 2014 Tariff Regulations.

(b) In terms of Article 7.3 of FPA, compensation was preferred on OIL due to its failure to supply minimum guaranteed quantum of gas. However, OIL had served notice of 'force majeure' in respect of disruption in gas supply to the



Petitioner.

(c) The Commission in exercise of its powers under Regulation 54 (Power to Relax) of the 2014 Tariff Regulations may relax the norms of operation by Considering the actual PAF to enable the Petitioner to recover the losses Incurred on account of reasons which are beyond its control.

(d) The learned counsel for the Petitioner clarified that in terms of the judgment of APTEL dated 22.1.2007 in Appeal No. 89 of 2006 (NTPC vs MPSEB & ors) the Commission may allow relaxation of the NAPAF. The learned counsel also clarified that for the purpose of invoicing, the force majeure called by the seller or the buyer would be treated as a justified event, unless determined otherwise by GSCC.

10. In response, the Respondent, APDCL has submitted the following:

(a) The PPA between the Petitioner and APDCL makes no reference to the FPA signed by the Petitioner with OIL. Thus, issues with regard to deviation from supply of the contracted gas by OIL and the corresponding reduction in the generation of power are required to be resolved by the Petitioner in terms of the FPA.

(b) Article 6.3.2 of the FPA provides for a mechanism that in case of any dispute/ disagreement in respect of supply of gas, the matter shall be referred to the Gas Supply Coordination Committee (GSCC). Thus, the Petitioner should have approached GSCC for realization of its compensation bill raised to OIL.

(c) The responsibility for arranging fuel is on the generating company.

Hence, the non-availability of fuel does not fall within the purview of Force majeure events. Moreover, the beneficiaries cannot be made liable for the petitioner's inability to arrange adequate fuel. [Judgment of APTEL dated 30.4.2013 in Appeal No. 110 of 2012 (NTPC vs CERC & others) was referred to].



Analysis and Decision

11. The submissions of the parties have been examined and the documents on record have been perused. The Petitioner in the instant petition has submitted that due to inadequate supply of fuel gas to the Plant by the gas supplier, Oil India Limited (OIL), it has been practically impossible to achieve the NAPAF of 72% as specified by the Commission in the 2014 Tariff Regulations. The petitioner is seeking to consider the actual PAF (excluding the loss of availability due to reasons attributable to the Petitioner) achieved by AGBP during the period 01.07.2016 to 31.03.2017 as the NAPAF for this period to allow recovery of loss of Capacity Charge due to inadequate availability of fuel gas, which is beyond the control of the Petitioner and allowing the same relaxation for future periods beyond 31.03.2017 whenever losses are incurred due to inadequate fuel supply.

The Commission had specified relaxed NAPAF of 72% for Assam GPS during the Tariff Period 2009-14 & 2014-19 on the basis that the station would receive 1.4 MCMD gas from the gas supplier.

12. The Commission while specifying 72% NAPAF has observed in the SOR of 2009 Tariff Regulations as follows:

“28.12 It is observed that the Target Availability of 80% could not be achieved by the Assam GPS from 2004-05 to 2007-08. IT is because the station is not getting required quantity of gas for availability declaration of 80%. Further, as brought out in our explanatory memorandum with draft regulation that the allocation of 1.0 MCMD of gas on firm basis and 0.4 MCMD on fall back basis is sufficient for sustaining a generation level of the order of 70% only. Arranging of spot gas or any other alternate fuel in the remote north-eastern region is also not a feasible option. In this back drop, Commission is of the view that there is a case for relaxation of target availability norm for the Assam GPS station. However, the



average availability of the station is about 73% for the years 2004-05 to 2007-08 despite availability of 70% (Actual PLF) in the year 2007-08. As regards, provision regarding conserving gas during off peak hours and using it during peak hours in consultation with beneficiaries due to gas shortage may be a difficult option for Assam GPS due to supply of gas from scattered wells, through shot pipelines which do not have any capacity for gas storage (line pack), Considering all these aspect, a target availability norm of 72% is allowed for the tariff period 2009-14 as against 70% provided in the draft Regulation.”

13. The Commission continued the same availability norm i.e. 72% during the tariff period 2014-19 also as the gas supply condition in the station had not improved. Accordingly, the Commission has already specified relaxed norms of 72% in the 2014 Tariff Regulations duly keeping in view the gas supply condition to the station to the tune of only 1.4 MCMD.

14. Now to consider the case of the petitioner for relaxation of NAPAF for the period from July, 2016 to March, 2017 and thereafter, we have examined the following factors :

- (i) Actual Quantum Gas Received Vs Agreed Quantum of Gas Supply as per Fuel Supply Agreement with M/s OIL.
- (ii) Comparison of Monthwise Declared Capacity (DC), NERLDC Scheduled Generation and Actual Generation.
- (iii) Forced Outages of the Machines.
- (iv) Quality of Gas (Comparison of Actual Calorific value of Gas Vs Calorific value as per gas Supply Agreement with Oil).
- (v) Consumption of gas in GBS units compared to design guaranteed consumption at site ambient condition.
- (vi) Plant Availability Factor during the Month (PAFM)

The above points are discussed in the subsequent paragraphs.



15. The Petitioner, vide affidavit dated 21/09/2017, has submitted the month wise break-up of actual gas received, agreed gas supply as per FSA and gas requirement to achieve NAPAF (72%) (MU) from July, 2016 to March, 2017 which is as given below:

Month	Actual gas Received (MMSCMD)	Gas Requirement corresponding to NAPAF of 72% (MMSCMD)	Agreed Quantum of gas supply as per FSA (MMSCMD)
July-16	1.237017	1.366715	1.4
August-16	1.075869	1.366715	
Sept.-16	0.975000	1.366715	
Oct.-16	1.283398	1.366715	
Nov.-16	1.0945518	1.366715	
Dec.-16	1.004414	1.366715	
Jan.-17	1.159161	1.322627	
Feb.-17	1.134744	1.366715	
March-17	1.145396	1.366715	
Total	10.10952	12.25635	

It is observed from the above table that Actual Quantum of gas received during July, 2016 to March, 2017 is lower compared to Agreed Quantum of gas supply as per the Fuel Supply Agreement dated 24.6.2015.

16. The Petitioner, vide affidavit dated 01/06/2018, has submitted the month wise break-up of Declared Capacity (DC), NERLDC Scheduled Generation and Actual generation (MU) for the period from July, 2016 to March, 2017.

The data of Generation required for achieving NAPAF of 72%, Declared Capacity (DC in MUs), Scheduled Generation, and actual generation is as given below.



Month	Generation required for achieving NAPAF of 72% (MU)	Declared Capacity (DC) (MU)	Scheduled Generation (SG) (MU)	Actual Generation (MU)
July, 16	155.88	144.97	119.41	141.09
August, 16	155.88	123.88	108.15	122.71
Sept., 16	150.85	89.31	89.31	92.18
Oct., 16	155.88	142.46	131.95	146.38
Nov., 16	150.85	115.88	110.16	120.81
Dec., 16	155.88	114.26	109.39	118.56
Jan, 17	150.85	127.22	125.99	132.21
Feb., 17	140.80	112.77	110.30	116.90
March, 17	155.88	126.21	119.89	130.64

It is observed from the above table that the Scheduled Generation is lower or equal as compared to DC. Further, actual generation is higher than DC except in the month of July & August 2016. However, Declared Capacity, Actual generation and Scheduled generation was less than generation required for achieving NAPAF of 72%. From the above, it appears that petitioner would not have been in a position to draw full quantum of gas even if gas was available in full.

17. The Petitioner, vide affidavit dated 01/06/2016, has submitted the month wise break-up of Planned and Forced Outage for the period from July, 2016 to March, 2017. It could be observed from the table below that Forced Outages and Planned Outage for the period from July, 2016 to March, 2017 is within the margin available 28% (100% and NAPAF of 72%) as tabulated below:

Month	Forced Outages (%)	Planned Outages (%)	Total Outages (%)
July. 2016	1.61	10.23	11.84
Aug. 2016	0.35	16.16	16.51
Sept. 2016	0.95	00.00	0.95
Oct. 2016	2.24	00.00	2.24
Nov. 2016	1.69	2.94	4.63
Dec. 2016	0.78	2.39	3.17
Jan. 2017	0.83	10.86	11.69



Feb. 2017	1.97	00.00	1.97
March. 2017	0.08	00.00	0.08
Average	1.17	4.73	5.90

It is observed from the above data that the total outage including the forced outage has been in the range of 0.08% to 16.51% and average outage was 5.90%. In view of the above, it could be concluded that forced outage of the plant has not contributed in the less availability of plant achieved during July, 2016 to March, 2017.

18. The Petitioner, vide affidavit dated 24/07/2018, has furnished the Average calorific value of gas supplied by OIL during 9 months i.e. from July, 2016 to March, 2017 as given below.

Month	GCV of gas (Kcal/kWh) GCV basis	Calorific Value of supplied gas as per Agreement with Oil (kcal/kWh)
July, 16	9576	8000 (NCV basis) 8888 (Equivalent value on GCV basis)
August, 16	9244	
Sept., 16	9179	
Oct., 16	9529	
Nov., 16	9176	
Dec., 16	9101	
Jan., 16	9095	
Feb., 16	9060	
March, 16	9095	
Average	9228	

It is observed from the above table regarding Quality of gas (GCV of Gas in Kcal/kWh) for the period from July, 2016 to March, 2017 that the Quality of gas is higher compared to the calorific value of supplied gas as per Agreement with OIL. Hence the quality (calorific value) of the gas has not attributed to the low NPAF of the plant.



19. The Petitioner, vide affidavit dated 24/06/2018, has submitted the consumption of gas in GBS units compared to guaranteed consumption at site ambient condition as given below.

Month	Actual Gas consumed in SCM	Total Gas to be consumed in SCM as per designed /(Tender specification)
Jul,2016	1102741	1189037
Aug., 2016	950426	1175742
Sept., 2016	801699	1059885
Oct., 2016	1141514	1361240
Nov., 2016	1054338	1334650
Dec., 2016	1068266	1120662
Jan., 2017	1352257	1416320
Feb., 2017	844560	1132691
Mar., 2017	971641	1214994
TOTAL	9287442	11005222

20. It is observed from the above table regarding consumption of gas in GBS Units compared to design guaranteed consumption at site ambient condition for the period from July, 2016 to March, 2017 that the consumption of gas in GBS Units is lower compared to the design guaranteed consumption at site ambient condition. Therefore, the GBS has not consumed any extra gas and low NAPAF cannot be attributed to the inefficiency of the GBS Units.

21. The Petitioner, vide affidavit dated 21/09/2017, has submitted the month wise break-up of plant availability based on declared capacity due to inadequate fuel availability for the period from July, 2016 to March, 2017 as under:

Month	PAFM(%) based on Declared Capacity
July-16	68.68
August-16	58.69
Sept.-16	43.72
Oct.-16	67.49
Nov.-16	56.73



Dec.-16	54.13
Jan.-17	60.27
Feb.-17	59.15
March-17	59.79

22. Based on the above discussion, it is evident that low NAPAF during July, 2016 to March 2017 is not due to the any operational problems and could be attributed to shortage of gas supply by OIL.

23. The petitioner has submitted that though the FSA dated 24.6.2015 with OIL stipulates an agreed quantum of gas supply of 1.4 MMSCUMD, OIL has been unable to supply this quantum on regular basis for various reasons since July, 2016. It has been observed from the e-mail from OIL on 30.8.2016 to NEEPCO that due to instructions from the Ministry of Petroleum & Natural Gas (MoP & NG) vide its letter dated 17.08.2016, OIL had to ensure gas supply of 1.65 MMSCMD to M/s Brahmaputra Valley Fertilizer Corporation Limited (BVFCL) as priority sector by applying pro-rata cut on all non-priority customers till gas production normalises in OIL. Under this condition, OIL will be compelled to restrict gas supply to NEEPCO up to 0.70-0.80 MMSCMD. In the said e-mail, OIL had also stated that it would require around 8-12 months to revive the affected gas wells. The petitioner has also referred to the communication dated 1.9.2016 of OIL and has submitted that OIL had served notice of Force Majeure conditions in respect of disruption of gas supply. NEEPCO, vide their letter dated 02.09.2016, informed the Ministry of Power (MoP) regarding the short supply of gas to the tune of 1.1 -1.2 MMSCMD w.e.f 15.07.2016 and further reduction to 0.8 MMSCMD w.e.f 28.08.2016 and requested the MoP to take up the matter with MoP&NG to give priority to Assam GPS and



ensure minimum gas supply to the tune of 1.1 MMSCMD.. We have examined the FSA provisions regarding terms and conditions of gas supply which are as below:

“Artlice 6: Gas Supply Quantities

6.1.1 Subject to provision of this AGREEMENT, SELLER shall supply and deliver the quantity of 1.40 (One point Four zero) Million Standard Cubic Metres per day (MMSCMD) of GAS to the BUYER at the Delivery Point on an average over a period of each month of operation adjusted for Annual Shut Down & Force Mejeure.

Artlice 7: Minimum Guranteed Quantity:

7.1 Except in case of situations mentioned in Article 9.1 and Article 15, if only the BUYER is unable to withdraw the Minimum Guaranteed Quantity of gas i.e. (MGQ) BUYER in spite of the availability from SELLER’s end as per terms and conditions of this AGREEMENT, the BUYER shall pay to the SELLER for the Minimum Guaranteed Quantity (MGQ) BUYER. The (MGQ) BUYER for this purpose would be as follows;

$(MGQ) \text{ BUYER} = 'N1' \text{ days} \times DCQ \times 0.80$

Where, 'N1' = ['N'-'S1'-'F1'] days

Where, 'N' is the number of days in the month

'S1' is the number of agreed schedule shut down days where applicable for the BUYER; and

'F1' is the number of Force Majeure days claimed by BUYER where applicable

'DCQ' is the Daily Committed Quantity

The (MGQ) BUYER would operate on a Monthly basis.

7.2 Except in case of situations mentioned in Article 9.1 and Article 15, if only the SELLER is unable to supply the Minimum Guaranteed Quantity of Gas i.e. (MGQ) SELLER as per the terms and conditions of GSPA, in spite of having the withdrawal capacity of Minimum Guaranteed Quantity of GAS by the BUYER, the SELLER shall pay to the BUYER for the difference of Minimum Guaranteed Quantity (MGQ) SELLER and actual quantity supplied in that month.

The (MGQ) SELLER for this purpose would be as follows:

$(MGQ) \text{ SELLER} = 'N2' \text{ days} \times DCQ \times 0.80$

Where, 'N2' = ['N'-'S2'-'F2'] days

Where, 'N' is the number of days in the month

'S2' is the number of agreed schedule shut down days where applicable for the BUYER; and



'F2' is the number of Force Majeure days claimed by BUYER where applicable

'DCQ' is the Daily Committed Quantity

The (MGQ) SELLER would operate on a Monthly basis. "

24. It could be observed from the FSA, that the gas supplier M/s OIL is liable to pay compensation for short supply of gas under the conditions as quoted below :

" 7.2 Except in case of situations mentioned in Article 9.1 and Article 15, if only the SELLER is unable to supply the Minimum Guaranteed Quantity of Gas i.e. (MGQ) SELLER as per the terms and conditions of GSPA, in spite of having the withdrawal capacity of Minimum Guaranteed Quantity of GAS by the BUYER, the SELLER shall pay to the BUYER for the difference of Minimum Guaranteed Quantity (MGQ) SELLER and actual quantity supplied in that month. "

As per the provision under FSA, the payment of compensation by Seller to Buyer has been linked to Minimum Guaranteed Quantity (MGQ). The MGQ would be 80% of DCQ on a monthly basis i.e. 80% of 1.4 = 1.12 MCMD on a monthly basis. It is not understandable on what basis NEEPCO has agreed to Minimum Guaranteed Quantity of gas as 80 % of 1.4 MCMD when the minimum requirement of gas is 1.4 MCMD for declaration of Availability @ 72%. It is to be mentioned here that, the very basis on which NEEPCO sought relaxation in Availability Target from 80 % to 72% is on the basis of available gas of 1.4 MCMD. Therefore, when NEEPCO has signed FSA dated 24.06.2015 with M/s OIL, it was known to NEEPCO that gas supply anything less than 1.4 MCMD would make it difficult for NEEPCO to declare Availability up to 72%. NEEPCO could have insisted OIL to have a compensation mechanism based on which OIL will compensate NEEPCO or pay penalty if the gas supply falls below the Contracted Quantity of 1.4 MCMD instead of 80% of MCQ. Therefore, we find that there was an imprudent Commercial Agreement by NEEPCO in FSA so far as Compensation Mechanism is concerned. Further, it could be observed from Table



at Para 16 that out of 9 months from July, 2016 to March, 2017 5 months i.e. July, October 2016 and Jan., Feb , March, 2017 the supply of gas was more than 1.12 MCMD i.e. more than 80% of 1.4 MCMD. Therefore, OIL is not liable to pay any Compensation on short supply of gas in these 5 months as per the provision under Article 7.2 of FSA. Only 4 months, i.e. Aug, Sept, Nov. & Dec, 2016, the supply was less than 80% of MCQ and OIL is liable to pay compensation but OIL has invoked Force Majeure Clause under Article 15 of FSA.

25. The Commission, while relaxing the NAPAF norms in case of Assam GPS to 72% for the tariff period 2009-14 and 2014-19 had recognized the fact that with the committed gas supply of 1.4 MCMD by OIL, the maximum target availability that can be achieved is 72% and had also noted the fact that there was no alternative source from where the petitioner can arrange gas and under these circumstances the onus was on the Petitioner to ensure that Minimum Guaranteed Quantity of gas should be 1.4 MCMD. Having failed to do that there was always possibilities to less declaration of availability in case of short supply of gas anything less than 1.4 MCMD .

26. Respondent APDCL has submitted that to arrange adequate fuel supply is the sole responsibility of the Petitioner. It has submitted that the fuel supply is being governed by a separate bilateral Fuel Purchase Agreement (FPA) signed between the Petitioner and Oil India Limited (OIL) and beneficiaries are not a party to it.

27. The Commission In the Tariff Period 2009-14 and 2014-19 , has relaxed NAPAF to 72% from 80 % and 85% respectively for short supply of gas and accordingly risk



for short fall in gas supplies was passed on to the beneficiaries. Now, the question arises as to what extent such risk of short supply of gas should be allowed to be passed on to the beneficiaries. Should the entire business risk of the generator with regard to supply of gas be passed on to the beneficiaries? In this context we are of the view that the responsibility for arranging the gas for declaration up to 72% squarely lies on the generating company.

28. It is true that the beneficiaries have no control over the supply of gas. Accordingly, further relaxation of NAPAF due to short supply of gas by the gas supplier would load the beneficiaries extra burden of higher tariff.

29. Based on the above discussions, it is observed that the shortfall in Target Availability is not due to any operational problems and could only be attributed to inadequate gas supply by the gas supplier. We are of the view that risk of non-supply of gas upto the requirement of 1.4 MCMD may have to be borne by the petitioner. The generating company and the Gas supplier both are the Government Companies and they should settle the gas supply issues among themselves. Accordingly, we are not inclined to relax the target availability any further to the level of actual availability.

30. Petition No. 225/MP/2017 is disposed of in terms of the above.

sd/-
(Dr. M. K. Iyer)
Member

sd/-
(P. K. Pujari)
Chairperson

