



Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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E-mail: registrar@nepra.org.pk

No. NEPRA/TRF-211/HPGCL-2012/3005-3007
March 29, 2013

Subject: Decision of the Authority in the matter of Petition filed by Halmore Power Generation Company Ltd. (HPGCL) for Revision / Modification of the Generation Tariff

Dear Sir,

Enclosed please find herewith the Decision of the Authority (19 pages) in the matter of petition filed by Halmore Power Generation Company Ltd. for revision / modification of the generation tariff, for information.

Encl: As above

(Syed Safeer Hussain)

Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)**

PETITION NO: NEPRA/TRF-211/HPGCL-2012

**DECISION OF THE AUTHORITY
IN THE MATTER OF PETITION FILED BY
HALMORE POWER GENERATION COMPANY LIMITED (HPGCL)
FOR
REVISION / MODIFICATION OF THE GENERATION TARIFF**

ISLAMABAD

March 29, 2013



**DECISION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY
HALMORE POWER GENERATION COMPANY LIMITED (HPGCL) FOR REVISION /
MODIFICATION OF GENERATION TARIFF**

CASE NO. NEPRA/TRF-211/HPGCL-2012

PETITIONER

Halmore Power Generation Company Limited (HPGCL), Sheikhpura-Faisalabad Road, Bhikki,
District Sheikhpura

INTERVENER

Nil.

COMMENTATOR


Nil.

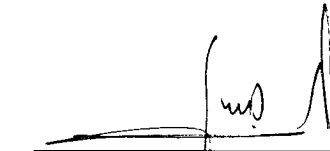
REPRESENTATION

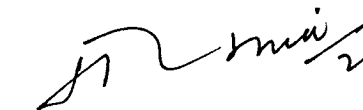
1. Mr. Haider & Mr. Shahid Saaud CFO & Senior Manager Finance as representatives of HPGCL
2. Representative of Power Purchaser




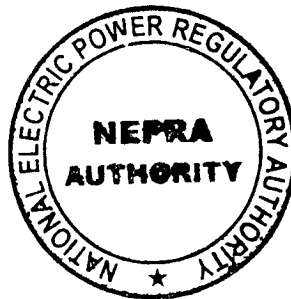
The Authority, in exercise of the powers conferred on it under Section 7(3) (a) read with Section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 and Rule 16 of Tariff Standards and Procedure Rules, 1998 and all other powers enabling it in this behalf, and after taking into consideration all the submissions made by the parties, issues raised, evidence/record produced during hearings, and all other relevant material, hereby issues this decision.

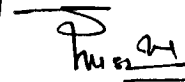

28/3/2013
(Habibullah Khilji)
Member


28.03.2013
(Khawaja Muhammad Naeem)
Member


29/3/13
(Major Rtd. Haroon Rashid)
Member


28.03.2013
(Shaukat Ali Kundi)
Vice Chairman




29.3.13



1 Halmore Power Generation Company Limited set up a 225 MW Power Project located at 16 KM Sheikhpura-Faisalabad Road, Bhikki, District Sheikhpura. The primary fuel of the power plant is gas while backup fuel is HSD. HPGCL achieved its Commercial Operation Date (COD) on 25th June 2011. The Company has been granted generation licence No. IGSP/L/07/2006 by NEPRA on 4th September 2006. In pursuance of Section 31 of the NEPRA Act read with Rule 3 of NEPRA (Tariff Standards and Procedure) Rules, 1998 (hereinafter referred to as, "Rules"), Halmore Power Generation Company Ltd. (HPGCL), vide letter dated 28th June 2012 submitted the subject petition which was withdrawn vide letter dated 9th July 2012. HPGCL again submitted the subject petition on 11th July 2012 (F/A) for revision/modification of the Generation Tariff Decision dated 26th December, 2007.

2 **Submissions of the Petitioner**

2.1 HPGCL stated that the Company's operations, its rights and obligations are governed by the Implementation Agreement (IA), Power Purchase Agreement (PPA), Gas Supply Agreement (GSA) and Fuel Supply Agreement (FSA). HPGCL stated that the aforementioned documents are structured and executed based upon the Guidelines of the Power Generation policy of the Government of Pakistan 2002. HPGCL also submitted that the tariff determination for the Company is also derived from the 2002 policy, NEPRA Act & Rules and such tariff determination also takes into account the provisions of the above mentioned agreements. According to HPGCL under the 2002 Policy Guidelines and with special reference to Guidelines for Tariff Determination, Section 1.4 (a) states;

"Tariff should be determined allowing reasonable Internal Rate of Returns (IRR) on equity investment"

2.2 Section 1.13 continues to say;

"As fuel cost is a pass-through, prices of different fuels e.g gas, oil, coal, etc., tend to distort the evaluation. Therefore, levelized tariff be evaluated on the basis of capacity purchase price, efficiency (taking into account fuel cost) and O&M costs."

2.3 Therefore, as Authority has already determined the IRR for the Company, any additional operations cost for the Company in current operation regime that is imposed by an external situation (relating to GOP) and is beyond Company's control and is not covered under the existing tariff determination for the Company is a pass through item and needs to be treated as such to ensure that Company's determined IRR is not diluted. According to HPGCL, the revised tariff petition is submitted on the basis of Amended Operating Regime as authorized by the Economic Coordination Committee (ECC) of GoP which requires changes in tariff component of energy. HPGCL has also enclosed a copy of PPIB letter no. 1(102)PPIB/11/PRJ dated July 15, 2011 which contained the aforementioned ECC Decision dated 30.06.2011 which is reproduced as under:





- i. *Firm gas allocation of 76 MMCFD to IPPs namely Saif, Sapphire, Orient and Halmore till 30th November 2011.*
- ii. *Cost differential on account of use of alternate fuel (HSD) by the four IPPs should be equally shared by the SNGPL and the Government; and*
- iii. **Modification of Tariff by NEPRA** allowing operation of gas based IPPs on backup fuel (HSD) with full cost recovery for whatever period gas was not made available to them."

2.4 HPGCL has requested the Authority for the following:

- i) Adjustment on HSD O&M variable component to make it 1.79 times the cost of O&M Gas component as against existing cost factor of 1.44 times (details are provided at page 12 of the tariff petition).
- ii) Conduct of HSD Heat rate test after each major maintenance.
- iii) Adjustment of specific gravity of HSD fuel to reflect the actual position during gas months.
- iv) Adjustment for item no. i and iii may be made effective from July 1, 2011.

3. Proceedings

3.1 In terms of rule 4 of the Tariff Rules, the Petition was considered by the Authority in its Regulatory Meeting # RM 12-447 dated 17th July 2012 (Minutes / decision of the meeting was circulated on 1st August 2012). The pleadings so available on record were examined by the Authority and in order to arrive at a just and informed decision, the Authority while admitting the petition also decided to conduct a hearing into the matter on September 11, 2012. In compliance of the provisions of rules 6 & 7 of the Rules, notice of admission and hearing along with the title and brief description of the petition was published on 18th August 2012 in the leading newspapers. Individual notices were also sent to the major stakeholders.

3.2 The issue wise discussion in the matter of instant petition is given in the following paragraphs;

4 Filing of Objections/ Comments:

Comments/replies and filing of intervention petition was desired by any interested/affected person/parties within 7 days of the publication. In response thereof, no intervention request or comments were received.

5 Hearing

The hearing was conducted on September 11, 2012 at NEPRA Headquarter, Islamabad. During the hearing, CFO, HPGCL along with its financial and technical team presented its case. Power Purchaser, representatives of Ministry of Water & Power and other stakeholders also participated in the hearing.





6 Comments filed by Ministry of Water & Power on the Subject matter

6.1 Ministry of Water & Power vide letter No. PI-Tariff/OSH/2012 (received on 20th December 2012) submitted the following:

- The heat rate of the IPPs should be determined at Commercial Operation Date (COD) and each year thereafter as per regulatory practice. Moreover the rights and obligations of the parties are governed in accordance with the PPA, duly approved by NEPRA.
- Adjustment of specific gravity of oil may only be considered by the NEPRA if the same allowance has been given to the other IPPs of similar technology.
- The aforesaid aspects are to be determined under and in accordance with NEPRA Act, Rules and Regulations.
- Since CPPA / NTDC is the power purchaser therefore its comments should be duly recorded and furthermore to protect the consumer interest, open hearing should be conducted.

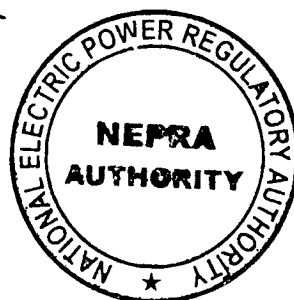
6.2 The comments of the Ministry of Water & Power have been addressed in the preceding paragraphs.

7 O&M Cost on HSD Operation

7.1 According to HPGCL, tariff determined by NEPRA for the Company for April-June Quarter is as follows:

Component on Gas	=	Rs. 0.3011/kWh
Component on HSD	=	Rs. 0.4345/kWh

7.2 HPGCL stated that HSD cost component is 1.44 times of the cost of the gas component while in reality and on actual basis the HSD component needs to be 1.79 times the cost component of gas. As per Section 5.3, the base price (un-indexed) of O&M variable component on Gas is US\$ 179.49 USD per FFH (Factored fired hours) per GT while the base price of O&M variable component on HSD (after 1450 actual hours) is US\$ 214.2 per FFH per GT which means that the base price of HSD component is 1.193 times the base price of gas component. HPGCL stated that as per Appendix G of the PPA, the agreement prescribes two different calculation methods of arriving at FFH on gas and HSD. Under the formula, whereas on gas the annual base load operating hours on gas fuel (referred to as G) are multiplied by a factor of 1 (one) only, in the case of HSD (referred to as D), these operating hours are multiplied by a factor of 1.5. This means that apart from the rate difference, there is a difference in the factors as well which lead to a much increased cost in the case of O&M variable cost component on HSD. As per HPGCL, the cost of the company on HSD is $1.193 \times 1.5 = 1.79$ times the cost of gas component as against the existing factor of 1.44 times allowed by NEPRA. Section 5.7 of the Implementation Agreement states;





"High Speed Diesel Cost Recovery after 30th June 2011

- (a) *If prior to June 30, 2011 (which date upon any extension(s) of the present Gas Allocation, as provided in (i) below, shall be deemed to be a date that is three hundred and sixty five (365) days prior to the end of such extended date the Gas Allocation for the firm delivery of Gas (as defined in the Gas Supply Agreement) during nine (9) Months of each Year will expire or shall materially reduce in duration within the following twelve (12) Months so that the Company will be able to continue to operate the Complex on Gas in a manner that will allow the Company to operate the Complex on Gas in a manner consistent with its Tariff Approval or (ii) the Power Purchase Agreement has not been modified or amended in a matter that will allow the Company to operate the Complex using high speed diesel beyond ninety (90) Days in a Year, consistent with the Tariff Approval (for high speed diesel), the GOP and the Company shall meet within (10) Business Days of the beginning of the Pre-Expiry Period and continue to meet at reasonable intervals until the Parties have agreed a mechanism reasonably acceptable to the Parties that will compensate the Company for the continued operation of the Complex.*
- (b) *One of the three (3) options under Section 5.7(a) providing for either an extension in the Gas Allocation or an amendment or modification in the Power Purchase Agreement or a mechanism which will compensate the Company for the continued operation of the Complex shall be agreed upon between the Company and the GOP prior to the end of the Pre-Expiry Period.*
- (c) *If by the date that is five (5) Business Days prior to the end of the Pre-Expiry Period, the Parties have not agreed on the mechanism which will compensate the Company for the continued operation of the Complex or the Gas Allocation has not been extended or the Power Purchase Agreement has not been modified or amended as provided for in Section 5.7(a), either Party may terminate this Agreement by giving thirty (30) days prior notice to the other Party. Upon termination of this Agreement following the delivery of such notice, the Power Purchase Agreement shall immediately terminate and the provisions of Section 14.5 and Section 14.6 and the Article XV shall apply."*

7.3 HPGCL stated that in the backdrop of Section 5.7 of the IA, various communications were exchanged between GOP and the IPPs. Eventually, a summary was moved to the ECC for a decision on this subject. The ECC gave its decision on June 30, 2011 which was communicated to the Company by PPIB through its letter no.1 (102) PPIB-1028/11/PR dated July 14, 2011. According to HPGCL, ECC decision means::





- Gas allocation to IPPs has been cut by half so that instead of 152 MMCFD, the IPPs will now get only 76 MMCFD and, as such, they will run partly on Gas and partly on HSD till November 30, 2011.
- ECC also decided to continue with the existing terms of the GSA wherein if the Gas Supplier was not able to provide even 76 MMCFD for any reason, then the cost of using HSD will be shared evenly between GOP and SNGPL.
- ECC also emphasized that this situation requires a modification of the Tariff from NEPRA and that the IPPs should be able to operate in HSD regime with full cost recovery beyond June 2011 for whatever indefinite period gas is not made available to the IPPs.

7.4 As per HPGCL, ECC upheld Section 5.7 of the IA which makes the same statement and emphasizes that IPPs be allowed full compensation to run under this regime beyond June 2011. In other words, current tariff structure where Complex is supposed to run on nine months on Gas and three months on HSD is being amended/changed so that Complex may run on HSD for unlimited periods when full Gas supply is not made available, Therefore, Tariff modification is required to ensure that Company recovers its full cost in this new regime.

7.5 As per Clause 5.3(b) of O&M contract

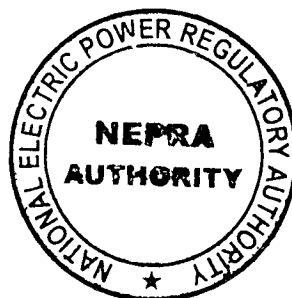
"One hour of operation on natural gas shall be treated as one Factored Fire Hour while one hour of operation on high speed diesel shall be treated as 1.5 Factored Fired Hours. The amount of US\$ 179.79 per FFH per GT up to 1450 actual hours of HSD operation per year per GT and US\$ 214.2 per FFH for all hours operated on HSD in excess of 1450 actual hours of HSD operation per year per GT. The first variable monthly fee following the Commercial Operation Date in respect of each gas turbine Covered Unit shall include all Factored Fired Hours incurred by such Covered Units prior to Commercial Operation Date. A Factored Fired Hours based payment shall be made in anticipation of certain maintenance events. It being understood that that the anticipated maintenance event may happen before or after the payment:

<i>Cumulative FFH Payment Trigger</i>	<i>Payment</i>	<i>Cumulative FFH Payment Trigger</i>	<i>Payment</i>
<i>Cover Unit 1</i>		<i>Covered Unit 2</i>	
<i>20,000</i>	<i>\$ 500,000</i>	<i>20,000</i>	<i>500,000</i>

7.6 HPGCL requested the Authority to adjust HSD O&M variable cost to 1.79 times the cost of gas O&M variable component.

7.7 Comments of the Power Purchaser

7.7.1 On the issue of revision of the O&M cost on HSD operation, the power purchaser raised oral objections during the course of hearing. The Authority directed the Power purchaser to





submit written objection to the Petitioner for response along with copy to NEPRA. The Power Purchaser in response thereof, vide letter No. COO (CPPA)/ Manager (Tech-V) / HPGCL/8151-52 dated 13th September 2012 submitted the following written comments:

- The project was envisaged to be operated on Gas fuel for 9 months and on HSD fuel for 03 months pursuant to Govt. of Pakistan Policy for Power generation projects year 2002. NEPRA determined the Tariff for the said project on 1st September 2006 in the case NEPRA/TRF-58/HPGCL-2006. Pursuant to Para-20 Variable O&M will cover:
 - a) Service fee of the O&M Operator on kWh basis for day to day management of the plant.
 - b) Replacement of spare parts on completion of service life of such parts as well as replacement of permanent failure of parts.
 - c) Cost of unscheduled maintenances which is separate from major overhaul.
 - d) Consumption of lubricants
 - e) Water Treatment
 - f) Chemicals

Pursuant to decision of the Authority in the matter of tariff determination dated 1st September 2006 with respect to HPGCL for Variable O&M component is as follows:

- a) VO&M Component on Gas = Rs. 0.1746 /kWh.
- b) VO&M Component on HSD = Rs. 0.2520 /kWh.

Annual amount to be paid by the power purchaser to the Company through VO&M with 92% plant availability and exchange rate of 1 US\$ = 60/-

- i) VO&M cost of gas operation (9 months) = US\$ 3.638 million
- ii) VO&M cost of HSD operation (3 month) = US\$ 1.75 million

Amount to be paid annually by the Power Purchaser to the Company for maintenance cycle as per PPA is US\$ 32.328 million.

- A) For extended operation on HSD (suppose 50% of time) the cost which the Company will recover

- i) VO&M cost of gas operation = US\$ 2.425 million
- ii) VO&M cost of HSD operation = US\$ 3.5 million

Amount to be paid annually by the power purchaser to the Company for maintenance cycle as per PPA is US\$ 35.55 million.

- B) For 100% HSD operation of plant with 92% of plant availability and exchange rate of 1 US\$ = 60/-





Annual amount of VO&M to be paid by the Power Purchaser to the Company is US\$ 7 million.

- Total VO&M payment to be made by the Power Purchaser to the Company for maintenance cycle as per PPA is = US \$ 42 Million.

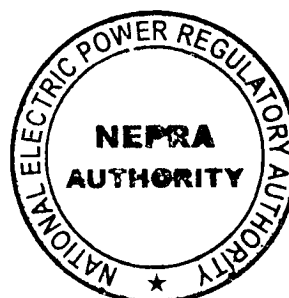
7.7.2 Keeping in view the above, NTDC / CPPA believes that any upward revision (i.e. Rs. 0.5390/kWh) as demanded by the Company is not justified as the Company is fully recovering its cost for VO&M through already awarded tariff.

7.8 The Petitioner's response w.r.t Comments of the Power Purchaser

7.8.1 The Petitioner in response to the objections raised by the Power Purchaser stated that brief background of the case needs to be clarified before responding to the comments of the Power Purchaser. According to the Petitioner:

- It is pointed out with great concern that NTDC has completely ignored reasons which necessitated the Company (HPGCL) to approach the Authority for a revision / modification in power tariff approved by the Authority on 26th December 2007. The tariff at that time was approved based on the assumption that the complex will run for 9 months (March to November) on gas and 3 months (December to February) on HSD> It was also assumed that the scheduled maintenance of plant will be carried out in one of the three non-gas months.
- The Implementation Agreement envisaged that Gas may not be available beyond June 2011 and, if this were to happen, the Implementation Agreement authorizes the parties to operate the Complex using High Speed Diesel beyond ninety (90) days in a year through a mechanism which will compensate the company for the continued operation of the Complex. (Authority may kindly read our petition pages under headings of "Basic Facts" and "Provisions of the Agreement");
- The Implementation Agreement and Power Purchase Agreement are the 2002 policy documents against which Authority determined Company's tariff. This means that the assumption is already built in that the Tariff would need to be changed for an operating regime where HSD will become the main fuel instead of a back up fuel. In fact, NPERA's own tariff determination for the Company states that it is based on 9 plus 3 months operating regime. Therefore, it is only the implementation of the 2002 policy;
- The ECC decision has simply reinforced this implementation process as given in the Implementation Agreement and directs "Modification of Tariff by NEPRA allowing operation of gas based IPPs on backup fuel (HSD), with full cost recovery, for whatever period gas was not made available to them".

7.8.2 The Petitioner further stated that the Power Purchaser does not have the background of the O&M Tariff allocated to the Company by the Authority; such Tariff was determined





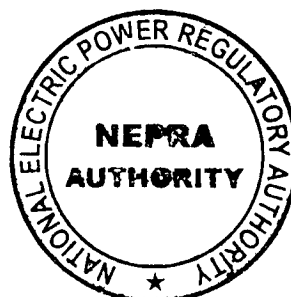
bilaterally between Company and the Authority. The assertions made by the Power Purchaser are misleading and contrary to the facts. The actual facts are as follows:

- The Authority is already aware that the relationship between O&M Revenue and O&M costs is to be on the basis of total revenue vs total costs. Such presentation was again given to the Authority at the time of True up of Tariff and Authority again acknowledged it. What this means is that;

REVENUE: O&M Variable + O&M Fixed Foreign + O&M Fixed local = Total O&M Revenue

COST : O&M Variable + O&M Fixed Foreign + O&M Fixed Local = Total O&M Cost

- The Comparison is therefore between the Total O&M Revenue and the Total O&M Cost. There may be a mismatch in individual components in a way that one component may have a slight positive variation while another component may have a negative variation. The reason for this is already known to the Authority as the tariff was determined before the finalization of the O&M Agreement. It can be demonstrated by comparing O&M cost and revenue that Company is already making some loss in the previous regime where 9 months were based on gas and 3 months were based on HSD. With the regime of 9 months on gas and 3 months on HSD, and based on revenue calculations by NTDC as stated in their letter, with a revenue of US\$ 32.328 million for one maintenance cycle, the company is making a loss of more than US\$ 6 million for one maintenance cycle.
- When the regime is changed and operations on HSD are done throughout the year, this loss increases substantially and company is looking to recover this increased cost caused by the change in regime. When it is determined that Company's total revenues in the O&M area are already negative as against such total costs (even if such loss is one dollar only), then it is a simple arithmetic and economics rule that any incremental cost not covered 100 percent by offsetting revenue, would further increase the losses. At the same time, it may be noted that Company's request for increase in HSD O&M Variable component would be applicable on the actual dispatch only i.e. if the Complex is run only 20% on HSD, only 20% of the HSD variable component would be applicable during the year in terms of absolute figures; similarly, if 40% dispatch is done, only 40% of the component would apply in a year for absolute value purposes. So while the number may look deceptive on paper, it would be lower in absolute terms depending on dispatch levels.
- With reference to above presentation about total costs and total revenue, we would also like to highlight that certain aspects and certain costs factors have been conveniently ignored by the Power Purchaser. For example; (a) negative variation in indexation (difference of what is paid to Company through tariff and what company has to pay to operator); (b) withholding tax on payments to Operator; (c) Import duties and clearance charges on spare parts which are also of substantial amounts; (d) certain bonuses



(indexed) to be paid to operator; (e) import of electricity; (f) out of scope items etc. There are many such other items which need to be accounted for and which are reflected in the Financial Model. Power Purchaser has not made any comparison between costs and revenues and yet conclusion has been drawn that tariff is sufficient and covers the full cost which is totally untrue as explained above. Power Purchaser has mentioned in points 1 A) and 1 B) the amounts to be paid annually to the Company by the Power Purchaser. However, what the Power Purchaser has ignored is the incremental cost of running HSD operations at 50% and 100%. On top of (a) the routine incremental costs including consumables spares and consumables lubricants etc, the overhauling costs (b) are doubled due to the fact that operations on HSD speeds up the major overhauling maintenance cycle from around 6 years to around 3.5 years. This also means that Combustion inspections, Hot Gas path inspections and other inspections are also more frequent. The Operator/Contractor recovers both of these costs through (i) the factor of 1.5 and (ii) through variation in prices between gas based operations and HSD based operations; the costs have been HPGCL it between a fixed factor of 1.5 and a variable price range to give incentive to the Company to run less on HSD. As was stated in the hearing in NEPRA on September 11, 2012, the revised factor of 1.79 needs to be somewhat fine tuned. As per O&M Agreement, same Gas rate of \$ 179.49 would apply to the first 1450 hours and then a rate of \$214.2 would apply to another 500 fired hours. After crossing these hours, the rate would be \$135.68 per FFH. This means;

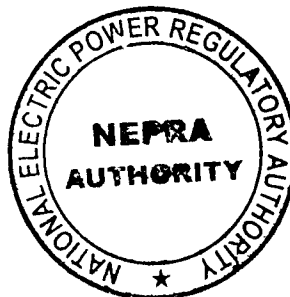
(a) 1450 hours at \$179.49; indexation factor	=	1*1.5	=	1.5	(16.55%)
(b) 7310 hours at \$214.2; indexation factor	=	1.19*1.5	=	1.79	(83.45%)

Therefore, on weighted average basis, the indexation factor is 1.74 (the factor of 1.79 may be discarded).

7.9 Decision of the Authority

7.9.1 The issue of variable O&M cost has been deliberated in detail at paras 94 to 95 of the original determination dated 1st September 2006. Considering the proposed variable O&M cost as reasonable was accepted as such. Similarly the Petitioner did not requested to revise the variable O&M in its revised petition filed on 13th September 2007 which was decided by the Authority on 8th November 2007. Subsequently the Petitioner filed review motion however did not agitate or request to review the O&M cost. The O&M contract is made by the Petitioner with GE on 27th April 2008.

7.9.2 In order to assess the reasonability of the petitioner's request for reviewing its variable O&M cost on HSD in-house exercise was carried out to analyze payment to O&M contractor as per the terms of the O&M contract and revenue receipt in accordance with the determined tariff for O&M component was carried out. The Petitioner's contention was examined in the light of the terms of O&M contract and provisions of Power Purchase Agreement (PPA). From the



examination of the terms of O&M contract it was revealed that the power producer will pay bonus in case there is improvement in the agreed efficiency as well as improvement in average net output. It may be noted that the power producer is required to pay bonus against the gains of efficiency improvement and average net output improvement. The Petitioner has shown the bonus as cost but it has not provided any corresponding gain on account of improvement on these two factors. It would not be out of place to refer the terms indicated at Appendix-E of O&M contract agreed between the Petitioner and the contractor (consortium between General Electric International, Inc. (GEII) and General Electric Energy Parts, Inc. (GEEPI)). The relevant terms are reproduced hereunder:

Output LD's / Bonus

Owner shall pay Contractor for each positive percentage of Average Net Output Improvement, rounded to the nearest ten-thousandth of a point, a bonus equal to US Dollars one hundredth fifty thousand (US\$ 150,000) up to a maximum cap of US Dollars two hundred fifty thousand (US\$ 450,000) for the facility per calendar year. Contractor shall owe Owner for each negative percentage point of Average Net Output Improvement, rounded to the nearest ten-thousandth of a point, a liquidated damage equal to US Dollars one hundred fifty thousand (US\$ 150,000) up to a maximum cap of US Dollars four hundred fifty thousand (US\$ 450,000) per Combined Cycle Power Island per calendar year.

If Owner, fails to make the applicable Covered Unit available for a Heat Rate Performance Test and Output Performance Test per its obligations in this degradation guarantee, the Net Heat Rate Gain and Net Output Gain shall be three (3) percent for the purpose of determining the Average Net Heat Rate Gain and Average Net Output Gain provided

The foregoing liquidated damages shall be in lieu of all actual damages and shall be Owner's sole remedy and Contractor's sole liability for failure to achieve positive Net Heat Rate Improvement and positive Net Output Improvement. The above liquidated damages are reflection of actual damages and are therefore not a penalty.

7.9.3 The Para 9.1 (b)(v) of the Article IX of the Power Purchase Agreement dated 28th April 2007 made between CPPA and the Power Producer provides as under:

"Notwithstanding anything to the contrary contained in this Agreement, should the Complex the Despatched up to the Declared Available Capacity or the Revised Available Capacity or the Adjusted Declared Available Capacity and the Net Electrical Output is more than the Despatched Net Electrical Output for that hour then in that case the Available Capacity for that hour shall be the capacity; in MW, as determined by the Net Electrical Output for such hour subject to a maximum upper limit of one hundred and one and a half percent (101.5%) of the Despatched Net Electrical Output."





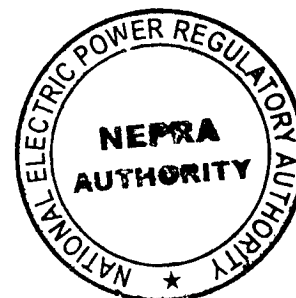
7.9.4 The actual generation on gas is 61% whereas on HSD is 27% from 1st July 2011 to 31st December 2012. In order to evaluate the Petitioner's request, O&M contracted amount of the Petitioner is compared with the O&M contracts made by the other IPPs based on the similar technology. For apple to apple comparison the amount was escalated in accordance with the adjustment formula given in the O&M contract. The Authority observed that the agreed amount in US\$ term is substantially on higher side as compared to the other IPPs. The Petitioner while entering into the O&M contract, did not exercise its prudence therefore the consumers' interest was not protected. In view thereof the Petitioner's contention in this regard does not hold valid grounds for reviewing its cost. Furthermore, the Petitioner has not provided complete relevant information / calculations indicating the impact of loss in revenue. The components of the tariff cannot be considered in isolation and outside the premise of the agreements between the power producer and O&M contractor and power producer and Power Purchaser. Another factor which is not considered in the calculations by the power producer was return on the advance payment received against milestone payment whereas the same has to be paid to the O&M contractor after completion of 20,000 FFH. The milestone payments will be paid after two years therefore opportunity cost / return on the monthly receipt to the power producers needs to be considered. This is a matter of record that the O&M tariff components were determined by the Authority as proposed by the petitioner. Since the contracted price agreed by the Petitioner is already on higher side as compared to the allowed tariff therefore any cost which is not prudently incurred cannot be passed on to the end-consumer. In view thereof the Authority decided not to entertain the subject issue.

8 Heat Rate Test after each Major Maintenance:

8.1 HPGCL stated that the HSD fuel component initially determined for all the four similar IPPs were discrepant. The Power Purchaser, GOP and the Company/ies agreed that a heat rate test would be conducted after the major maintenance (when the turbines would be brought back to the near brand new position). In this way, the heat rate benchmark would be reestablished again to allow a more true representation. The results of such heat rate test would become the benchmark for the HSD fuel cost component in the tariff till next major maintenance which has a cycle of around 5-6 years. HPGCL requested the Authority to allow HSD Heat rate test after each major maintenance.

8.2 Comments of the Power Purchaser

8.2.1 NEPRA determined Tariff for HPGCL dated 1st September 2006 on the basis of Plant efficiency on Gas as 51.2% (Heat Rate 6666 BTU / kWh) and in HSD as 48.5% (Heat Rate 7037 BTU / kWh). It may please be noted that there is no provision to conduct heat rate test at COD or during the operation regime of the plant neither in the PPA nor in the tariff determinations. Hence power purchaser believes that the demand of the Company is beyond the scope of the agreement.





8.2.2 It may please be noted that a heat rate degradation charge i.e. Annex-5, Schedule – 1 of the PPA was agreed between the Company and Power purchaser, the same chart may be adopted for HSD operation, since heat rate degradation is independent of the fuel used for operation of the plant. Power Purchaser provided the GE's degradation curve of heavy duty product line gas turbines (519HA745 and 519HA772) as reference. The power purchaser believes that the demand to conduct heat rate test after each major maintenance is out of the scope of the PPA.

8.3 The Petitioner's response w.r.t Comments of the Power Purchaser & NEPRA

8.3.1 The Power Purchaser has commented that there is no provision to conduct Heat Rate Test at COD or during the operation regime of the plant. We would like to again refer to Section 5.7 of the Implementation Agreement (IA) and the decision of the ECC. The Power Purchaser's statement is incorrect in the context of 5.7 of IA which states a mechanism for full recovery of costs to the Company and GOP, through ECC has gone on to recommend NEPRA to that effect.

8.3.2 A meeting was held on August 9, 2011 where Power Purchaser along with GOP participated to discuss the heat rate tests. The Power Purchaser himself agreed that Heat Rate Tests should be performed at every major overhauling. The Heat rate tests before November 2011 could not be performed as Power Purchaser deliberately kept stalling the exercise. Further to that, as time passed away and substantial degradation took place in the turbines, there was no purpose of conducting such tests anymore at that stage as no one would have been able to determine the original heat rate figure given the fact that actual degradation could very well vary against the degradation estimated on papers. Therefore, subsequently, this exercise was not carried out as it was also not acceptable to all the four IPPs and none of the IPPs would actually allow any test at this stage as it would not reflect the true position at all. However, the Heat Rate test after a major maintenance was agreed since the degradation is recovered during such overhauling and therefore it is possible to determine the original heat rate number of the Complex. Further, it is only just and fair that any error in the heat rate value is rectified so that the Power Purchaser only pays for the actual fuel costs; nothing more and nothing less.

8.3.3 Company also does not agree to the comments from Power Purchaser regarding heat rate degradation factors. Company is already using the heat rate degradation factors in Annexure 5 of the PPA which are based on the assumption of Gas efficiency of 51.2 %. However, If the degradation table is reworked by changing the base from Gas efficiency to HSD efficiency of 48.5%, the values will be different for the same degradation as plotted in the referred graph. However, in any case, this is beside the point since our objective is to determine the original value of the heat rate and nothing else.





8.4 The Petitioner was directed vide letter No. NEPRA/TRF-211/HPGCL-2012 dated November 7, 2012 to provide the relevant documentary evidence with respect to the efficiency established by the EPC contract at the time of Commercial Operation Date (COD). In response HPGCL vide letter dated 12th November, 2012 stated that:

- The Authority had concluded the hearing by stating that each company will receive a letter from Power Purchaser which will contain all the points to which Company may respond. Accordingly, we filed our reply on September 25, 2012 to all the points in NTDC letter. Company did not have the understanding that any data evidence other than this response was also to be filed.
- The heat rate test could not be performed at the time of COD on June 25, 2011 due to the following reasons:
 - Delay in COD;
 - Gas supply was only upto June 30, 2011
 - Power Purchaser was not willing for this costly test during gas months.
 - The Company was under a lot of pressure from GOP to start plant operations
- As was argued and explained earlier, any EPC values have no relevance to our request for a one time test after major maintenance. During the last hearing and also in response to NTDC letter, Company also stated that the Heat Rate test cannot be conducted now as it can only be performed on an almost brand new machine and that situation will only come immediately after the major maintenance which has a period of 6-7 years depending upon the dispatch given by NPCC.

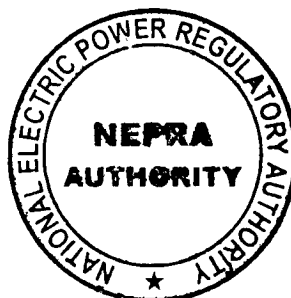
8.5 Decision of the Authority

8.5.1 The Petitioner's contention has been examined in the light of the determinations made by the Authority from time to time, O&M contract and PPA. In order to verify and validate the Petitioner's stance, the Authority during hearing dated 11th September 2012 directed the Petitioner to provide documentary evidence of the heat rates tests conducted by the EPC contractor at the time of Commercial Operation Date.

8.5.2 The Petitioner's submission, comments of the power purchaser and response of the Petitioner in response to Power Purchaser and NEPRA letter have been examined carefully. From going through the terms of O&M contract with respect to heat rate LDs/Bonus, it reveals that for determining the quantum of Bonus or LDs there must be some reference heat rate which O&M contractor has to ensure. The relevant terms of O&M contract are as under:

Heat Rate LD's / Bonus

Owner shall pay Contract for each positive percentage of Average Net Output Improvement, rounded to the nearest ten-thousandth of a point, a bonus equal to US Dollars one hundredth fifty thousand (US\$ 150,000) up to a maximum cap of US Dollars two hundred fifty thousand





(US\$ 450,000) for the facility per calendar year. Contractor shall owe Owner for each negative percentage point of Average Net Output Improvement, rounded to the nearest one-hundred fifty thousand (US\$ 150,000) up to a maximum cap of US Dollars four hundred fifty thousand (US\$ 450,000) per Combined Cycle Power Island per calendar year.

- 1.1.1 The Authority feels that the petitioner's stance with respect to heat rate rest on HSD fuel is not valid because the petitioner entered into an agreement with the O&M contractor to ensure the minimum efficiency benchmarks for determining LDs or bonus as the case may be on the basis of certain tests. The Authority noted that the power producer is required to pay bonus against the gains of efficiency improvement and average net output improvement. The reluctance in provision of the relevant documentary evidence by the petitioner indicates that the actual efficiency is higher than the efficiency allowed by the Authority. The components of the tariff cannot be considered in isolation and outside the premise of the agreements between the power producer and O&M contractor as well as power producer and Power Purchaser. Generation tariff is a package where loss in some components is compensated by surplus in the other tariff components. In view thereof, the tariff components cannot be considered in isolation. Since the Petitioner was unable to justify its claim with respect to heat rate test through documentary evidence, the Authority has therefore decided not to consider the Petitioner's request in the instant case.

9 Adjustment of Specific gravity of HSD

- 9.1 The petitioner submitted that specific gravity value of 0.84 at 15° C was incorporated in HSD Fuel Cost Component calculations. On the other hand, the actual average HSD supply on site is collected at much higher temperatures, i.e., approximately 25° C — resulting in the much lower specific gravity of less than 0.84. This translates to significant annual losses for the Company. The petitioner requested the Authority to allow adjustment in HSD fuel component on account of change in reference specific gravity value from 0.84 to 0.833, in accordance with the actual average ambient site temperature of 25° C.

9.2 Comments of the Power Purchaser

The Authority determined the tariff for the project on 1st September 2006 and HSD supply agreement was signed between the Company and Shell Pakistan on 29th April 2008 with specific gravity at 15° C (60° F) as per Schedule-I to the HSD Supply Agreement with Cost recovery for calorific value adjustment formulated in Schedule-6 of the HSD Supply Agreement. NTDC believes that the Company's demand for downward revision in specific gravity is not justified and its revision will extend undue benefit to the Company.

9.3 The Petitioner's response with respect to the comments of the Power Purchaser

HPGCL has entered into Fuel Supply Agreement (FSA) with PSO and not with Shell as wrongly mentioned by NTDC. Moreover there is no Schedule 6 in the Agreement and





hence no mechanism for adjustment in the fuel quantity based on variation in specific gravity at different temperatures and cost recovery for calorific value adjustment.

9.4 Decision of the Authority

9.4.1 The Authority in its decision in the 1st September 2006 calculated the energy charge part of tariff on the following assumptions:

The reference specific gravity and calorific value for the purpose of calculation of fuel cost component of Energy Charge in case of plant operation on HSD are as follows:

HSD Fuel price with GST (GCV)	Rs. 37.29 per litre
GST	15%
HSD Fuel price without GST (GCV)	Rs. 32.43 per litre
HHV-LHV Adjustment Factor	1.06
HSD Fuel price without GST (NCV)	Rs. 34.37 per litre
HSD Fuel price without GST	Rs. 954.27 per MMBTU*

- Calculated by using the following reference values:

Reference specific gravity @ 15 °C or 15.6 °C	0.84
Reference calorific value (Gross)	42,880 BTUs/Kg

HPGCL shall submit request for adjustment, along with supplier's certificate indicating flash point, specific gravity and calorific value duly verified by the power purchaser. The Power Purchaser shall make all necessary arrangements to satisfy itself regarding the authenticity and validity of the information provided by HPGCL. In case of any dispute or discrepancy the power purchaser shall seek third party verification. In this regard HDIP is nominated for the settlement of technical issues; and OGRA for price issues. HPGCL shall be allowed immediate adjustment by the Authority within 7 days of receipt of such request with requisite certificates and verifications.

9.4.2 In accordance with the decision of the Authority the fuel cost component of the energy charge part of the tariff of HPGCL is subject to adjustment on the basis of variation in HSD price, calorific value and specific gravity which must be supported with the supplier's certificate indicating flash point, specific gravity and calorific value duly verified by the power purchaser. The fuel cost component of the Petitioner is adjusted as per the reference values on the request of the Petitioner; however the Petitioner did not provide the authentic documentary evidence with respect to flash point, specific gravity and calorific value duly verified by the Power Purchaser through which the Petitioner's claim with respect to reviewing specific gravity could be substantiated. Since the Petitioner did not provide any documentary evidence in support of its claim despite of clear directions, the Authority has therefore decided to maintain its earlier decision in this regard.





10 Adjustment for Item No. 1 & 3 may be made effective from July 01, 2011.

- 10.1 The petitioner requested to make the revision of the relevant tariff components from 1st July 2011.
- 10.2 The Power purchaser stated that since the Company is not justified in its claim and its retrospective application is also out of scope of the Power Purchase Agreement (PPA).
- 11 In view of the issue-wise discussion made by the Authority in the preceding paragraphs; the Authority considers that the non-compliance of the information directions by the Petitioner is violation of the NEPRA Act and licensing terms and conditions. The Petitioner did not provide the information necessary to process the case. In view thereof the Authority has decided not to entertain the instant petition; accordingly the petition is hereby dismissed.

