

National Electric Power Regulatory Authority

Islamic Rebublic of Pakistan

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No NEPRA/TRF-208/SPL-2012/853-855

February 07, 2013.

Subject: Decision of the Authority in the matter of Petition filed by Saif Power Ltd. (SPL) for Revision / Modification of the Generation Tariff. (Case No. <u>NEPRA/TRF-208/SPL-2012)</u>

Dear Sır,

Enclosed please find herewith the Decision of the Authority (22 pages) in the matter of Petition filed by Saif Power Limited (SPL) for Revision / Modification of the Generation Tariff in Case No. NEPRA/TRF-208/SPL-2012, for information.

Enclosure: <u>As above</u>

(Syed Safeer Hussain)

Secretary Cabinet Division, Government of Pakistan Cabinet Secretariat Islamabad

CC

- 1. Secretary, Ministry of Water & Power, Islamabad
- 2. Secretary, Ministry of Finance, Islamabad.





NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

PETITION NO: NEPRA/TRF-208/SPL-2012

DECISION OF THE AUTHORITY

IN THE MATTER OF PETITION FILED BY

SAIF POWER LIMITED (SPL)

FOR

REVISION / MODIFICATION OF THE GENERATION TARIFF

ISLAMABAD

FEBRUARY 7, 2013



DECISION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY SAIF POWER LIMITED (SPL) FOR REVISION / MODIFICATION OF GENERATION TARIFF DATED 20TH JUNE 2011

CASE NO. NEPRA/TRF-208/SPL-2012

PETITIONER

Saif Power Limited (SPL), Kulsum Plaza, Blue Area, Islamabad

INTERVENER

Nil.

COMMENTATOR

Nil.

REPRESENTATION

- 1. Mr. Sohail Haideri, Chief Financial Officer
- 2. Representative of Power Purchaser



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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, 1997and 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.

(Major Rtd. Haroon Rashid) Vice Chairman

(Shaukat Ali Kundi)

Member

(Khawaja Muhammad Naeem)

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Member

(Habibullah Khilji) Chairman



- 1.1 Saif Power Ltd. (SPL) here in after referred as "the Petitioner", vide letter dated 2-7-2012 submitted the subject tariff petition under Section 31 of the NEPRA Act read with Rule 3 of NEPRA (Tariff Standards and Procedure) Rules, 1998 for revision/modification of the Generation Tariff determined vide Decision dated 20th June 2011 read with Corrigendum dated 23rd April 2011.
- 1.2 The Petitioner 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). According to the petitioner, the aforementioned documents are structured and executed based upon the Guidelines of Federal Government and the Power Generation policy of the Government of Pakistan 2002. The Petitioner also submitted that the tariff determination for the Company is issued in the light of the 2002 policy, NEPRA Act & Rules and such tariff determination also takes into account the provisions of the above core agreements. According to the Petitioner 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"

1.3 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."

- 1.4 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 the Petitioner, 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. The petitioner 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."

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- **1.5** The Petitioner has requested the Authority for the following:
 - i) Adjustment in O&M variable component on HSD operation to make it 2.215 times the cost of O&M Gas component as against existing cost factor of 1.44 times
 - 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. 1 and 3 may be made effective from 1st July 2011.

2. Proceedings

2.1 In terms of rule 4 of the Tariff Standards and Procedure Rules 1998 (hereinafter referred to as "Rules"), the Petition was considered and admitted by the Authority on 12th July 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 also decided to conduct a hearing into the matter on September 11, 2012. In terms 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. Filing of Objections/ Comments:

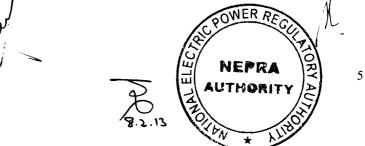
Comments/replies and filing of intervention petition was desired from any interested/affected person/parties within 7 days of the publication. In response thereof, no intervention request or comments were received before the hearing date.

4. Hearing

The hearing was conducted on September 11, 2012 at NEPRA Headquarter, Islamabad. During the hearing, CFO SPL, OPCL, HPGCL along with their financial and technical team presented their case. Power Purchaser, representatives of Ministry of Water & Power and other stakeholders also participated in the hearing. During the hearing the representatives of Ministry of Water & Power gave oral comments. The representative of Ministry of Water & Power was directed to submit written comments for consideration of the Authority.

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

- 5.1 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 operate date 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.



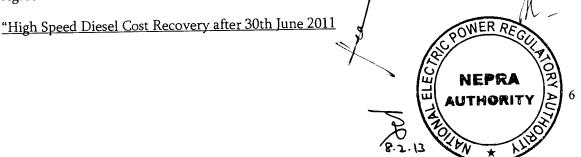
- Since CPPA / NTDC is the power purchaser; its comments should be duly recorded and furthermore to protect the consumer interest, open hearing should be conducted.
- **5.2** Based upon the pleading, comments of stakeholders and other relevant facts and circumstances of the case, following issues have been framed for discussion, consideration and decision of the Authority.
 - O&M Cost on HSD Operation
 - Heat Rate Test after each Major Maintenance
 - Adjustment of Specific gravity of HSD.
- **5.3** The issue wise discussion in the matter of instant petition is given in the following paragraphs;

6. <u>O&M Cost on HSD Operation</u>

6.1 According to the Petitioner existing Tariff determined by NEPRA for the Company at COD is as follows;

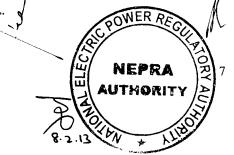
Component on Gas	=	Rs. 0.2650 / kWh
Component on HSD	=	Rs. 0.3825 / kWh

- The Petitioner contended that as per the determination, HSD cost component is 1.44 times 6.2 the cost of the Gas component while in reality and on actual basis the HSD component needs to be 2.215 times the cost component of Gas. In support of its argument, the Petitioner referred Section 5.3 and Appendix G of O&M Agreement, wherein the base price (unindexed) of O&M variable component on Gas for first 500 Factored Fired Hours (FFH) is US\$91.86 USD per GT while the base price of O&M variable component on HSD (after 1000 actual hours) is US\$135.68 per FFH per GT which means that the base price of HSD component is 1.477 times the base price of Gas component. The petitioner stated that the Agreement prescribes the 2 different calculation methods of arriving at FFH on Gas and on 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 one (1) 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. This means that the cost to the Company on HSD is 1.477 (as in 2 above) \times 1.5 = 2.2155 times the cost of Gas component as against the existing factor of 1.44 times allowed by NEPRA. Company, therefore, appeals to the Authority to adjust the HSD O&M Variable cost to 2.2155 times the cost of the Gas O&M variable component.
- 6.3 While justifying its request, the Petitioner referred the Section 5.7 of the Implementation Agreement which states that;





- If prior to June 30, 2011 (which date upon any extension(s) of the present Gas (a) 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) Month 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 manner 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."
- 6.4 The Petitioner 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 The Petitioner, 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 <u>full cost recovery</u> beyond June 2011 for whatever indefinite period gas is not made available to the IPPs.
- 6.5 As per the Petitioner, 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.

6.6 Comments of the Power Purchaser

- 6.6.1 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 15th June 2006 in case No. NEPRA/TRF-53/SPL-2006/5168-70. Pursuant to Para-81 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
 - The Authority while accepting the petitioner's request at para 83 of the determination states;

"...... The Authority considers that the amount indicated by the petitioner appears to be reasonable therefore accepted". Accordingly the following Variable O&M Component in the tariff determination dated 15th June 2006 with respect to Saif Power Limited (SPL) was determined:-

- a) VO&M Component on Gas = Rs. 0.2650 /kWh.
- b) VO&M Component on HSD = Rs. 0.3825 / kWh.

Amount to be paid annually by the Power Purchaser to the Company for maintenance cycle as per PPA is US\$ 35.530 million:





- A) For extended operation on HSD (suppose for 50% of time) the cost to be paid to the Company by the Power Purchaser is:
 - i) VO&M cost of gas operation = US\$ 2.668 million
 - ii) VO&M cost of HSD operation = US\$ 3.850 million

Amount to be paid annually by the Power Purchaser to the Company for maintenance cycle as per PPA is US\$ 39.108 million.

B) For 100% HSD operation of plant with 92% of plant availability and exchange rate of 1 US\$ = 84/ Annual amount of VO&M to be paid by the Power Purchaser to the Company is US\$

7.699 million.

- Total VO&M payment to be made by the Power Purchaser to the Company for maintenance cycle as per PPA is = US \$ 46.2 Million.
- 6.6.2 Keeping in view the above, NTDC / CPPA believes that any upward revision (i.e. Rs. 0.5869/kWh) as demanded by the Company is not justified as the Company is fully recovering its cost for VO&M through already awarded tariff.

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

- 6.7.1 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:
 - 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 and such tariff adjustment on the basis of above is well within the jurisdiction of the Authority;
 - 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".

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- 6.7.2 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 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. In a personal hearing of the Company called by the Authority at the True up stage, company had submitted a financial model of O&M costs and revenue wherein it was demonstrated that Company was already making some loss in the previous regime where 9 months were based on gas and 3 months were based on HSD. As per that model, Company's total revenues for 30 years were US\$ 442.3 million while Company's total costs for the same period were US \$480.07 million. This Financial Model shows only 20% utilization and dispatch on HSD. It is obvious that if the dispatch and utilization is 50% or more, this loss in the financial model would also increase.
- 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. For example, if Company is getting revenue of 1.44 a unit and is paying a unit of 2.2155, it is obvious that with every increase of dispatch over 20% (as stated in above paragraph), the absolute costs to the Company would further increase and the negative margin would further widen. 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 split 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 2.215 needs to be somewhat fine tuned. As per O&M Agreement, same Gas rate of \$91.86 would apply to the first 500 hours and then a rate of \$116.44 would apply to another 500 fired hours. After crossing these hours, the rate would be \$135.68 per FFH. This means;

(a) 500 hours at \$91.86; indexation factor	=	1 *1.5	=	1.5	(5.7%)
(b) 500 hours at \$116.44; indexation factor	=	1.26 * 1.5	==	1.89	(5.7%)
(c) 7760 hours at \$135.68; indexation factor	=	1.477 * 1.5	=	2.215	(88.6%)
Therefore on weighted even as having the induced	C .	0 1FF /	.1	c .	

6.7.3 Therefore, on weighted average basis, the indexation factor is 2.155 (the factor of 2.2155 may be discarded.

6.8 Decision of the Authority

6.8.1 The Authority has examined and considered the petitioner's submissions, comments of Ministry of Water and Power, CPPA and petitioner's response thereof in detail. The Authority has noted that the issue of variable O&M cost has been deliberated in detail at paras 81 to 85 of the original determination dated 15th June 2006. Considering the proposed variable O&M cost as reasonable was accepted as such. The decision in the matter of variable O&M cost was not objected by the petitioner in its motion for leave for review against the Authority's original determination. The issue has also been discussed in detail at Para 10.1 to 10.5 of the decision of the Authority in the matter of adjustment of the relevant tariff

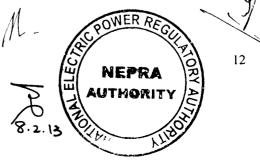
POWER sponents at the time of Commercial Operation Date (COD). According to the analysis





made at the Para 10.3 of the said decision, the Authority noted that "---- the petitioner will recover US\$ 263.127 million through determined Variable O&M component over 30 years as against the actual payment of US\$ 216.641 million on account of variable fee, milestone payments and bonus. It was further noted that SPL will recover through determined tariff US\$ 100.994 million and US\$ 78.410 million on account of fixed foreign and fixed local O&M respectively. While it will pay US\$ 184.301 million on this account. From the given calculations it is clear that over 30 years project term there will be about US\$ 41.58 million surplus. SPL however claimed that it will have to incur US\$ 79.134 million local expenses like head office expenses, plant consumables and duties". The Authority at Para 10.5 further held that "---SPL's contention has been considered in the light of O&M contract, previous submissions as reproduced above (para 10.4 of the decision) and calculations provided by SPL. It has been observed that SPL working of US\$ 79.134 million pertaining to head office expenses and plant consumables is contradictory to the above breakup (Para 10.4 of the decision) provided by SPL itself. The Authority considers that SPL's claim for head office expenses, consumables and initial spare parts is not legitimate as the same have already been allowed as part of O&M cost. SPL itself had stated that "...... amounts may slightly change internally from head to head while the overall figures remain the same." SPL's contention that it will incur additional cost of about US\$ 13.435 million over 30 years on account of custom duties on spare parts has been carefully examined. The Authority is of the considered opinion that the additional cost claimed on this account is also not justified because the tariff already given to SPL is sufficient to cover the additional cost on account of import duties on spare parts. In view thereof the Authority has decided to maintain its earlier decision in this respect.

- 6.8.2 In order to assess the reasonability of the petitioner's request for reviewing its variable O&M cost on HSD, in-house exercise on the basis of payment to O&M contractor as per the terms of the O&M contract and receipt in accordance with the determined tariff component (indexed till July 2011) was carried out. The working was also shared with the petitioner. According to the petitioner's calculations on the basis of 100% plant operation on HSD with 50% plant factor there is loss of US\$ 2.8 million on existing tariff indexed till 1st January 2011. As per the petitioner, it will have to pay withholding tax of US\$ 0.398 million, bonus of US\$ 0.338 million, electricity import charges of US\$ 0.575 million and import duties of US\$ 0.171 million.
- 6.8.3 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 Page –E-17 of the 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:

<u>Output LD's / Bonus</u>

Owner shall pay Contract for each positive percentage of Average Net Output Improvement, rounded to the nearest one-hundredth of a point, a bonus equal to US Dollars one hundredth fifty thousand (US\$ 150,000) up to a maximum cap of US Dollars for hundred fifty thousand (US\$ 450,000) per Combined Cycle Power Island 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.

If Owner, due to a reason attributable to it, fails to make the applicable Covered Unit available for a Heat Rate Performance Test and Output Performance Test per it's 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 however that this provision will not apply in case of none availability of applicable covered unit due to any reason beyond the Owner's control or a requirement from power purchaser the Power Purchase Agreement

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.

6.8.4 As per Para 9.1 (b)(v) of the Article IX of the Power Purchase Agreement made between the Petitioner and National Transmission(through Central Power Purchasing Agency) on behalf of Ex-WAPDA Distribution Companies and Dispatch Company on 30th April 2007:

"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."

6.8.5 It was observed that the petitioner has calculated withholding tax @ 15% on the 60% of the FFH and milestone payments whereas import duties have been calculated on the basis of actual imports for the period plus 7.5% of 80% of the off-shore milestone payment. The Petitioner however did not provide any supporting evidence as to know the exact breakup of fee and cost of spare parts for calculations of the aforementioned cost items. The Authority noted that the withholding tax is applicable to the fee for technical services (foreign). In view of the aforesaid reasons and making fair assessment of the O&M cost receipt and payments to





be made to the O&M contractor on the basis of Factored Fire Hours (FFH) by the power producer are considered as payment for fee for technical services and milestone payments as payment for spare parts etc. Accordingly the calculations of withholding tax and import duties were made to access the potential loss. The Authority also noted that the 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.

6.8.6 The Authority considers that O&M contractors fee depends upon achieving certain reference bench marks i.e. efficiency and net output. The bonus is paid only if the O&M contractor achieves better efficiency and net output. From the available record The Authority however could not find any such reference bench marks. In this regard The Authority during hearing directed the petitioner to provide relevant information which was not provided. In the absence thereof the Authority was constrained to make fair analysis to access the exact financial impact on account of petitioners operation on HSD. The Authority is of the opinion that 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. In order to assess that whether the existing tariff is sufficient to account for the full cost recovery of the Petitioner's plant operation on HSD, the relevant information was required to be provided by the Petitioner. The Petitioner did not comply with the directions of the Authority; therefore the Authority considers that Non-compliance of its directions with respect to provision of the information is violation of the NEPRA Licensing Rules and terms. In the absence of the such information, the Authority has decided not to entertain the instant request of the Petitioner and decided to decline the relief prayed for under this head.

7. <u>Heat Rate Test after each Major Maintenance:</u>

The Petitioner 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. The petitioner requested to allow HSD Heat rate test after each major maintenance.

7.1 Comments of the Power Purchaser

NEPRA determined Tariff for Saif Power Ltd. (SPL) dated 15^{th} June 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), on the analogy of Orient Power Company being same plant and same reference conditions, as per Para 77 & 79 of the said determination.

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 Power Purchase Agreement nor in the Tariff





determinations. Hence we believe that the demand of the Company is beyond the scope of the Agreement.

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

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.

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. However, it now appears that Power Purchaser has second thoughts on this issue and it has changed its position.

Besides above, 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, it is relevant to mention here that Company has not requested for any change in the degradation factors.

In response to NEPRA's letter No. NEPRA/TRF-208/SPL-2012/9928 dated November 7, 2012, the petitioner 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 inderstanding that any data evidence other than this response was also to be filed;





- Anyway, we hereby would like to inform you that Company's Heat Rate Test was only performed on Gas at the time of COD in April 2010. Since this was a Gas period and there was a huge pressure from GOP to start plant operations, the HSD fuel execution was waived at that time and "Take Over" from EPC Contractor was accepted. Company itself later verified the figures of the Heat Rate upon the start of HSD operations.
- As was argued and explained earlier, any EPC values have no relevance to our request for a one time test after major maintenance. We had already put up our case to the Authority in 2006- 2007 and to other relevant parties that Heat Rate on HSD determined for the Company in 2006 on brand new machine was based on incorrect values. 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. At the moment, we are only in the middle of the 3rd year. The Heat Rate Test after the Major maintenance will determine what the original Heat Rate on HSD should actually be and, in today's changed circumstances (which is the subject of our petition) where HSD operations are on continuous basis, the significance of this future test is huge for the Company. It is possible that by the time the major maintenance has arrived, the gas position in the country may have changed. For example, LNG may be in place and plants may be running 100% throughout the year on Gas; Iran gas pipeline may have been executed and likewise there may not be any need for HSD operations. So, Company's petition is only asking for a principal approval to have a HR Test done after major maintenance just in case the HSD operations are to be continued even after the first major maintenance.

7.3 Decision of the Authority

7.3.1 The Petitioner's contention has been examined in light of the Authority earlier determinations given from time to time, O&M contract and PPA, 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. In response to Authority's directions the Petitioner stated that:

"Company's Heat Rate Test was only performed on Gas at the time of COD in April 2010. Since this was a Gas period and there was a huge pressure from GOP to start plant operations, the HSD fuel execution was waived at that time and "Take Over" from EPC Contractor was accepted. Company itself later verified the figures of the Heat Rate upon the start of HSD operations.

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7.3.2 The Petitioner's submission, comments of the power purchaser and response of the petitioner have been examined carefully. The Petitioner has itself admitted that the heat rates were carried out on both fuels i.e. gas and HSD. The Authority feels that the petitioners stands 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 reluctance in provision of the relevant documentary evidence by the petitioner indicates that the actual efficiency established at the time of heat rate test is higher than the efficiency allowed by the Authority. The relevant terms of O&M contract indicated at Page –E-17, Appendix –E are as under:

Heat Rate LD's / Bonus

Owner shall pay Contractor for each positive percentage point of Average Net Heat Rate Improvement, rounded to the nearest one-hundredth of a point, a bonus equal to US Dollars one hundred thousands (US\$ 100,000) up to a maximum cap of US Dollars three hundred thousand (US\$ 300,000) per Combined Cycle Power Island per calendar year. Contractor shall owe Owner for each negative percentage point of Average Net Heat Rate Improvement, rounded to the nearest one-hundredth of a point, a liquidated damage equal to US Dollar one hundred thousand (US\$ 100,000) up to a maximum cap of US Dollars three hundred thousand (US\$ 300,000) per Combined Cycle Power Island per calendar year.

7.3.3 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 did not comply with the Authority's direction for provision of documentary evidence with respect to the efficiency established at the time of COD therefore, the Authority decided not to consider the Petitioner's request in this regard.

8. Adjustment of Specific gravity of HSD

8.1 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.

8.2 Comments of the Power Purchaser

The Authority determined the tariff for the project on 15th June 2006 and HSD supply agreement was signed between the Company and Shell Pakistan on dated 3rd March 2007 with specific gravity of 0.87 kg/litre 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.

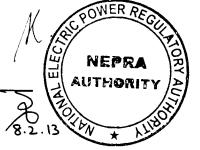
8.3 The Petitioner's response with respect to the comments of the Power Purchaser

The Agreement signed between Company and Shell Pakistan states under the head of General Specifications that MAXIMUM Density at 60. F could be 0.87 at any given time but it does not mean that actual Density would be the same or is to be taken at or is to be converted at 0.87 nor is such adjustment stated or envisaged in the FSA. From the very start of the Company's operations till this date, the density has never exceeded 0.84. The Hydrocarbon Institute which regulates such standards in Pakistan has determined that based on actual data the fuel density at 15 degrees centigrade is 0.84. Authority has used the same standard to allow tariff to the Company. If the density were to actually exceed 0.84, the Oil producing and distribution Companies would incur such huge losses in their fuel inventory that they would stop selling the product to the IPPs. During the last one year, Company has submitted random laboratory reports of Hydro Carbon Institute to the Authority which demonstrate that Density of the product has not gone beyond 0.84 and is in fact less than 0.84 on most of the occasions (the same reports are hereby attached for Authority's reference under Annexure 2). What the Authority needs to note from these result is that while the Density is coming below 0.84 i.e 0.83 or similar values, yet, Company has to apply a fixed density figure of 0.84 throughout the year in its calculation of fuel component thus incurring losses on the financial side.

Further to above, nowhere in the FSA, it is stated that there would be any adjustment of Specific gravity. It is also being confirmed through this letter that no adjustment of specific gravity has taken place with Shell under the FSA. Company is not claiming adjustment of Calorific Value but is seeking density adjustment at mean site conditions of 25 degrees.

8.4 Decision of the Authority

8.4.1 The Authority having gone through the record and is of the opinion that the Power Purchaser has raised very pertinent objection with respect to specific gravity agreed by the petitioner with the fuel supplier in its fuel supply agreement. The Authority in its decision in the matter for motion for leave for review dated August 3, 2006 have discussed in detail the issue of specific gravity for calculation of HSD fuel cost component. In this regard Para 6, 7, 8 and 9 may be referred; relevant paragraphs of the Authority's decision are reproduced as under:



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The Authority based its calculations of fuel cost component for HSD on the reference values of specific gravity and calorific value given in the Pakistan Energy Year Book 2005. The numbers indicated in the Pakistan Energy Year Book published by HDIP were considered authentic and reliable. Saif Power submitted test report to HDIP seeking its opinion in the matter. In response to Saif's query HDIP vide letter No. HDIP/LAB-1/2006 has confirmed as follows:

Gross Calorific Value	(GCV)	19,400 Btu / lb
Net Calorific Value	(NCV)	18,267 Btu / Ib
Specific gravity at 15 '	°C or 15.6° C	0.84

According to HDIP the conversion of Gross to Net Calorific Value has been made according to the following formula:

4,309 + 0.7195 x GCV

According to HDIP the reference calorific value appearing in the Energy Year-Book was established from the tests carried out in HDIP's laboratory at a flash point of 65 °C. The Authority has been further informed the calorific value of HSD is dependent upon the flash point and any variation in flash point would change the calorific value. This is also confirmed from the test report attached by the Petitioner.

According to the test report two samples were tested at flash point of 58°C and 56 °C; the resultant average gross calorific value BTU per Lb was 19,425 BTU. Based upon the evidence presented by the Petitioner the adjustment in the reference values is accepted. Accordingly 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 being revised as follows:

HSD Fuel price with GST (GCV)	Rs. 37.29 per litre				
GST	15%				
HSD Fuel price without GST (GCV)	<i>Rs. 32.43 per litre</i>				
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 1	15.6°C 0.84				
Reference calorific value (Gross)	42,880 BTUs/Kg				

The Authority considers that any variation in aforementioned variables which are beyond Petitioner's control has an impact on fuel cost for which an adjustment mechanism is required. The Authority has therefore decided to provide a mechanism of adjustment in HSD fuel component. SPL shall submit request for adjustment duly supported with the 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 SPL. In case of any dispute or discrepancy the power purchaser shall seek third party verification. In this regard



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HDIP is nominated for the settlement of technical issues; and OGRA for price issues. SPL shall be allowed immediate adjustment by the Authority within 7 days of receipt of such request with requisite certificates and verifications.

- 8.4.2 In accordance with the decision of the Authority the fuel cost component of the energy charge part of the tariff of the Petitioner 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 test reports attached with the petitioner's response do not fulfill the prerequisites as laid down by the Authority in its determination referred above.
- 8.4.3 The Authority has also examined the test reports submitted by the petitioner. The Authority considers that the test reports were not carried out in accordance with the laid down procedure. This was also observed by the Authority when in January 2011 the petitioner filed a request for adjustment of HSD price variation on 12th January 2011 vide letters No. NEPRA/11/001 & 002. While reviewing the Petitioner's request a substantial difference in the calorific value was noted. In order to verify the tested calorific value one NEPRA Officer visited Hydrocarbon Development Institute of Pakistan (HDIP) office on 13th January 2011. During his visit of HDIP, the officer observed as follows;
 - two samples No. 308 & 309 were received from the petitioner on 5th January, 2011;
 - the tested calorific value of sample number 309 was 18,980 Btus /lb whereas for sample number 308 it was 18,405 Btus / lb;
 - The petitioner did not inform about the tested calorific value of 18,980 Btus / lb;
 - The difference between the two tests calorific value, gravity and LHV HHV factor had an financial impact of 0.3296/kWh that translated into Rs. 30 to 45 million (60% to 90% plant factor) per month depending upon the operation of the plant;
 - The quality of samples delivered by the petitioner were not according to the testing procedures and the samples were delivered without the seal of Shell Pakistan (Pvt.) Ltd, the fuel supplier;
 - The petitioner always requested only to test calorific value or gravity without having a complete test report required as per specifications and procedures of the fuel indicated in schedules 1 and 2 of the fuel supply agreement.
- 8.4.4 The perusal of the record indicates that the petitioner vide letter no. SPL/HDIP/11/0001 dated March 04, 2011 addressed to DG/Chief Executive, HDIP Islamabad sought clarification with respect to different test results having different gross CV (within the range of 18450 to 19070 BTU/lb. It was also pointed out in the same letter that the issue was discussed with the HSD supplier, who told that the Gross Calorific Value of the samples tested by them in HDIP Karachi were coming out higher and the gross CV (Btu/lb) of none of the results was under 19,000 Btu/lb. The Petitioner in the letter further states that to eliminate this difference & confusion two samples from the same truck were jointly collected by the company and the supplier; one was sent to Karachi and the other to **v**





Islamabad. It was noted that the results of both the samples were entirely different. According to HDIP Karachi CV (Gross/Net) was 19430/18290 BTU/lb whereas it was 18,975/17,960 BTU/lb as per HDIP Islamabad. The petitioner sought clarification for difference in the test reports from HDIP Islamabad. In response thereof, HDIP Islamabad stated that they had thoroughly investigated the matter and it was concluded that CV of HSD reported by HDIP Karachi operations is correct. Subsequent to the clarification by HDIP Islamabad, the petitioner reviewed its claim of adjustment of CV and vide its letter No. NEPRA/11/015 dated 19th April 2011 requested to revise its fuel cost component for the month of December 2010 from Rs. 14.5289/kWh to Rs. 14.0117/kWh. Accordingly the Authority vide its decision dated June 2011 adopted the tested CV of 19,430 Btus/lb (42,891.73 Btu/kg) and revised the fuel cost component from Rs. 14.5289/kWh to Rs. 14.0079/kWh.

8.4.5 It could not be out of place to reproduce the relevant extract of the fuel supply agreement which are as under:

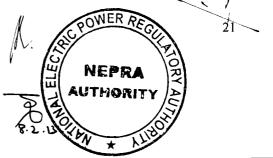
Calorific Value as per HSD Supply Agreement

Shell Pakistan Limited and Saif Power Limited entered into an HSD Supply Agreement (herein after "the Agreement) on 17th September 2007. As per HSD specifications in Schedule-1 of the Agreement, the calorific value will be between 18,800 Btus/lb. to 19,500 Btus/lb. with the condition that the minimum CV of HSD supplied be no less than 18,000 Btu/lb. and if the specs of crude oil supplied to local refineries changes such that the calorific value supplied to all OMC's drops below the stated calorific value range (between 18,800 Btus/lb. to 19,500 Btus/lb.), then the parties shall amend the range to reflect the same.

Adjustments for Calorific Value

Section 8.5 of the Agreement provides the procedure for adjustments due to variation in CV. The Section 8.5 states as "promptly after the end of each month during the term of this Agreement, the Company shall compare the actual calorific value of all deliveries of HSD to the complex during such month on a weighted average basis with the expected calorific value for HSD deliveries to the complex as set forth in Schedule-1., Part A. If the actual weighted average calorific value is greater or less than the expected calorific value of HSD deliveries to the complex, the Company shall calculate an adjustment to the amounts paid by the Company to the HSD supplier with respect to such HSD (with respect to each month, the "BTU Adjustment") in accordance with the formulas set forth in Schedule 6, an the Company shall notify the HSD Supplier of the Btu Adjustment within thirty (30) days after the end of the month to which such Btu Adjustment relates. If the Btu Adjustment results in an amount owing from the HSD Suppler to the Company, such amount shall be credited against the Company's obligation to make advance payment for HSD. If the Btu Adjustment results in an amount owing from the Company to the HSD Supplier the Company shall pay such amount to the HSD Supplier within fifteen (15) days after delivery to the HSD Supplier of the Btu Adjustment notice."

8.4.6 In view of the discussion in the preceding paragraph the Petitioner in support of its instant petition has attached the test reports of HDIP Islamabad which are not carried out according





to the specifications and procedures given at Annex-I & II of HDIP report regarding CV and specific gravity, therefore cannot be considered as authentic and reliable document. Furthermore, the reports are neither verified by the Power Purchaser nor by the fuel supplier in accordance with the Authority's decision dated 3rd August 2006. In view thereof the Authority finds no justification to review its earlier decision with respect to specific gravity.

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

- **9.1** The petitioner requested to make the revision of the relevant tariff components from 1st July 2011.
- **9.2** 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).
- 10. 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 submitted 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.

