



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

2nd Floor, OPF Building, G-5/2, Islamabad

Ph: 9206500, 9207200, Fax: 9210215

E-mail: registrar@nepra.org.pk

Registrar

No.NEPRA/TRF-125/SECL-2009/8457-59

September 21, 2011

Subject: **Decision of the Authority in the Matter of Adjustments in Generation Tariff of Sapphire Electric Company Limited at Commercial Operation Date (COD) [Case # NEPRA/TRF-125/SECL-2009] - Intimation of Decision of Tariff Adjustment pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997)**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I & II (42 pages) including an Additional Note of Vice Chairman/Member NEPRA and Dissenting Notes of two Members in Case No. NEPRA/TRF-125/SECL-2009.

2. The decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997) and Rule 16(11) of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998.

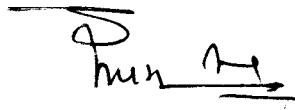
3. Please note that Order of the Authority at para 11 of the Decision relating to the reference tariff, adjustments, indexation and terms & conditions along with Annex-I & II needs to be notified in the official Gazette.

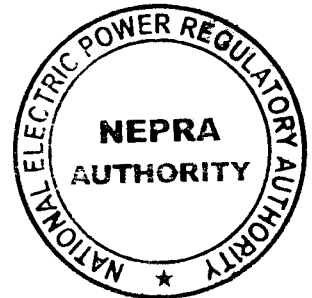
Enclosure: As above

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

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.


(Syed Safeer Hussain)



**DECISION OF THE AUTHORITY IN THE MATTER OF ADJUSTMENTS IN
GENERATION TARIFF OF SAPPHIRE ELECTRIC COMPANY LIMITED
AT COMMERCIAL OPERATIONS DATE
CASE NO. NEPRA/TRF-125/SECL-2009**

1. Introduction

- 1.1 Pursuant to the Authority's determination dated June 15, 2006 and subsequent determinations/reviews decisions dated August 03, 2006, August 10, 2006, November 22, 2007 and September 16, 2009 reference tariff components of Sapphire Electric Company Limited (hereinafter "SECL") were required to be adjusted at Commercial Operations Date (hereinafter "COD").
- 1.2 Through a letter dated December 29, 2010, received on December 31, 2010, SECL submitted that it commenced Commercial Operations on October 04, 2010; the day as per the certification by Independent Engineer. Together with its request, SECL also submitted copies of original invoices and relevant documents in support thereof.
- 1.3 In order to adjust the reference tariff components on the basis of actual expenditure, revised KIBOR, US CPI, WPI, exchange rate and initial dependable capacity at COD the following methodology was adopted:
- i) Verification of the information provided by SECL with the original determination;
 - ii) Verification of the source documents i.e. invoices, general ledgers, copies of the pay orders, taxes & custom duty challans etc;
 - iii) Clarification and additional information sought for processing of the case;
 - iv) Verification through independent sources i.e. financial statements, bank statements etc.; and
 - v) Physical verification through visit to the generating facility.

2. Adjustment on account of Net Capacity at COD

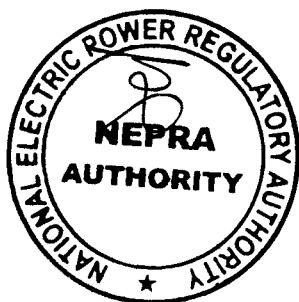
- 2.1 According to the Authority's determination dated 16th September, 2009 the reference tariff was determined on the basis of minimum net capacity of 209 MW at delivery point at mean site conditions; and all the tariff components including the fuel cost component were required to be adjusted at COD based upon the Initial Dependable Capacity (IDC) Test to be carried out for determination of contracted capacity. Subsequent to the IDC test as certified by the Independent Engineer, the net capacity at COD has been established as 212.107 MW. Based on the IDC Test established at COD, the reference tariff has been accordingly adjusted.



3. One Time Adjustments for Project Cost

3.1 Engineering Procurement and Construction (EPC) Cost

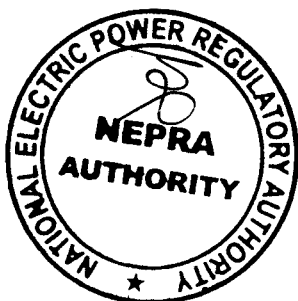
- 3.1.1 SECL claimed US\$ 193.668 million (Rs. 14,042.783 million) on account of EPC cost, as against the determined US\$ 158.850 million at para 19 of the determination dated September 16, 2009. According to SECL, the cost overrun of US\$ 34.818 million occurred mainly due to the bankruptcy of EPC contractor M/s. SKODA.
- 3.1.2 Earlier in the year 2009, SECL filed a petition i.e. Case No. NEPRA/TRF-124/SECL-2009 in this regard which was considered and decided by the Authority on 16 September 2009. In the said petition the petitioner failed to substantiate its case.
- 3.1.3 While justifying its instant request for increase in EPC cost, SECL argued that subsequent to the contractor's bankruptcy, the actual work completed varied significantly from the reports prepared by the EPC contractor. According to SECL, designs for some of the operating units were still pending at that time while, on the procurement side key deliveries for some of the essential operating units had not been made. In addition, many of the sub-contractors had demobilized works and SECL had to incur additional mobilization costs. In those circumstances, SECL had no choice but to complete the work with alternate means by engaging subcontractors. The sub-contractors agreed to complete the works, only if SECL agreed to pay them amounts due and owing to the subcontractors by the EPC contractor resulting in significant cost escalation. In support of its claim, SECL submitted various documentary evidences such as the EPC contract with the main EPC Contractor and assignments of contracts to subcontractors after the bankruptcy of SKODA, novation of existing agreements with some sub-contractors, variation orders, IPCs, EPC invoices, bank statements indicating payments of invoices to contractors/sub-contractors etc.
- 3.1.4 After having considered SECL's arguments, the Authority is of the view that certain business risks invariably exist and it is the sponsor's responsibility to protect itself against such risks and adopt necessary measures to mitigate these risks through mutually agreed contracts. The Authority also observed that SECL was reasonably compensated from the EPC Contractor for not fulfilling contractual obligations which ultimately caused delay in achieving the required commercial operations date (hereinafter "RCOD") as per the terms of Power Purchase Agreement (hereinafter "PPA").
- 3.1.5 The Authority has also observed that SECL has failed to establish that allowing/adjustment of increase in EPC cost was within the scope of tariff adjustments at the COD stage. While making adjustments at the COD stage, the Authority's scope is limited to remaining within the boundaries set by it in the original tariff determinations/review decision. The Authority therefore is of the view that increase in EPC cost is not subject to adjustment at COD stage.



- 3.1.6 In view of the above and in light of the Authority's determinations/decision, only adjustment for PKR/US\$ exchange rate variation is applicable in the instant case. Accordingly, on the basis of available information and record the weighted average exchange rate of Rs. 72.51/US\$ has been established. On the basis thereof in the instant case, the allowed EPC cost of US\$ 158.85 million works out to Rs. 11,517.501 million.

3.2 Interest During Construction (IDC)

- 3.2.1 SECL claimed IDC of Rs. 3,642.720 million (US\$ 44.744 million) against the determined amount of Rs. 933.420 million (US\$ 15.557 million). In order to substantiate its claim, SECL submitted the copies of common term agreements with lenders, general ledgers, copies of bank statements to authenticate the actual draw downs of debt, bank advices evidencing the amount of interest charged by the lenders, data of KIBOR rates, etc. The documents submitted by SECL were duly verified in detail along with the source documents.
- 3.2.2 It was observed that SECL also claimed substantial amount of IDC pertaining to the construction period beyond RCOD. In support of its claim SECL vide its letter no. SECL/NEPRA/1043 dated December 29, 2010 stated that the project faced extraordinary circumstances during its construction phase, which threatened the continuation of the project. SECL highlighted the following events which impacted the total project cost, including IDC, adversely:
- Deteriorating law and order situation
 - Damage to the heat recovery steam generator half modules
 - Bankruptcy of the EPC contractor
 - Gas turbine rotor damage incident
- 3.2.3 SECL contended that the tariff determinations allowed adjustment of IDC on actual basis at COD. Legal counsel for SECL, M/s. Hassan & Hassan pleaded that SECL is entitled to adjustment of reference capacity price on account of actual variation in IDC on the basis of the principle of Promissory Estoppel and the doctrine of Legitimate Expectation as SECL and its stakeholders relied on the right to receive the IDC at actual. SECL counsel further submitted that in the event of conflict, PPA provisions would always be subject to the overriding regulatory framework of the Authority. SECL submitted that the Authority should distinguish between licensees such as SECL, on the one hand, and others where time lines for project completion were submitted in the tariff petitions and were considered by the Authority.
- 3.2.4 SECL argued that had it not taken the risk of completing the EPC contractor's job itself, its IDC would have been even higher than the IDC now incurred. The EPC contract was awarded after due diligence. The bankruptcy of the EPC contractor was an extraordinary event which could not have been foreseen or controlled by the SECL. If the Authority does not allow cost overruns resulting from the extraordinary circumstances faced by SECL, then the performance capability of



the project will suffer and its IRR will be reduced to mere 7%. Inclusion of the risk associated to default of the EPC contractor in sponsors' IRR will be discriminatory. The project cost per MW being claimed by SECL even after the abnormal circumstances faced by it is lower than many other comparable IPPs. Further, SECL's overall tariff and capacity tariff are amongst the lowest.

3.2.5 SECL requested the Authority to consider the provisions of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (hereinafter "NEPRA Act"), Guidelines For Determination Of Tariff For Independent Power Producers, objectives of the Policy For Power Generation Projects 2002 and the provisions of the National Electric Power Regulatory Authority (Tariff Standards & Procedure) Rules, 1998 (hereinafter "Tariff Rules") before arriving at any decision.

3.2.6 The Authority having considered SECL's above arguments is of the opinion that;

3.2.6.1 In terms of section 7 (3) of the NEPRA Act, determination of tariff is one of the statutory functions of the Authority. Tariff is determined after an exhaustive process envisaged in the Tariff Rules, which includes the filing of a tariff petition, its admission, soliciting the opinion of key stakeholders by the Authority, participation of public in the tariff setting process by means of public hearing, consideration of the comments and interventions, if any, filed by the various stakeholders, etc.

3.2.6.2 In contrast to the thorough process involved for tariff determinations, the scope of tariff adjustments at the COD stage is limited to remaining within the boundaries set in the original tariff determinations/review decisions. COD adjustments normally involve allowing indexations on account of inflation, exchange rates variations, KIBOR/LIBOR rates variations and fuel price variations. Further, since the exact quantum and timing of some of the costs are not known at the time of tariff determinations (e.g. insurance, financing cost, debt and equity injections) therefore these are adjusted while allowing tariff adjustments at the COD stage, on the basis of actual data within the parameters determined by the Authority. Due to the limited scope in deciding tariff adjustments at the COD stage, it does not involve participation of the stakeholders; therefore fundamental changes in tariffs are not allowed through COD adjustments.

3.2.6.3 The Authority has consistently been limiting maximum construction period on the basis of PPA executed between the power purchaser and the respective IPP. Any deviation from this established principle, without giving an opportunity to the stakeholders of being heard, is contrary to the principle of natural justice. For deciding this material issue in a transparent manner, public hearing and comments of the stakeholders are absolutely necessary. It is also relevant to mention over here that the PPIB and power purchaser have in all the previous instances, opposed the requests of IPPs for condoning delays in attaining their COD by the Authority.



- 3.2.6.4 It is also relevant over here to consider the decision of the Authority in the identical case of Orient Power Company Limited (herein after referred to as "Orient"), who had the same EPC contractor as SECL i.e. M/s. SKODA. The Authority in its recent decision dated April 13, 2011, in the matter of adjustments in generation tariff of Orient at COD stage, decided that its construction period be fixed in accordance with the terms of its PPA. Orient faced problems after the bankruptcy of its EPC contractor, and was forced to carry out the balance work of EPC contractor with alternate means. This situation was exactly like the situation faced by SECL.
- 3.2.7 In view of the aforesaid decision in an identical case, and giving consideration to the fact that no new or important matter of evidence has been produced by SECL, changing the principle position taken in the case of Orient, viz. limiting maximum construction period in accordance with the terms of the PPA and "that it is neither justified nor fair to pass on costs of such risks to the consumers", is not justified.
- 3.2.8 In the Authority's opinion essence of the provisions of the NEPRA Act and Tariff Rules will be negated if claimed construction period is permitted while allowing tariff adjustments at the COD stage. Any inconsistency on a material issue, defeats the whole purpose of providing a regulatory framework i.e. to provide transparency and consistency to the tariff setting process.
- 3.2.9 It is a matter of record that the phrasing of tariff orders (being the effective part of tariff determinations, which are notified in the official Gazette) regarding IDC in case of other IPPs was comparable to the phrasing of tariff orders of SECL.

Relevant portions of orders of the Authority in some instances are reproduced below:

Atlas Power Limited

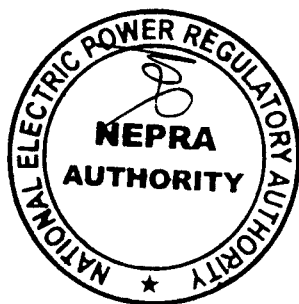
"IV. Adjustment Based on Actual Interest During Construction

Debt service, return on equity and ROE during construction shall be adjusted on account of actual variation in drawdown and interest during construction with reference to the estimated figures."

Nishat Power Limited

"IV. Adjustment Based on Actual Interest During Construction

Debt service, return on equity and ROE & ROEDC during construction shall be adjusted on account of actual variation in drawdown and interest during construction with reference to the estimated figures."



Saif Power Limited

"Debt Service, Return on Equity (ROE) and Return on Equity during Construction (ROEDC) shall be adjusted at COD as per actual based upon the authentic documentary evidence to be provided by SPL on account of following variations;

.....

v) *Interest During Construction;*

....."

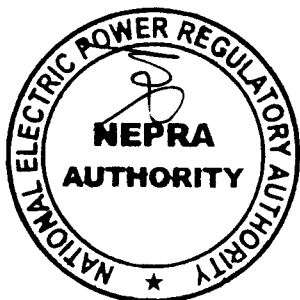
3.2.10 The Authority has, in allowing tariff adjustments, at the COD stage in all the previous instances, including the above quoted cases, limited maximum construction period in accordance with the terms of the respective PPA. Further, it is pertinent to consider that Saif Power Limited and Orient, both were allowed construction period in accordance with the terms of their PPA; although they were not fast track projects and their tariff determinations did not specify timelines for project completion.

3.2.11 It is an established principle that the adjustment of IDC on "actual" basis is considered in the context of specific parameters of the power sector. The intention of the Authority while mentioning that IDC is subject to adjustment on actual, implies that factors like variation in KIBOR rates, quantum and timing of draw downs which are not known at the time of tariff determination will be adjusted on the basis of actual at COD within certain parameters. It does not imply that actual construction period without any limitation will be allowed to the IPP. It is also relevant to mention over here that the principle of limiting maximum construction period according to the provisions of PPA has generally not been questioned by any of the stakeholders, on the ground of phrasing of their tariff determinations.

3.2.12 When a licensee executes any documents/instruments pursuant to the issuance of license or after the determination of tariff these documents/instruments also form part of the regulatory frame work. These documents/instruments cannot be ignored by the Authority and due respect and consideration is and should be given to them by the Authority.

National Electric Power Regulatory Authority Licensing (Generation) Rules 2000 define applicable documents as:

"applicable documents means the Act, the NEPRA rules and regulations, any documents or instruments issued or determinations made by the Authority under any of the foregoing or pursuant to the exercise of its powers under the Act, the grid code, the applicable distribution code, if any, or the documents or instruments made by the licensee pursuant to its generation license, in each case of a binding nature applicable to the licensee or, where applicable, to its affiliates and to which the licensee or any of its affiliates may be subject."



- 3.2.13 Accordingly PPA is an applicable document and its provisions are supposed to be adhered to by the licensees and need to be considered by the Authority. Further, the tariff determinations of SECL specified the following as terms and conditions of tariff:

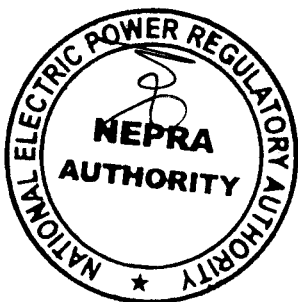
"General assumptions of SECL which are not covered in this determination may be dealt with in the PPA according to its standard terms."

The PPA of SECL defines RCOD as:

"The date that is twenty eight (28) months following the date on which financial closing occurs, as such date may be extended pursuant to section 6.5 or section 8.1 (b) or by reason of a Force Majeure Event."

In view of the applicability of PPA, RCOD worked out in accordance with its provisions, which has not been covered by the SECL's determination, is required to be followed.

- 3.2.14 The arguments of SECL regarding extraordinary circumstances faced by it, due to bankruptcy of its EPC contractor, are as good as the arguments of some other IPPs justifying their own delays in achieving their RCOD. The Authority is cognizant of the fact that IPPs are pleading that the circumstances that led to delays on their part in achieving their RCOD uniformly apply to all the IPPs sanctioned under the Policy for Power Generation Projects 2002. If for arguments sake, it is considered that the costs incurred by SECL during its actual construction period were prudent on the ground that avoiding bankruptcy of the foreign EPC contractor was beyond the reasonable control of SECL; then on the same yardstick, delays faced by other IPPs due to law and order situation in Pakistan, etc. (which are undeniable facts) were also beyond their reasonable control and on this principle they also emerge as prudent. However, the Authority cannot condone delays in achieving COD, unless the RCOD is extended by the signatories of the PPA in terms of the agreement.
- 3.2.15 With respect to the principle of Promissory Estoppel and the doctrine of Legitimate Expectation, in addition to the arguments detailed in the preceding paragraphs, IDC of US \$ 14.358 million was calculated in the original tariff determination of SECL, and revised later on to US \$ 15.557 million in tariff determination dated November 22, 2007, on the basis of construction period of 27 months, the same basis as provided by SECL. SECL could not have expected to receive IDC beyond that period of 27 months, or to the maximum of 28 months after its financial close as stipulated in its PPA.
- 3.2.16 The Authority has considered SECL's argument with respect to assurance of allowing reasonable return and it considers that tariffs do not allow risk free returns to the investors. Rule 17 (3) (ii) of the tariff rules which is relevant in this case reads as follows:



"..... a rate of return on the capital investment of each licensee commensurate to that earned by other investments of comparable risk."

The IRR based 15% return on equity with indexation of US\$/PKR parity allowed by the Authority to thermal IPPs, takes into account the risk factor. This 15% IRR based return is being allowed in addition to the guarantees provided by the GOP. Further, this return is also tax free. Effectively this means that 15% tax free return in US \$ terms is being provided on equity. It is also worth mentioning here that risk free investments in US dollars terms historically do not fetch returns even equivalent to half of the IRR being allowed to the thermal IPPs.

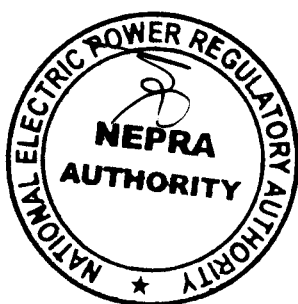
If as a result of business risk, the project investors face some losses, these losses cannot be considered prudent costs and passed on to the consumers, as this will tantamount to passing on the cost of risk to the consumers twice. The Authority considers the internal rate of return to be allowed while determining tariffs and not at the time of making COD adjustments. While determining tariffs, factors like raw materials to be used, project cost, tariff, technology and equipment are considered in detail by the Authority.

The Authority does not consider and adjust the IRR earned on equity investment at the COD stage or at any later stage on the basis of actual costs incurred, timings of receipts/payments, etc. In fact the actual IRR earned by the IPPs seldom equates 15% allowed by the Authority in the tariff determinations, as 15% IRR is based on predefined parameters whereas actual results rarely match those parameters. For the projects already in operation, the actual IRR in many cases are reported to be higher, due to various efficiencies, cost saving measures, more effective and professional project management by their sponsors.

SECL's contention that it will earn internal rate of return of 7% on its investment in equity could not be substantiated in the absence of submission of the computations and underlying assumptions by SECL. However, it is relevant to consider that despite losses faced by SECL, it is still earning positive return on the equity injected. Earning lower return on equity will not shut down the project, if the project sponsors and lenders take adequate corrective measures.

3.2.17 It is also pertinent to mention over here that gas supply agreement of SECL has expired on 30 June, 2011. As a result SECL will be required to generate a part of its electricity on High Speed Diesel. Based on High Speed Diesel it will have one of the most expensive tariffs amongst the IPPs till alternative gas/LNG arrangements are made.

3.2.18 Section 7 (6) of the NEPRA Act requires that the Authority shall, as far as practicable, protect the interests of the consumers and companies providing electric power services. Furthermore, objectives of the Power Policy 2002 also envisage that all the stakeholders are looked after in the process i.e. a win-win situation for all. It will be prejudicial to the interest of the consumers that



business losses, as claimed by the investors, are passed on to them without even giving them an opportunity of being heard.

3.2.19 The Authority in its capacity as a regulator of the power sector cannot allow timeless construction periods. The Authority is also not expected to pass on the costs of delays and burden of losses or inefficiencies of the investors to the consumers. Further, the Authority needs to be consistent and transparent in its decisions and should not discriminate between different power producers.

3.2.20 In view of the arguments detailed above, the Authority is of the opinion that there are no grounds in the case of SECL, justifying deviation from the already established principle of determining maximum construction period according to the provisions of PPA.

3.2.21 The Authority has also observed that net IDC up to RCOD of Rs. 2,017.066 million (US\$ 25.715 million) has increased against the determined amount of Rs. 933.420 million (US \$ 15.557 million) due to the following main reasons:

- In the determination construction period of 27 months was used for calculation of IDC, however, on the basis of stipulations of the PPA construction period works out to 28 months. Therefore the construction period has increased by one month as compared to the construction period used for calculation of IDC in the determination.
- Amount of debt has increased due to increase in the project cost allowed mainly on account of exchange rate variation.
- Actual KIBOR rates, during the allowed construction period were substantially higher (9.59% p.a. to 15.52% p.a.) as compared to KIBOR rate of 9% p.a. considered as a reference in the determination.

3.2.22 SECL's audited financial statements also reveal interest income up to RCOD of Rs. 6.384 million. After deducting this interest income, the IDC works out to be Rs. 2,017.066 million (US\$ 25.715 million). The Authority has therefore decided to allow the IDC of Rs. 2,017.066 million (US\$ 25.715 million).

3.3 CUSTOM DUTIES

3.3.1 SECL claimed Rs. 485.861 million as duties and other charges/taxes related to import of plant and equipment, which when converted into US\$ based on actual PKR/US\$ parity work out as US\$ 6.172 million against US\$ 6.943 million allowed in the determination. In support of its claim, SECL submitted copies of goods declarations of Pakistan Customs, payment challans of these duties, copies of pay orders of different banks through which these duties were paid, copies of bills of entries, EPC import invoices, etc. Based on evaluation of the information, it has been concluded that all the claims against custom duties, Cess, Sindh excise duties, etc. pertain to SECL and are verifiable. Therefore, the Authority has decided to allow Rs. 485.861 million.



3.4 Financing Fee and Charges

- 3.4.1 SECL claimed Rs. 227.828 million (US\$ 3.233 million) duly supported with the documentary evidences against Rs. 175.620 (US\$ 2.92) million as determined by the Authority in its determination on account of financing fee and charges.
- 3.4.2 As per the determination, Financing fee and charges were subject to actual with the maximum threshold of 1.2% of loan amount, unlike other IPPs wherein the Authority generally allows 3% capping of overall financing fee and other financial charges.
- 3.4.3 As per the assessed project cost, the loan amount works out to be Rs. 11,485.325 million. The claimed amount of financing fee works out to be 1.98% of assessed loan, which is within the threshold of 3% as allowed by the Authority to other IPPs. Therefore based on actual expense restricted up to the benchmark rate of 3% of loan, the Authority has decided to allow Rs. 227.828 million (US\$ 3.233 million) to SECL.

3.5 Withholding Tax

- 3.5.1 SECL claimed US\$ 2.457 million (Rs.205.459 million) on account of withholding tax against the allowed US\$ 1.806 million in the determination. SECL in support of its claim provided complete detail of withholding tax related to EPC payments along with the copies of statements of withholding tax filed with FBR. Since withholding tax is pass-through item; therefore is being allowed as such.

3.6 Insurance During Construction

- 3.6.1 The information provided by SECL indicates that its actual Insurance during Construction was Rs.195.549 million, which in terms of percentage works out as 1.70% of Rs.11,517.501 million EPC cost. The Authority in its decisions with respect to other new IPPs established a maximum ceiling of 1.35% of EPC cost on account of insurance during construction. For consistency purposes, therefore similar approach is being adopted for adjusting Insurance during Construction of SECL. Accordingly, the Insurance Cost during Construction @1.35% of the EPC cost of Rs.11,517.501 million works out as Rs 155.486 million.

3.7 Non EPC Cost

- 3.7.1 In the COD adjustment request, SECL sought an increase in Non-EPC cost on the ground that it has a direct relationship with EPC cost. In addition thereof, SECL further requested to allow the following costs, which were not allowed previously by the Authority in the determinations;
- Cost of working capital other than fuel stock
 - Cost of DSRA SBLC in financing fee and charges
 - Cost of Initial/Emergency Spare Parts



- 3.7.2 SECL's request being outside the scope of COD adjustment and inconsistent with the other similar/comparable project is not accepted.

4. Overall Project Cost

- 4.1 SECL claimed a total project cost of US\$ 244.898 million (PKR 18,077.810 million) against the determined project cost of US\$ 202.797 million (PKR 12,167.820 million).
- 4.2 Based on the adjustments made in the preceding paragraphs SECL's overall project cost has been assessed as PKR 15,725.438 million (US\$ 212.967 million) as against the claim of Rs 18,077.810 million (US\$ 244.898 million).

5. Debt Equity Ratio / Financing Structure

- 5.1 SECL requested to allow debt equity ratio as per the original determination i.e. 75:25. However, after restricting the equity up to actual draw downs amounting to Rs.4,240.113 million (US\$ 58.904 million), the debt/equity ratio works out as 72.34:27.66.

6. Adjustment on account of Return on Equity (ROE)

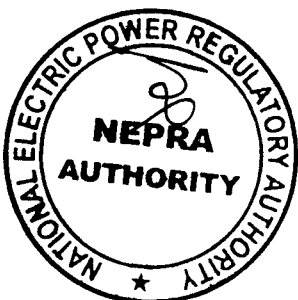
- 6.1 SECL has claimed ROE component of Rs 0.4314/KW/h up to actual COD against the determined ROE component of Rs 0.2492/kW/h which was subject to adjustment at COD.
- 6.2 Based on equity amount of US\$ 58.904 million as per actual draw downs duly verifiable from the documentary evidence, annual ROE @ 15% based on net capacity of 212.107 MW has been revised as Rs 0.3964/kW/h against the determined ROE component of Rs. 0.2492 /kW/h.

7. Adjustment on account of Return on Equity During Construction (ROEDC)

- 7.1 SECL has claimed ROEDC component of Rs 0.1541/kW/h up to actual COD against the determined ROEDC component of Rs 0.0228/kW/h on assumed equity injections which were subject to adjustment as per the actual equity injections at COD.
- 7.2 In view of the considerations discussed in Para 3.2 for IDC the Authority has restricted the construction period for the computation of ROEDC up to RCOD, which is also consistent with previous decisions of the Authority for the computation of ROEDC.
- 7.3 Based on the total construction period of 28 months as per PPA and keeping in view the relevant dates of equity injections and the ROEDC in the instant case has been revised as Rs 0.0759/kW/h against the determined ROEDC component of Rs. 0.0228/kW/h.

8. Insurance Component (Insurance subsequent to COD)

- 8.1 SECL claimed Rs. 0.1007/kW/h against the determined component of insurance during the operations amounting to Rs.0.0703/kW/h. SECL in support thereof



provided the documentary evidence, such as Insurance Policies, Insurance Invoices and acknowledgements of payment of insurance premiums amounting to Rs.162.781 million which is within the limit of 1.35% of EPC cost. Accordingly the reference tariff component determined by the Authority has been revised as Rs. 0.0876/kW/h at COD.

9. Working Capital Component

9.1 SECL based on KIBOR + 2% requested working capital component of Rs. 0.0469/kW/h for gas based operation and Rs. 0.1023/kW/h for HSD based operation against the determined component of Rs 0.0384 /kW/h and Rs 0.0745/ kW/h respectively.

9.2 Based on the information provided by SECL the reference tariff component as determined in the determination September 16, 2009 is being revised as Rs. 0.0449/kW/h for 9 months (for summer season on the basis of 7 days inventory) and 0.0961/kW/h for 3-months (for winter season on the basis of 15 days inventory) on the basis of following parameters:

- HSD Price (LHV) 77.36 / Liter
- Net Capacity 212.107 MW
- KIBOR 12.60% + 2% Margin
- Sales Tax 17%

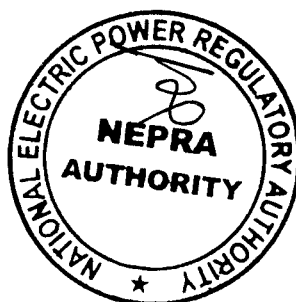
10. Debt Servicing Component

10.1 SECL requested Rs 1.4958/kW/h as debt service component against the determined debt service component of Rs. 1.7943/kW/h

10.2 Based on the assessed project cost of Rs. 15,725.438 million (US\$ 212.967 million), Rs. 4,240.113 million is financed through equity while the remaining amount of Rs.11,485.324 million through debt. Based on the debt of Rs. 11,485.324 million, net capacity of 212.107 MW and 3 months KIBOR of 12.60%+3% p.a. margin, debt service component in the instant case works out as Rs.1.2307/kW/h as against the claim of Rs.1.4958/kW/h.

11. ORDER

Pursuant to Rule 16(11) of the NEPRA Tariff Standards & Procedure Rules, 1998, Sapphire Electric Company Limited (SECL) is allowed to charge, on the basis of revised net dependable capacity established on the basis of test jointly carried out by the Central Power Purchasing Agency (CPPA) of the National Transmission and Despatch Company Limited (NTDC) and SECL at the time of Commercial Operations Date (COD), the following tariff for delivery of electricity:



REFERENCE TARIFF

Tariff Components	Year 1 to 10	Year 11 to 30	Indexation
Capacity Charge (PKR/kW/h)			
Fixed O&M - Foreign	0.0965	0.0965	US\$/PKR & US CPI
- Local	0.0529	0.0529	WPI
Insurance	0.0876	0.0876	US\$/PKR
Cost of working capital – Gas	0.0449	0.0449	KIBOR
- HSD	0.0961	0.0961	KIBOR
Debt service	1.2307	-	KIBOR
Return on equity	0.3964	0.3964	US\$/PKR
Return on equity during Construction	0.0759	0.0759	US\$/PKR
Total Capacity Charge – Gas	1.9849	0.7542	
- HSD	2.0361	0.8054	
Energy Charge Rs./kWh			
For Operation on Gas			
Fuel cost component	2.4538	2.4538	Fuel price
Variable O&M – Foreign	0.2583	0.2583	US\$/PKR & US CPI
For Operation on HSD			
Fuel cost component	14.6399	14.6399	Fuel price
Variable O&M – Foreign	0.3728	0.3728	US\$/PKR & US CPI

Note:

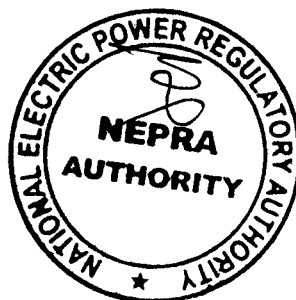
- i) Capacity Charge Rs./kW/hour is applicable to dependable capacity at the delivery point.
- ii) Dispatch criterion will be the Energy Charge.
- iii) The above tariff is applicable for a period of 30 years commencing from the date of the Commercial Operations.
- iv) Component wise tariff is indicated at **Annex-I** and Debt Service Schedule at **Annex-II**.

I) Adjustment in Insurance Component

Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by SECL according to the following formula:

$$\text{Insurance Component (Revised)} = \text{Rs. } 0.0876 \text{ per kW per hour} / (1.35\% * \text{US\$ } 158.850 \text{ million}) * \text{AP}$$

Where;



AP = Actual Premium subject to maximum of 1.35% of the adjusted EPC

II) Pass-Through Items

No provision for income tax has been accounted for in the tariff. If SECL is obligated to pay any tax on its income, the exact amount paid by the company shall be reimbursed by NTDC to SECL on production of original receipts. This payment will be considered as a pass-through (as Rs./kW/hour) hourly payment spread over a 12 months period in addition to the capacity purchase price given in the tariff. Furthermore, in such a scenario, SECL shall also submit to NTDC details of any tax shield savings and NTDC shall deduct the amount of these savings from its payment to SECL on account of taxation.

Withholding tax is also a pass-through item just like other taxes as indicated in the government guidelines for the determination of tariff for new IPPs. In revised tariff table withholding tax number is indicated as reference and NTDC shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 15% of reference equity i.e. hourly payment (Rs./kW/hour) spread over 12 months.

In case company does not declare a dividend in a particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what is paid in that year and the total entitlement as per the net return on equity) would be carried forward and accumulated so that the company is able to recover the same in hourly payments spread over 12 months period as a pass-through from the power purchaser in future on the basis of the total dividend payout.

III) Indexations

The following indexations shall be applicable to reference tariff.

a) Indexation applicable to O&M

In future fixed O&M part of capacity charge will be adjusted on account of local inflation (WPI) and variation in US CPI and dollar/rupee exchange rate parity. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics, US CPI notified by the US Bureau of Labor Statistics and revised TT & OD selling rate of US dollar notified by the National Bank of Pakistan. The mode of indexation will be as under:

i) Fixed O&M

$F\ O\&M_{(LREV)} = \text{Rs. } 0.0529 \text{ per kW per hour} * WPI_{(REV)} / 145.36$



$$F O\&M_{(FREV)} = \text{Rs. } 0.0965 \text{ per kW per hour} * US CPI_{(REV)} / 216.177 * ER_{(REV)} / \text{Rs. } 83.35$$

Where;

- $F O\&M_{(LREV)}$ = The revised applicable fixed O&M local component of the capacity charge indexed with WPI
- $F O\&M_{(FREV)}$ = The revised applicable fixed O&M foreign component of the capacity charge indexed with US CPI and exchange rate variations
- $WPI_{(REV)}$ = The revised wholesale price index (manufacturers)
- $WPI_{(REF)}$ = 145.36 wholesale price index (manufacturers) of October 2009 notified by the Federal Bureau of Statistics
- $US CPI_{(REV)}$ = The revised US CPI (all urban consumers)
- $US CPI_{(REF)}$ = 216.177 US CPI (all urban consumers) for the month of October 2009 as notified by the US Bureau of Labor Statistics
- $ER_{(REV)}$ = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

ii) **Variable O&M**

The formula of indexation for variable O & M component (Gas) will be as under:

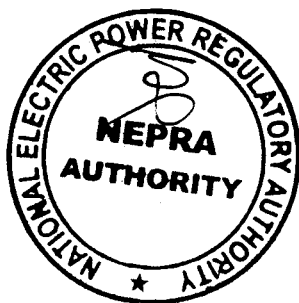
$$V O\&M_{(REV)} = \text{Rs. } 0.2583 \text{ per kWh} * US CPI_{(REV)} / 216.177 * ER_{(REV)} / \text{Rs. } 83.35$$

Where;

- $V O\&M_{(REV)}$ = The revised applicable variable O&M component of the energy charge indexed with US CPI and exchange rate variation.
- $US CPI_{(REV)}$ = The revised US CPI (all urban consumers)
- $US CPI_{(REF)}$ = 216.177 US CPI (all urban consumers) for the month of October 2009 as notified by the US Bureau of Labor Statistics
- $ER_{(REV)}$ = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

AND

The formula of indexation for variable O & M component (HSD) will be as under:



$$V O\&M_{(REV)} = \text{Rs. } 0.3728 \text{ per kWh} * US CPI_{(REV)} / 216.177 * ER_{(REV)} / \text{Rs. } 83.35$$

Where;

$V O\&M_{(REV)}$ = The revised applicable variable O&M component of the energy charge indexed with US CPI and exchange rate variation.

$US CPI_{(REV)}$ = The revised US CPI (all urban consumers)

$US CPI_{(REF)}$ = 216.177 US CPI (all urban consumers) for the month of October 2009 as notified by the US Bureau of Labor Statistics

$ER_{(REV)}$ = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

b) Adjustment for KIBOR variation

The interest part of debt service charge component will remain unchanged throughout the term except for the quarterly adjustment due to variations in interest rate as a result of variation in 3-months KIBOR according to the following formula:

$$\Delta I_{(L)} = P_{(LREV)} * (KIBOR_{(REV)} - 12.60\%) / 4$$

Where;

$\Delta I_{(L)}$ = The variation in interest charges applicable corresponding to variation in KIBOR. $\Delta I_{(L)}$ can be positive or negative depending upon whether $KIBOR_{(REV)}$ is $>$ or $<$ 12.60%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta I_{(L)}$ for each quarter under adjustment on quarterly basis.

$P_{(LREV)}$ = The outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date.

c) Fuel Price Variation

The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations. In this regard, the variation in SECL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FCg_{(Rev)} = \text{Rs. } 2.4538 \text{ per kWh} * FP_{g(Rev)} / \text{Rs. } 368.11 \text{ per MMBTU}$$

Where;

$FCg_{(Rev)}$ = Revised fuel cost component of variable charge on Gas




$FPg_{(Rev)} =$ The new price of gas as notified by the relevant authority per MMBTUs of fuel adjusted for LHV-HHV factor

AND

$FCd_{(Rev)} =$ Rs.14.6399 per kWh * $FPd_{(Rev)}$ /Rs.70.70 per Litre excluding GST

Where;

$FCd_{(Rev)} =$ Revised fuel cost component of variable charge on HSD

$FPd_{(Rev)} =$ The new price of HSD/Litre (exclusive of GST) as notified by the relevant authority

d) **Adjustment in Return on Equity (ROE)**

ROE component of tariff will be adjusted on account of exchange rate variation according to the following formula;

$ROE_{(Rev)} =$ Rs. 0.3964 per kW per hour * $ER_{(Rev)}$ / $ER_{(Ref)}$

Where;

$ROE_{(Rev)} =$ The revised ROE component of the capacity purchase price

$ER_{(Rev)} =$ The revised TT & OD selling rate of US\$ as notified by the National Bank of Pakistan

$ER_{(Ref)} =$ The reference exchange rate of PKR 83.35 = 1 US\$.

e) **Adjustment on Return on Equity during Construction (ROEDC)**

ROEDC component of tariff will be adjusted on account of exchange rate variation according to the following formula;

$ROEDC_{(Rev)} =$ Rs.0.0759 per kW per hour * $ER_{(Rev)}$ / $ER_{(Ref)}$

Where;

$ROEDC_{(Rev)} =$ The revised ROEDC component of the capacity purchase price

$ER_{(Rev)} =$ The revised TT & OD selling rate of US\$ as notified by the National Bank of Pakistan

$ER_{(Ref)} =$ The reference exchanges rate of PKR 83.35= 1 US\$.



Adjustments on account of variation in WPI, US CPI, exchange rate, KIBOR and fuel price will be approved and announced by the Authority for immediate application in accordance with the requisite indexation mechanism stipulated herein.

IV) Terms and Conditions of Tariff

- i) Use of Gas will be considered as primary fuel.
- ii) Dispatch criterion will be based on the energy charge.
- iii) General assumptions of SECL, which are not covered in this and earlier determinations, may be dealt with in the PPA according to its standard terms.

AUTHORITY

*Dissenting note
is attached*

(Zafar Ali Khan)
Member

(*)

(Maqbool Ahmad Khawaja)
Member

Ghassan 10/8
(Ghassan Ahmed)
Member

Shaukat Ali Kundi
(Shaukat Ali Kundi)
Vice Chairman/Member

Khalid Saeed
(Khalid Saeed)
Chairman

(*) Dissenting note is attached

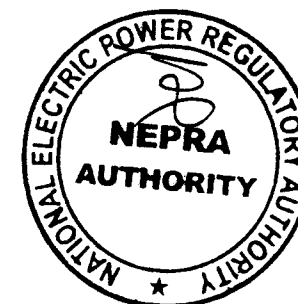


N.A. KHALATA
MEMBER

Sapphire Electric Company Limited Modified Tariff (GAS)

Year	Variable Charge (PKR/kWh)			Capacity Charge (PKR/kW/Hour)									Total Capacity Charge
	Fuel	Variable O&M	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Insurance	Working Capital Component	Return on Equity (ROE)	Return on Equity during Construction (ROEDC)	Withholding Tax	Loan Repayment	Interest Charges	
1	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.2824	0.9483	2.0202
2	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.3291	0.9016	2.0202
3	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.3835	0.8472	2.0202
4	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.4469	0.7838	2.0202
5	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.5208	0.7099	2.0202
6	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.6070	0.6237	2.0202
7	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.7073	0.5234	2.0202
8	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.8243	0.4064	2.0202
9	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.9606	0.2701	2.0202
10	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	1.1195	0.1112	2.0202
11	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
12	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
13	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
14	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
15	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
16	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
17	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
18	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
19	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
20	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
21	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
22	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
23	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
24	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
25	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
26	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
27	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
28	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
29	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
30	2.4538	0.2583	2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	-	-	0.7895
Levelized Tariff (1-30 Years)			2.7121	0.0965	0.0529	0.0876	0.0449	0.3964	0.0759	0.0354	0.3580	0.4442	1.5917

Net Capacity	212.107	MW
Reference Exchange Rate (PKR/US\$)	83.3500	
Reference Fuel Price (Gas) LHV	PKR 368.11 per MMCFT	
Reference US CPI	216.1770	October 2009
Reference WPI (manufacturers)	145.3600	October 2009
KIBOR	12.60%	
Net Efficiency	51.20%	
Levelized Tariff (at 60% plant factor)	Rs. per kWh	5.3649 (US cents/kWh) 6.4366



Sapphire Electric Company Limited
Modified Tariff (HSD)

Year	Variable Charge PKR/kWh			Capacity Charge (PKR/kW/Hour)									
	Fuel	Variable O&M	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Insurance	Working Capital Component	Return on Equity (ROE)	Return on Equity during Construction (ROEDC)	Withholding Tax	Loan Repayment	Interest Charges	Total Capacity Charge
1	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.2824	0.9483	2.0715
2	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.3291	0.9016	2.0715
3	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.3835	0.8472	2.0715
4	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.4469	0.7838	2.0715
5	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.5208	0.7099	2.0715
6	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.6070	0.6237	2.0715
7	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.7073	0.5234	2.0715
8	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.8243	0.4064	2.0715
9	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.9606	0.2701	2.0715
10	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	1.1195	0.1112	2.0715
11	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
12	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
13	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
14	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
15	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
16	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
17	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
18	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
19	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
20	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
21	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
22	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
23	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
24	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
25	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
26	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
27	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
28	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
29	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
30	14.6399	0.3728	15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	-	-	0.8408
Levelized Tariff (1-30 Years)			15.0127	0.0965	0.0529	0.0876	0.0961	0.3964	0.0759	0.0354	0.3580	0.4442	1.6430

Net Capacity	212.107	MW
Reference Exchange Rate (PKR/US\$)	83.3500	
Reference Fuel Price (HSD) Rs. per litre	48.0300	
Reference US CPI	216.1770	October 2009
Reference WPI (manufacturers)	145.3600	October 2009
KIBOR	12.60%	
Net Efficiency	48.50%	
Levelized Tariff (at 60% plant factor) Rs. per kWh	17.7510	(US cents/kWh) 21.2969

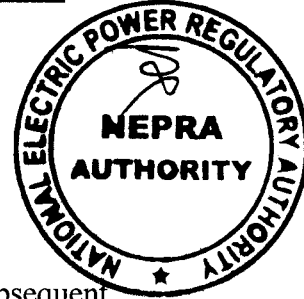


Sapphire Electric Company Limited
Debt Repayment Schedule

Year	Quarter	Principal Amount Million Rs.	Repayment Million Rs.	Mark Up Million Rs.	Debt Service Million Rs.	Principal Amount Million Rs.	Annual Principal Repayment Rs/Kw/hr	Annual Interest Rs/kW/hr	Annual Debt Serving Rs/kW/hr
1	1	11,485	124	448	572	11,362			
	2	11,362	129	443	572	11,233			
	3	11,233	134	438	572	11,099			
	4	11,099	139	433	572	10,961	0.2824	0.9483	1.2307
2	5	10,961	144	427	572	10,816			
	6	10,816	150	422	572	10,667			
	7	10,667	156	416	572	10,511			
	8	10,511	162	410	572	10,349	0.3291	0.9016	1.2307
3	9	10,349	168	404	572	10,181			
	10	10,181	175	397	572	10,007			
	11	10,007	181	390	572	9,825			
	12	9,825	188	383	572	9,637	0.3835	0.8472	1.2307
4	13	9,637	196	376	572	9,441			
	14	9,441	203	368	572	9,237			
	15	9,237	211	360	572	9,026			
	16	9,026	220	352	572	8,806	0.4469	0.7838	1.2307
5	17	8,806	228	343	572	8,578			
	18	8,578	237	335	572	8,341			
	19	8,341	246	325	572	8,094			
	20	8,094	256	316	572	7,838	0.5208	0.7099	1.2307
6	21	7,838	266	306	572	7,572			
	22	7,572	276	295	572	7,296			
	23	7,296	287	285	572	7,009			
	24	7,009	298	273	572	6,711	0.6070	0.6237	1.2307
7	25	6,711	310	262	572	6,401			
	26	6,401	322	250	572	6,079			
	27	6,079	335	237	572	5,744			
	28	5,744	348	224	572	5,396	0.7073	0.5234	1.2307
8	29	5,396	361	210	572	5,035			
	30	5,035	375	196	572	4,660			
	31	4,660	390	182	572	4,270			
	32	4,270	405	167	572	3,865	0.8243	0.4064	1.2307
9	33	3,865	421	151	572	3,444			
	34	3,444	437	134	572	3,007			
	35	3,007	454	117	572	2,552			
	36	2,552	472	100	572	2,080	0.9606	0.2701	1.2307
10	37	2,080	491	81	572	1,589			
	38	1,589	510	62	572	1,080			
	39	1,080	530	42	572	550			
	40	550	550	21	572	(0)	1.1195	0.1112	1.2307



DISSENTING NOTE OF MR. ZAFAR ALI KHAN, MEMBER NEPRA
IN THE MATTER OF ADJUSTMENTS IN GENERATION TARIFF
OF SAPPHIRE ELECTRIC COMPANY LIMITED
AT COMMERCIAL OPERATIONS DATE
CASE NO. NEPRA/TRF-125/SECL-2009



Background

1. Pursuant to the Authority's determination dated 15th June 2006, and subsequent determinations/review decisions dated 3rd August 2006, 10th August 2006, 22nd November 2007 and 16th September 2009, reference tariff components of Sapphire Electric Company Limited (hereinafter referred to as "SECL") were required to be adjusted at the Commercial Operations Date (hereinafter referred to as "COD").
2. Through its letter dated 29th December 2010, SECL submitted that it has commenced commercial operations on 4th October 2010 and, with copies of original invoices and relevant supporting documentation, requested tariff adjustments at the COD stage.
3. The SECL case was unique in that its EPC contractor went bankrupt during the project construction phase. Furthermore, SECL claimed that its tariff determinations allowed adjustment of interest during construction (hereinafter referred to as "IDC") and return on equity during construction (hereinafter referred to as "ROEDC") on actuals basis.
4. A working paper analyzing the tariff adjustments of SECL at the COD stage, prepared by the Authority's relevant professionals, was considered by the Authority in a meeting held on 16th June 2011. In accordance with standard practice, the Authority's decision required specificity on each and every requested tariff adjustment. The undersigned, being the Member responsible for the matter, *i.e.*, Member Tariff, explained the case in detail to the Authority. After thorough deliberations, in view of difference of opinion amongst the Authority Members in the matter of the IDC to be allowed to SECL, the Chairman asked for a vote to be taken on this issue. Mr. Shaukat Ali Kundi (Member Consumer Affairs), Mr. Maqbool Ahmad Khawaja (Member Standards & Privatization) and the undersigned, voted in favor of allowing IDC on actuals basis to SECL. The Chairman and Mr. Ghiasuddin Ahmed (Member Licensing) did not agree with the majority decision, and undertook to write dissenting note(s). Based on the decisions taken in the meeting, the decision of the Authority in the matter of COD adjustments of SECL was prepared, and was signed by the undersigned on 8th July 2011. Thereafter, it was signed by Mr. Maqbool Ahmad Khawaja (Member Standards & Privatization) and was circulated for signature to the other members.
5. Subsequent to the aforesaid circulation, it transpired that Mr. Shaukat Ali Kundi (Member Consumer Affairs) who had earlier voted for allowing IDC on actuals basis, had changed his mind and intended to dissent in the matter of IDC and ROEDC to be allowed to SECL. After passage of more than a month, a new decision signed by three (3) members, *i.e.*, the majority, has been forwarded to the undersigned, which deviates materially from the decisions taken in the Authority's meeting held on 16th June 2011 at which the SECL case was discussed in detail.

9

6. I do not agree with this decision of the Authority, and hereby record my Dissenting Opinion in the following terms.

Dissenting Opinion

7. Engineering, Procurement and Construction Cost (Paragraphs 3 and 3.2 of the Authority's Decision dated 10th August 2011, hereinafter referred to as the 10th August 2011 Decision)

(a) SECL has, *inter alia*, asked for an increase in its EPC cost from US \$158.850 million, as originally determined, to US \$193.668 million — with a differential of US\$ 34.818 million. I am of opinion that the following factors are germane to deciding the EPC cost to be allowed to SECL:

- (i) In determining adjustments at the COD stage, the Authority's mandate is confined to remaining within the boundaries established in the Authority's original tariff determinations/review decision.
- (ii) In SECL's tariff determination dated 16th September 2009, the Authority itself had allowed SECL to file, on this issue, a fresh tariff petition before or at the time of COD.
- (iii) Consequently, SECL has now submitted complete details of the amounts it recovered after termination of its EPC contract by encashing the EPC contractor's guarantees, together with its new direct contracts with vendors. SECL has also provided complete details of all amounts paid/to be paid to such vendors. Having already indicated, in its official determination/review decision, its receptivity to tariff adjustment on the basis of this very issue, it would now be unreasonable and unjust for the Authority to disregard SECL's fully documented submissions regarding the increase in its EPC cost.
- (iv) In the case of Engro Powergen Qadirpur Limited (Case No. NEPRA/TRF-72/EEL-2007 dated 3rd November 2010), the Authority reduced the EPC cost originally determined, on the ground that only actually incurred EPC cost is to be allowed. The Authority, therefore, has already established the principle that EPC cost is subject to change on the basis of actually incurred cost. Following the same established principle, in the case of SECL, therefore, the Authority is obliged to consider SECL's claim for increase in its EPC cost.
- (v) SECL undertook its project, *inter alia*, on the cost-plus principle. Applying this principle, new contracts signed with various vendors, together with the original EPC contract until termination, must be considered collectively as EPC contracts for purposes of determining the EPC cost. In this perspective, the doctrine of Promissory Estoppel is irresistible.
- (vi) As per the ECC decision in Case No. ECC-65/5/2007, the EPC cost must be based on a firm (non-reopenable) competitive price duly initialed/signed by the IPP/EPC contractors. After termination of SECL's EPC contract, the fundamentals of the project have changed, and the EPC cost previously approved by the Authority became invalid — thereby necessitating re-determination of the EPC cost by the Authority.



✓

(vii) In the aforesaid circumstances, had SECL filed a separate tariff petition for allowing the increased EPC cost prior to achieving COD, the increase in EPC cost, as a matter of course, would have been allowed by the Authority — as has already been done in the case of some IPPs subsequent to their original tariff determinations.

(viii) If the Authority does not allow cost over-runs resulting from the aforesaid extraordinary circumstances, on the one hand, SECL's performance capability will suffer and, on the other, the confidence of stakeholders in the regulatory process will be eroded. Furthermore, SECL might not be able to sustain the burden of abnormal losses, eventually resulting in denial to consumers of electricity at an affordable price.

(b) In light of the above, I am of the considered and firm opinion that the increase in EPC cost claimed by SECL should be given due consideration by the Authority.

8. Notional Figures of IDC Used in the Determinations

The IDC figure of US \$14.358 million initially used and of US \$15.557 million used thereafter in the Tariff Determinations were, and were understood to be, subject to subsequent adjustment on the basis of actuals at COD. SECL's expectation as to adjustment of its IDC and ROEDC constitute an assumption integral to its tariff.

9. Fidelity to the Original Decision, & Misconception as to "Fundamental Changes"

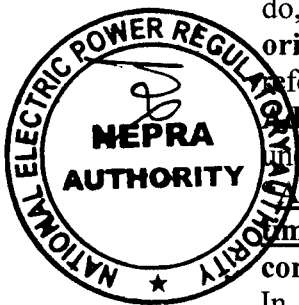
(a) The essential principle enunciated in Paragraph-3.2.6.2 of the 10th August 2011 Decision, is unexceptionable — that "... the scope of tariff adjustments at the COD stage is limited to remaining within the boundaries set in the original tariff determination/review decisions. ..." What the Authority is being moved to do, and what the Authority must do, is to remain within the parameters of the original Determination dated 15th June 2006 on SECL's tariff (hereinafter referred to as the **Original Determination**). Under the heading "**One Time Adjustment**" on page-22 of the **Original Determination**, the Authority unequivocally laid down in its **Order**, *inter alia*, that:

All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the IDC tests to be carried out for determination of contracted capacity."

In thus remaining faithful to the **Original Determination**, there is no scope for reopening the matter before all stake-holders.

(b) And on pages-22 and 23 thereof, the Authority categorically reaffirmed that: "Adjustments due to customs duties and Interest during Construction Debt Service, Return on Equity and ROE during construction shall be adjusted at COD on account of actual variation in customs duties, drawdown and Interest During Construction with reference to the estimated figures of USD5.037 million and USD14.358 million respectively."

(c) The context and perspective of this ruling, however, is provided in **Paragraph-35** on page-14 of the **Original Determination**, in the following sentences: "Return on Equity has been computed to allow 15% IRR on equity investment by including a component of ROE during construction of Rs.15.2037/kW/month based on equity draw down assumption of 50:50 during



the first and second year of construction. The ROEDC will be adjusted for actual draw down on COD along side IDC.”

(d) The aforesaid principle of adjustments being made on the basis of actuals at the time of COD, as laid down by the Authority itself, is abundantly clear and entirely unambiguous — and there is no basis or scope for resiling therefrom. In its 10th August 2011 Decision, however, the Authority is doing precisely that — it is resiling from the very principle it has enunciated in its Paragraph-3.2.6.2 — that “... the scope of tariff adjustments at the COD stage is limited to remaining within the boundaries set in the original tariff determination/review decisions. ...”. It is again unexceptionable that “... **fundamental changes are not allowed through COD adjustments**” — but the changes being sought here are anything but “fundamental” — the required modifications are integral to the very concept and purpose of adjustments being made at actual COD. The phrase “**reference to the estimated figures of USD5.037 million and USD14.358 million respectively**” (quoted in paragraph-2 hereinabove), contrary to the purport of Paragraph-3.2.15 of the 10th August 2011 Decision, does not constitute limits of adjustment, but simply provides the frames of reference as merely notional base figures for calculation—to be revised in the circumstances of actual COD. The criterion is, and always must be, actuals at the time of COD. The same misperception is repeated in the same paragraph, in relation to the time-frame — and remains equally fallacious in that context.

(e) In fact, in the above-quoted references, the Authority has not independently laid down any principles for the levy of tariff, but has simply faithfully followed the PPA provision in **Section-12.10 (One Time Adjustment)**, on **page-Sch 1-27 of Schedule 1** to the standard PPA developed by the Government of Pakistan, which provides, *inter alia*:

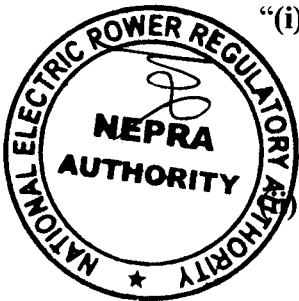
“(i) **One time adjustment due to variation in Net Capacity at the time of COD ... All the tariff components except fuel cost component shall be adjusted at the time of commercial operations date (“COD”) based upon the Initial Tested Capacity tests to be carried out for determination of Contract Capacity ...**

Adjustments due to customs duties and Interest during Construction Debt Service, Return on Equity and Return on Equity during Construction shall be adjusted on account of actual variation in Customs Duties and “Interest during Construction” with reference to the estimated figures of USD5.037 million and USD14.358 million respectively. ...”

It is quite clear, therefore that the concepts used hereinabove, have been imported from the PPA. Consequently, the Authority is not free to distort the concepts it imports and uses.

(f) It is also not available to the Authority, as a statutorily responsible regulator in Pakistan’s electric power sector, to resile from its declared position and to decide that the word “actuals” doesn’t actually mean actuals, or that “COD” doesn’t actually mean COD or that “COD” actually means RCOD — when the PPA, in Section-1.1, very clearly and unambiguously defines the two to be different: “COD” is the actual COD (Commercial Operations Date), as so defined (page-13 thereof):

“The Day immediately following the date on which the Complex is Commissioned: provided, that in no event shall the Commercial Operations Date occur earlier than ninety (90) Days prior to the Required



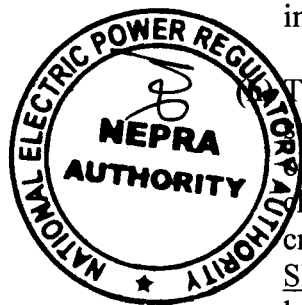
Commercial Operations Date without the prior written approval of the Power Purchaser.”

On the other hand, “RCOD” is not COD but RCOD (Required Commercial Operations Date), as so defined (page-25 thereof):

“The date that is twenty-eight (28) months following the on which Financial Closing occurs, as such date may be extended pursuant to Section 6.5 or Section 8.1(b) or by reason of a Force Majeure Event.”

In fact, the PPA even goes on, not only to differentiate between the two, but to provide very serious negative consequences for the IPP (a “Company Event of Default”) should the actual COD get delayed beyond 400 days (more than 13 months!) after the RCOD (Section 16.1(a)(2) on page-122 of the PPA). It is a very serious misperception to equate the two concepts — and failure to distinguish between them is fraught with potentially disastrous consequences!

- (g) The essence of the justice of this issue lies in its rationale. The purpose is to compensate the investor — in acknowledgement of the inevitable excessive duration of construction of the power plant — with a reasonable return on the equity prior to commencement of its actual commercial earnings. In the instant case, SECL suffered an 11-month delay on account of the bankruptcy of Skoda, its EPC contractor — circumstances entirely beyond its control and/or its diligent anticipation. In order to sustain its financial integrity, SECL needs the financial consequences of this inordinate delay to be covered within the concept of IDC, or interest during construction — which is precisely the purpose of the concept.



The Authority has limited the aforesaid criteria — and rightly so — strictly to the settled time-lines in the case of “fast-track projects”. The “fast-track” concept is one of different flexibilities, different rigidities and different criteria. These characteristic features require rigid adherence to time-lines — the dominant criterion which cannot be compromised. Importantly, in other projects, including SECL, the “fast-track” criteria do not eclipse either established norms or the legitimate expectations of investors and/or licensees, which expectations are based upon decisions of the Authority and the principles enunciated therein.

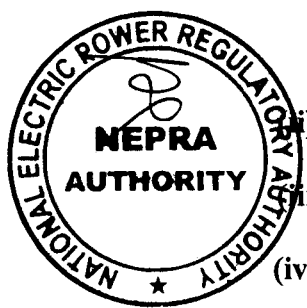
10. COD Adjustments Allowed to Orient

In Paragraph-3.2.6.4 of its 10th August 2011 Decision, the Authority has referred to its earlier (13th April 2011) Decision in the case of Orient Power Company Limited, hereinafter referred to as Orient, an IPP that suffered a similar misfortune on account of bankruptcy of its own EPC contractor, the same Skoda — which decision the Authority has purported to follow in this (SECL’s) case as well. With great respect, I firmly believe that the referenced Orient Decision was in error and should not constitute a precedent to be followed. In fact, subsequent events in the Orient project have demonstrated that the Authority’s blunder has caused Orient to run into serious and substantial financial difficulties, which render it unable to operate at optimum level. Consequently, it is fortunate for Pakistan’s electric power sector that Orient has filed a revision petition, which is currently under consideration before the Authority. As far as the responsibility of the Authority is concerned, the sooner the Authority repudiates its error(s) the better — better not only for the consumers, investors, but also for the entire electric power sector, with all its stake-holders.

✓

11. Compliance with Statutory Requirements

- (a) The weight of the aforesaid references and considerations is not addressed simply by the broad, general and sweeping statement, that **“... the provisions of the NEPRA Act and Tariff Rules will be negated if claimed construction period is permitted while allowing tariff adjustments at the COD stage. ...”** (Paragraph-3.2.8 of the 10th August 2011 Decision). Nor is it pertinent in a non-“fast-track” project such as SECL, to rely (Paragraph-3.2.9 thereof) upon the Authority’s policy in “fast-track” projects — where time is of the very essence of the project, its prerogatives and liabilities, and strict adherence to time-lines is the absolute and unqualified responsibility of the IPP. Again, there is no basis whatsoever to restrict the meaning of the word “actual(s)” to KIBOR rates etc., as Paragraph-3.2.11 thereof seeks to do — especially in light of the references and considerations cited hereinabove. There can be no argument as to the status and relevance of the PPA, which is acknowledged in Paragraphs-3.2.12 and 3.2.13 of the 10th August 2011 Decision — and is specifically referenced and relied upon in paragraphs hereinabove.
- (b) Section 7(6) of NEPRA Act provides:
“In performing its functions under this Act, the Authority shall, as far as practicable, protect the interest of consumers and companies providing electric power services in accordance with guidelines, not inconsistent with the provisions of this Act, laid down by the Federal Government.”
- (c) Furthermore, the objectives of the Power Policy 2002 also envisage that all the stakeholders are looked after in the process, i.e. a win-win situation for all. The Authority therefore is required to strike a balance between the interests of consumers and companies providing electric power services. In the case of SECL, the interests of consumers have been addressed by the Authority in the following particulars:
- (i) SECL utilizes turbine-based technology, which is approximately 15% more efficient than reciprocating engine-based technology and is much better suited to generation and transmission in Pakistan and, therefore, more beneficial than others for the consumer.
 - (ii) SECL’s primary fuel is economical, efficient, environment-friendly and indigenous.
 - (iii) SECL’s ultimate project cost and power generation tariff is one of the lowest of the IPPs.
 - (iv) For its delay in achieving RCOD, liquidated damages in the sum of about US \$7 million, in accordance with SECL’s PPA, have already been recovered from SECL — the ultimate benefit of which is to be passed on to the consumer.
- (d) SECL, on the other hand, has been exposed to the following:
- (i) SECL’s equity and loan are at stake for the tariff control period of thirty (30) years.
 - (ii) SECL’s PPA provides recourse against SECL, in term of liquidated damages, for its failure to achieve RCOD.
 - (iii) The bankruptcy of its EPC contractor, which caused SECL’s delay in achieving RCOD, with resultant liquidated damages — was due to factors completely beyond its control or predictability.



27

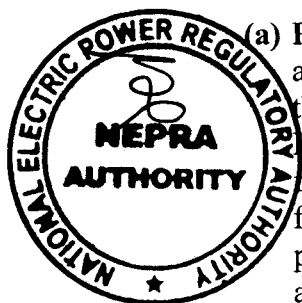
- (e) To disregard the aforesaid factors of an IPP's adversities, and to disallow adjustment of its actually and prudently incurred IDC and ROEDC, is a distortion and a travesty of the Authority's mandate under section 7(6) of the NEPRA Act. For 11 months delay in achieving RCOD, SECL and its sponsors would suffer a drastic reduction in its IRR on the equity for its entire tariff control period of thirty years.
- (f) **Section-7(6) of the NEPRA Act**, in fact, is being capriciously applied by the Authority at **Paragraph-3.2.18** of its **10th August 2011 Decision**, in neglecting the interests and requirements of the producers of electric power. This disregard of IPPs, as stated earlier hereinabove, can lead to disastrous consequences

12. Risk-Free Returns

Notwithstanding the foregoing discussion, **Paragraph-3.2.16** of the **Authority's Decision** dated **10th August 2011** requires independent addressal on account of its several erroneous and therefore misleading premises.

- (a) In the first place, IRR is not risk-related, but is a matter of reasonable return. This is the first fundamental erroneous premise of the paragraph referenced herein.
- (b) Secondly, the disregard for investors' losses incorporated in the referenced paragraph is a factor that vitiates investment in the sector, and disincentivizes IPPs — which, in effect, defeats the institutional purpose and objectives of the Authority as a regulator in the electric power sector.
- (c) Thirdly, it is simply untrue that the Authority has disregarded the 15% criterion in other projects. In fact, it has been higher than 15% for oil-based electric power projects. In the instant case, the IRR, at present, is below 9%! This is completely inadequate to cover its losses and enable it to meet, and continue to meet its contractual requirements and obligations.
- (d) Comparison with investment in US Dollars has absolutely no relevance in the instant case. What is pertinent here is the reasonable rate of returns comparable with other thermal projects in Pakistan.

13. Commercial Aspects

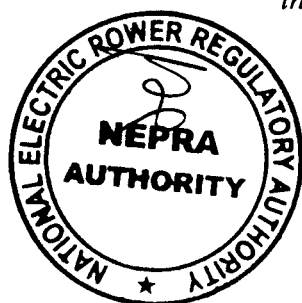


- (a) **Paragraph-3.2.17** of the **10th August 2011 Decision** is also erroneous — in its assumption that gas is not, or will not be, available to SECL in future. It is true that the projected 9-month per annum gas availability, at present, is in disarray. However, as evidenced on record, SECL does, at present and in the foreseeable future, have at least a 6-month per annum gas availability, and hopefully more in future. Even this reduced gas availability leaves SECL a more economical power producer than others — provided the Authority refrains from choking its business and entrepreneurial motivation.
- (b) SECL's gas-based tariff, at gas prices and exchange rates prevailing at the time of COD amounts to US Cents 6.4 in comparison with oil-based reciprocating engine tariffs at US Cents 16.8 on average. Even if SECL operates on gas only in six months in the year — and remains non-functional for the remaining six months, with payment of capacity charge — the effective tariff will remain much lower, *ie.*, US Cents 9.7.
- (c) In making decisions as the power sector regulator, the Authority is obliged to address legal as well as economic aspects of the issue — and balance both. In the case of SECL, the Authority needs to consider that:
 - (i) SECL's primary fuel, gas, is an environment-friendly, cleaner and more efficient fuel than others.

- (ii) SECL's nine-months per year gas allocation would provide stable power generation for nine (9) months in a year, as against only six (6) months in the case of hydel power plants.
 - (iii) While encouraging utilization of indigenous fuels, some coal-based IPPs have been incentivized with IRR as high as 20.5% of equity. SECL, on the other hand, despite its favourable features enumerated hereabove, is being disincentivized by reducing IRR from its originally approved 15% to not more than 9% at most.
- (d) In choking an IPP, the Authority should not overlook Pakistan's burgeoning electrical energy crisis and the resultant load-shedding, with its disastrous effect on the national economy. No short-term solution is in sight, to meet the ever-growing gap between the demand for electrical energy and its supply at an affordable price. Extraordinary measures have already been taken by the power purchaser/GOP, such as procurement of power from rental power plants at exorbitant prices. In view of limited options, PPIB seems to be contemplating substantial furnace-oil based enhancement of power generation capacity. In these circumstances, the need of the hour is to encourage, rather than discourage power producers from investing in generating electricity at affordable tariffs. SECL's sponsorship includes renowned foreign investors, namely Xenel and DEG (a member of KFW banking group owned by the German Government). If the impact of delay in commencing commercial operations due to extraordinary circumstances is not compensated in this case, SECL's capability to deliver affordable electricity to consumers is seriously jeopardized. In such circumstances, it is imperative that the regulator play its due role in accordance with the NEPRA Act, Tariff Rules, and guidelines issued by the Federal Government.
- (e) It is important to recognize that even if the actual construction period had been allowed to SECL, it would not have been adequate for it to recover its total project cost actually incurred. According to SECL's audited financial statements, as of 31st December 2010, its capital work in progress transferred to fixed assets was Rs.17.737 billion, whereas its project cost (even inclusive of actual construction) period compensation would be Rs.17.341 billion. Thus, without considering any other figures such as the cost already transferred to fixed assets of Rs.130 million etc, there will be a shortfall of at least Rs.396 million for the equity-holder, irrecoverable through the tariff.

14. Principle of Promissory Estoppel & Doctrine of Legitimate Expectation

- (i) SECL is entitled to adjustment of reference capacity price on account of actual variation in IDC and ROEDC on the basis of the principle of Promissory Estoppel and the doctrine of Legitimate Expectation. In support of this legal principle, counsel for SECL, M/s. Hassan & Hassan, in writing submitted, *inter alia*:



“(d) Reliance by Sapphire

That Sapphire and its stakeholders relied on its right to receive the IDC at “actuals” is conclusively borne out in the (1) Sapphire statement under Section 160 of the Companies Ordinance 1984 filed on 17th March 2008 and (2) Sapphire notice dated 13th April 2010 of its EGM (copies enclosed).

✓

It clearly follows that under the principles of promissory estoppel and legitimate expectations, the Authority cannot now deviate from its earlier representations made to Sapphire and acted upon by Sapphire."

- (ii) In view of SECL's arguments on the basis of principles of Promissory Estoppel and the doctrine of Legitimate Expectation it is necessary to consider SECL's key timelines. The relevant timelines are the following:

Tariff Petition Filing	: 14 th February 2006
Tariff Determination — First (Note 1)	: 15 th June 2006
Review Motion Decision (Note 1)	: 3 rd August 2006
PPA Signing	: 19 th February 2007
Financial Close	: 20 th June 2007
EPC Contractor's First Payment	: 21 st June 2007

Note 1 : Required adjustment of IDC on actual basis at COD

There is a need to recognize that the first tariff determination of 15th June 2006 constitutes the basis for Financial Close and, therefore, constitutes a vested right for the investors, of which they cannot now legally be deprived after more than five years. It should also be recognized that legal sanctity is attached to a tariff determination, and the tariff thereby determined is to remain in the field until and unless reviewed or modified by the Authority itself or until judicial review thereof by a Court of competent jurisdiction.

15. Distinction Between Fast-Track & Other Projects

- (a) It is also essential to distinguish between licensees such as SECL, on the one hand and, on the other, fast-track projects where time-lines for project completion were submitted in their tariff petitions and were relied upon by the Authority. Tariff determinations of some of the fast-track projects, regarding time-lines allowed to them, are:

NISHAT POWER LIMITED

"Timeline/Completion of Project

39. NPL submitted the following timeline/completion of project:

.....

- Construction completion: 31st March 2009 (18 months from financial close)."

"H. Timeline/Completion of Project

95. The Authority has considered the proposed timeline/completion of project by the petitioner indicated at para 39 and decided to allow the same as such."



✓

ATLAS POWER LIMITED

"Timeline/Completion of Project"

42. APL has submitted following timeline/completion of project:

.....

- Construction completion: 31st March 2009."

"H. Timeline/Completion of Project"

99. The Authority has considered the proposed timeline/completion of project by the petitioner indicated at para 42 and decided to allow the same as such."

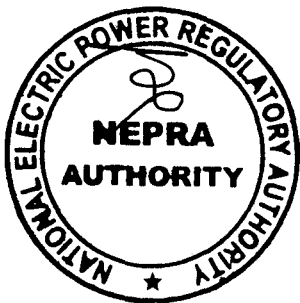
(b) The dissimilarity between fast-track projects and pioneer projects also becomes apparent from the letter of support (hereinafter referred to as "LOS") issued to them by the Private Power & Infrastructure Board (hereinafter referred to as "PPIB"). In the case of fast-track projects, their LOS clearly specifies that the performance guarantee shall secure the project company's obligation to achieve COD by a specified date, and lays down that in case the project fails to achieve its COD by the stipulated date its performance guarantee may be encashed by PPIB. In contrast, SECL's LOS stipulates no such condition for achieving its COD.

(c) Due to the un-anticipatable problems that befell pioneer projects such as SECL and Orient Power Company Limited, subsequent fast-track projects were able to commence commercial operations before them. Since time-lines are integral to fast-track project, the favoured treatment meted out to them was contingent upon strict adherence thereto. Consequently, in enforcement of that strict adherence to time-lines, the Authority capped their COD tariff adjustments very strictly. The same inflexible approach is not justifiable or even viable — and was not applied — in other projects, where time-line adherence is not integral to their character or category of treatment. I have already written my Dissenting Note on this issue in the matter of tariff adjustments of Saif Power Limited at the COD stage. Orient Power Company Limited, on the other hand, has already filed a review motion against the Authority's decision as to tariff adjustments at the COD stage.

(d) I am also of opinion that tariff orders of fast track projects cannot be considered in isolation, and should be read in conjunction with the stipulations contained in other parts of tariff determinations, as has already been done by the Authority in many other cases.

16. SECL's Extraordinary Circumstances, Corrective Measures & Prudent Costs

(a) In determining tariffs of IPPs, currently the Authority follows the cost-plus model, and does not award any uniform or up-front tariff. Accordingly, while deciding IPP matters, the Authority takes into consideration the peculiar circumstances of the IPP.



- (b) SECL faced unique circumstances due to bankruptcy of its EPC contractor, and there was never any willful default on SECL's part. The abnormal circumstances faced by SECL were not comparable with any other IPP except Orient Power whose review motion, as already stated, is pending for decision before the Authority.
- (c) SECL has submitted that it selected the EPC contractor after competitive and transparent bidding and bid evaluation by an independent expert, M/s. Fichtner. The selected EPC contractor was the second largest exporter of engineering goods from the Czech Republic, and was owned by the Czech government. The EPC contractor and contract had been approved by PPIB in accordance with the IA. The EPC contract was executed as per international EPC contracting standards and bonds were obtained as per prudent industrial practices. The bankruptcy of the EPC contractor was an extraordinary event which could not have been foreseen or controlled by SECL. From contractor selection to signing of the EPC contract, therefore, SECL's due diligence remains unimpeachable.
- (d) When SECL's EPC contractor filed for bankruptcy, SECL could have chosen the safe approach of re-negotiating the contract with a new EPC contractor and could have applied for tariff determination afresh, which would have further delayed commissioning of the project. Instead, SECL took the risk of completing the EPC contractor's job itself by entering into separate new contracts with vendors. SECL thereby avoided further delays, which would have resulted in even higher IDC and ROEDC, and that delay in the supply of SECL's cheap electricity would have constrained consumers to buy expensive power during that period.



17. Mandatory Regulatory Determinants as to Prudent Cost & Reasonable Rate of Return

Rule 17(3)(i) of the Tariff Rules

- (a) While determining, modifying or revising tariffs, the Authority must follow its Tariff Rules. **Rule 17(3)(i)** of the Tariff Rules provides:

“tariffs should allow licensees the recovery of any and all costs prudently incurred to meet the demonstrated needs of their customers ...”

- (b) In compliance with this rule, the Authority must allow recovery of all prudently incurred costs while determining, modifying or revising tariffs. In the case of SECL, therefore, the Authority needs to consider:
 - (i) Whether the IDC has actually been incurred; and
 - (ii) **Whether the IDC has been incurred prudently.**
- (c) Regarding incurring of the IDC, there is no doubt that the IDC has actually been incurred, as it has been verified by the professionals of the Authority, and SECL has also submitted its financial statements audited by M/s A. F. Ferguson & Co., Chartered Accountants, confirming that this cost has actually been incurred.

4/

- (d) The other question is whether this cost has been incurred prudently. The following facts need to be considered in this regard:
- (e) Avoiding bankruptcy of the foreign EPC contractor was beyond the reasonable control of SECL.
- (f) Once the project construction is impeded or obstructed, it takes time to recover momentum — especially when it is to be completed by other contractors.
- (g) Despite delay in commencing commercial operations, the IDC claimed by SECL is still within comparable range of the IDC allowed by the Authority to similar projects.
- (h) When its EPC contractor filed for bankruptcy, SECL's saving time and thereby reducing the burden of its IDC and ROEDC, by taking the risk of completing the EPC contractor's job itself, clearly bespeaks SECL's *bona fides*.
- (i) The IDC incurred was absolutely necessary for setting up the project.
- (j) There was never any willful default on the part of SECL.
- (k) Return on equity allowed by the Authority does not shift to the project investors, the impact of abnormal non-systemic risks, such as bankruptcy of the EPC contractor.

Rule 17(3)(iii) of the Tariff Rules

- (l) If SECL's extraordinary circumstances are not considered, its capability to invest in equipment and facilities for improved and efficient service will be affected, which will vitiate the requirement of **Rule 17(3)(iii)** of the Tariff Rules, which requires that:

"Tariffs should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service;"

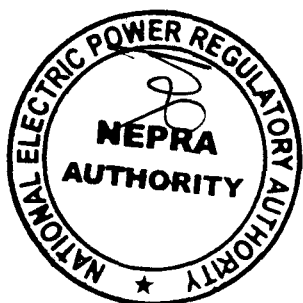
Guidelines Issued by the Federal Government

- (m) In compliance with **Section 7(6)** of the **NEPRA Act**, the Authority also needs to consider the 'Guidelines For Determination Of Tariff For Independent Power Producers' issued by the Federal Government, requiring, *inter alia*, that tariff be determined allowing reasonable IRR on equity investment.

18. Reasonable Rate of Return

The fundamental issue here is to determine what constitutes a reasonable rate of return for an electric power generating company Roger Morin, in his "**New Regulatory Finance**" (2006 Edition), **Chapter-1.3** on **pages-9 and 10**, very aptly explains the concept of "**Allowed Rate of Return**", as follows:-

"The heart of utility regulation is the setting of just and reasonable rates by way of a fair and reasonable return. How then does a regulatory commission determine a rate of return that is fair and reasonable? Although there are no hard-and fast rules, no mathematical formula or scientific panacea that can be mechanically and infallibly applied, two landmark U.S. Supreme Court cases define the legal principles underlying the regulation of a public utility's rate of return, and provide the foundations for the notion of a fair return:



- (i) *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U S 679 (1923).
- (ii) *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S 391 (1944).

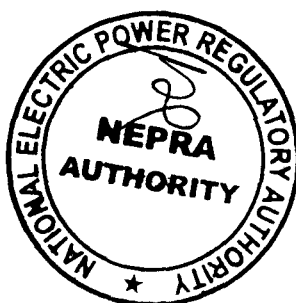
- (a) The *Bluefield* case set the standard against which just and reasonable rates are measured:

“A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties. ... The return should be reasonable, sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money necessary for the proper discharge of its public duties.”

- (b) The *Hope* case expanded on the guidelines to be used to assess the reasonableness of the allowed return. The Court re-emphasized its statements in the *Bluefield* case and recognized that revenues must also cover “capital costs”. That Court stated:

“From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock ... By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital. ...

Moreover, a utility is entitled to a return that will allow it to maintain its credit so that it continues to have access to the capital market to raise the funds required for investment. The allowed return should therefore be sufficient to assure confidence in its financial health so it is able to maintain its credit and continue to attract funds on reasonable terms. ...



The rate levels should be just and reasonable to the consumer as well as to the utility and in the latter case, the earnings should yield a fair rate of return on money invested. Clearly, if rates are to be just and reasonable to the utility and yield a fair return, the allowable return on common equity should be commensurate

✓

with returns on investments in other firms having corresponding risks, and sufficient to assure confidence in the financial integrity of the firm. Otherwise, the utility will be unable to maintain creditworthiness and attract capital on reasonable terms. The concepts of justice, fairness, and reasonableness are intimately related to comparability of returns, financial integrity, and creditworthiness”.”

Applying to SECL the internationally accepted principles established in these two cases, it becomes abundantly clear that the Regulator’s decision should not force SECL in to a position where it is unable to maintain its credit-worthiness and would be left with insufficient revenues for its operation in an efficient manner over the tariff control period.

19. Normal vs. Abnormal Risk

- (a) Return on equity allowed to IPPs, shifts the onus of normal and controllable risks to the project investors. However, return on equity allowed does not cater for the impact of abnormal, uncontrollable and non-systemic risks such as bankruptcy of the EPC contractor.
- (b) SECL has claimed that its IRR will be reduced to a mere 7%, if allowance is not made for its cost overruns due to bankruptcy of the EPC contractor. Consideration should be given to the fact that, in no other case, has IRR on the IPP’s equity been reduced to a mere single digit. Consideration should also be given to the fact that reduction in IRR will affect the sponsors’ returns not just for one year, but for the entire project life of thirty years.
- (c) Inclusion of risk associated with the EPC contractor’s default in the sponsors’ IRR, will be unfair to the project investor and adverse to the consumer’s interest since it will discourage future investments in the power sector.

20. Fallacy of “Timeless Construction Period”

Paragraph-3.2.19 of the **10th August 2011 Decision** is based on yet another misconception — that the Authority can, or “cannot allow timeless construction periods”. This “allowing” or not “allowing” of construction periods is not within the role of the Authority: it is the direct concern of the Government and of the Power Purchaser, and has already been appropriately addressed in the PPA with suitable provisions of liquidated damages for the delays.

21. Level Playing Field

- (a) SECL’s Implementation Agreement allows it protection against discriminatory action.
- (b) **Section 12.1 of SECL’s Implementation Agreement** provides:



"Assurance Against Discriminatory Action

Neither the GOP nor any Federal Entity shall take any discriminatory action (as described in section 12.4) which materially and adversely affects the Project or the performance of the Company's obligation, or the enjoyment of its rights or the interest of investors or lenders under the project agreements. ... "

- (c) The purport of distinguishing discriminatory and non-discriminatory measures, is stated in Section 12.4, thus:

" ... It is intended, however, to prohibit the use of governmental authority, over Company Consents, for example, to deprive the Company of the benefits of this Agreement or the Power Purchase Agreement by the application of a higher standard to the Company (alone, or together with others in a small class) than to others similarly situated because of, for example, its foreign ownership, or to gain commercial or political advantage."

- (d) It would be travesty of justice if a comparatively low-cost, low-tariff project, using indigenous raw material and turbine-based technology and equipment (of European make) receives IRR in a single digit, while oil-based projects which have reciprocating engine-based technology, have higher project cost and higher tariff (US Cents 16.8 as against US cents 6.4), receive much higher return on equity (almost 50%, as against 9%).




Such unequal and unfair treatment is contrary to the Authority's mandate, which is to encourage efficiency and protect consumers' interest under the NEPRA Act and Tariff Rules. Furthermore, being a federal entity, the Authority is required, under the terms of the Implementation Agreement, to ensure that turbine-based projects are not discriminated against by the Authority.

22. Conclusion

- (a) There can be no doubt that the bankruptcy of SECL's EPC contractor was completely beyond SECL's foresight and control. Compared to other IPPs, this impediment has been unique. I am of the firm opinion that it is in the interest of both the investor and consumers, that the extraordinary circumstances faced by SECL are given due consideration by the Authority.
- (b) Gas, being its primary fuel for power generation, enables SECL's to generate electricity at a competitive price during the tariff control period of 30 years. SECL's overall project cost per MW is favourably comparable with other IPPs. In fact, SECL's claimed project cost is lower than many IPPs, despite the abnormal circumstances faced by it. SECL's tariff per kWh is also amongst the lowest in the country. The objective of the 2002 Power Policy — **"To provide sufficient capacity for power generation at the least cost, and to avoid capacity shortfalls"** — would be sadly defeated.
- (c) In light of the foregoing, it is my considered opinion that the regulator must stand resolutely firm and protect its statutory mandate to encourage efficient technology and look after the interest of the consumers and producers of electric power. After all, for the Authority to ensure comparatively cheap power for the consumers, it

must first ensure the sustained production of that electric power as well as the trust and confidence of investors. Resiling from its decisions given in its determinations and misinterpreting PPA, may choke genuine investors of producing electricity at competitive rates and denying consumers of cheap electric power which may add to the unaffordable and unending darkness.

- (d) In view of the foregoing, including the stipulations in the tariff determinations/decision of the Authority in this case, the NEPRA Act and Rules, Guidelines issued by the Federal Government, and circumstances of the case, I am of the considered opinion that the construction period up to the actual COD, and the resultant IDC, after deduction of interest income upto COD, of Rs.10.422 million, amounting to Rs.3632.298 million should have been allowed to SECL up to its actual COD. Accordingly, ROEDC should be revised keeping in view the relevant dates of equity injection within the actual construction period — as Rs.0.1392/kW/h against the determined ROEDC component of Rs. 0.0228/kW/h.


Zafar Ali Khan
Member (Tariff) 8/9/11



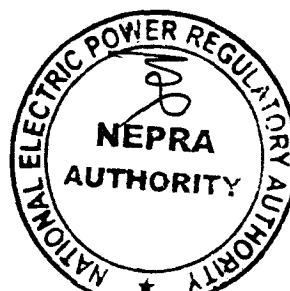
DISSENTING NOTE OF MR. MAQBOOL AHMAD KHAWAJA,
MEMBER NEPRA IN THE MATTER OF ADJUSTMENT IN
GENERATION TARIFF OF SAPPHIRE ELECTRIC COMPANY
LIMITED AT COMMERCIAL OPERATION DATE
CASE NO.NEPRA/TRF-125/SECL-2009

After going through Decision of Authority majority members and dissenting note of Mr. Zafar Ali Khan Member Tariff, my observations are as following:-

- 1) As a matter of principle, all Authority determinations are based on 15% IRR for all IPP Thermal Projects so as to allow proper return on investments by sponsors in form of equity / loan.

In present case, it is very strange that Sapphire Electric Company Limited claims that due to non-acceptance of their actual expenses by Authority, their IRR has been reduced to 7%. Whereas Authority in present decision has not accepted this on the plea that SECL have not submitted basis of arriving figure of 7%. I feel that Authority professionals could have calculated factual IRR figures to refute SECL claim which has not been done. On the other hand Mr. Zafar Ali Khan, Member (T) who is heading Tariff Division of NEPRA during last 5 years is his dissenting note has mentioned clearly that in present state, IRR of SECL works out as 9%. If so than it will be unfair to SECL who is a sponsor of gas based project and completed same expecting IRR of 15%.

- 2) (a) SECL has claimed that due to bankruptcy of EPC contractor they had to engage local contractors and as such ultimately had to spend more. Whereas they have also paid penalty of \$ 7.0 million to Power Purchaser due to delay in commissioning.
- (b) It is also important to decide that due to bankruptcy of any bank or any company what is the maximum any affectee / sponsor can do? As I



understand, they can claim certain damages as per contract / agreement. After that shall they abandon the project or try to complete.

- (c) Due to bankruptcy of M/s. SKODA, EPC contractor which is, no doubt beyond control of SECL, is a ground reality & must be taken into consideration. Had SECL not engaged other contractors, the project would not have come and ultimately effected quantum of generation in the country which was badly needed at that time & even now.
 - (d) I feel that we have to take holistic view of overall project and accordingly try to compensate the genuine problems instead of making decision in mechanized manner.
 - (e) I think it is necessary to work out actual expenditure after proper verification and if found genuine and prudent, we should allow if not all expenses, at least to a reasonable extent after considering L. D's received by sponsor from EPC contractor M/s. SKODA & penalty paid to Power Purchaser.
- 3) There is also a pertinent point raised by Mr. Zafar Ali Khan in his dissenting note that the power generators / IPP's generating power through reciprocating engines based on furnace fuel oil are making huge profit even up to 50%. In my opinion this matter is serious and needs to be examined in detail by the Authority. If so investors / sponsors will be encouraged to generate electricity through reciprocating engines on furnace oil instead of turbine technology / indigenous resources.
- 4) It is a matter of fact that in Authority's determination's we have neither given any incentive for early completion of project nor put any penalty on delays. In case of Engro, the only project which was completed before the required period with reduced EPC cost, Authority could not provide any benefit for this achievement



which I understand is the only project. All the projects considered to be fast track could not achieve RCOD and could not be penalized. This pertinent aspect must be kept in view during decision making.

- 5) I am personally of the opinion and always have been vocal that indigenous fuel based generation needs to be more encouraged and promoted. For this even now we are in the process of upfront / feed-in tariff for indigenous resources like wind/gas/coal/hydel. Since SECL's generation is basically gas-based and with the optimistic / progressive thinking I am of the view that after few years gas shall be available from Iran and other sources. As such genuine problems if faced by any sponsors of indigenous based fuel must be resolved / dealt with lightly as per ground realities. SECL's project is also not a fast track project and is a regular project and as such needs to be dealt with a separate perspective.

Based on my above observations, ground realities and bankruptcy of M/s. SKODA which was beyond control of the sponsor and whose project is low cost generation project based on gas turbine technology instead of reciprocating engine and as such extra expenditure had to be incurred and above all because of reduction of IRR from 15% to 9%, as calculated by Mr. Zafar Ali Khan, Member (T) as mentioned in his dissenting note whereas Authority has not worked out / mentioned the resultant % IRR of SECL as per the present determination, I strongly feel that Authority's present decision is more mechanical & less realistic on actual ground realities.

I therefore, dissent present decision of the Authority.



Maqbool Ahmad Khawaja
Member (Standards)

Additional Note of Mr. Shaukat Ali Kundi in the matter of adjustment in Generation Tariff of Sapphire Electric Company Ltd. (SECL) at Commercial Operate Date (COD)
Case No. NEPRA/TRF-125/SECL-2009

1. Mr. Zafar Ali Khan, Member NEPRA, while dissenting in the matter of adjustment in generation tariff of Sapphire Electric Company Ltd.(SECL) at Commercial Operation Date (COD) at Para 4 has stated that after detailed deliberations, in view of the difference of opinion amongst the Authority Members in the matter of Interest During Construction (IDC), I voted in favour of allowing IDC on actual basis to SECL. In my opinion worthy Member has not kept in view the factual position, as reflected in his dissenting note. The position stated is ostensibly not in line with sub-Section 1 of Section 6 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 which states that *"all orders, determinations and decisions of the Authority shall be taken in writing and shall identify the determination of the Chairman and each Member."* The decision of the Authority does not attain finality until and unless it is signed by the Authority, therefore referring to a mere discussion in the dissent note has no legal bearing.
2. As a matter of fact, principally, I agreed on all the adjustments except IDC because full facts of the case were not before me and I wanted to go through the detailed record and Authority's earlier decisions in this regard. In view thereof, I advised tariff professionals to provide relevant record along with the decisions of the Authority in the similar matter. Having gone through the Authority's earlier decisions in similar other cases, I noted that the decision signed and circulated by the worthy Member for signatures of the Authority was entirely inconsistent with the Authority's earlier decisions regarding IDC. Since each Member and the Chairman has to give its decision in writing, therefore, when I received the decision I showed my intentions in writing to write note of dissent in the matter of IDC which is part of record.
3. I am also surprised to see the worthy Member's stance at Para 7(b) of the dissenting note which is altogether contrary to worthy Member's earlier stance at Para 3.1.5 of the decision duly initialed and signed by the worthy Member on 8th Jul 2011. The aforesaid Para is reproduced as follows:

