

**TAMIL NADU ELECTRICITY REGULATORY COMMISSION**  
(Constituted under Section 82 (1) of the Electricity Act 2003  
Central Act 36 of 2003)

**PRESENT:-**

Thiru.S.Kabilan ... Chairman  
Thiru.K.Venugopal .... Member  
and  
Thiru.S.Nagalsamy .... Member

**D.R.P. No. 14 of 2009**  
**and**  
**M.P. No.1 of 2010**  
**in**  
**D.R.P. No.14 of 2009**

M/s. Penna Electricity Limited  
Rep. by Executive Director  
Sri. Bezawada Vikram  
New No.37, Vijayaraghava Road  
T.Nagar, Chennai – 600 017.

.... Petitioner  
(Thiru.A.Satyaseelan, Advocate for Petitioner)

**Vs.**

1. The Tamil Nadu Electricity Board  
Rep. by its Chairman  
No. 144, Anna Salai  
Chennai – 600 002.
2. Member (Generation)  
The Tamil Nadu Electricity Board  
No.144, Anna Salai  
Chennai – 600 002.
3. Chief Engineer  
(Independent Power Project)  
The Tamil Nadu Electricity Board  
No.144, Anna Salai  
Chennai -600 002.

.... Respondents  
(Thiru.H.S.Mohammed Rafi,  
Advocate for Respondents)

**Dates of hearing: 26-08-2009, 14-10-2009, 25-02-2010, 8-7-2010, 18-8-2010, 21-10-2010, 27-10-2010 and 13-1-2011.**

**Date of Order : 30-12-2011**

The Dispute Resolution Petition No.14 of 2009 and Miscellaneous Petition No.1 of 2010 came up for hearing before the Commission on 26-8-2009, 14-10-2009, 25-2-2010, 8-7-2010, 18-8-2010, 21-10\*2010, 27-10-2010 and 13-1-2011. The Commission upon perusing the above Dispute Resolution Petition No. 14 of 2009 and Miscellaneous Petition No.1 of 2009 and other connected records and after hearing both sides passes the following:-

**ORDER**

**Prayer in D.R.P.No.14 of 2009:-**

a. To direct the Tamil Nadu Electricity Board (TNEB), the Respondent to make the payment of Rs.25.63 cores towards fixed charges and Rs.8.10 crores towards payment due on the actual variable charges payable in respect of the power generated and availed for 153.26 millions unit during the period 29-10-2005 to 30-6-2006 (Open Cycle Operation of the Gas Turbine) to the Petitioner.

b. To direct TNEB to make the payment to the Petitioner of the sum of Rs.18.06 crores towards under recovered fixed charges in respect of operations of the generating station of the Petitioner for the period 1-7-2006 to 15-6-2009 (Combined Cycle Operation of the Gas Turbine and the Steam Turbine).

c. To direct TNEB to make the payment to the Petitioner of the sum of Rs.12.77 crores towards under recovered additional cost of generation (variable charges) in respect of operations of the generating station of the Petitioner for the period 1-7-2006 to 15-6-2009 (Combined Cycle Operation of the Gas Turbine and the Steam Turbine).

d. To direct TNEB to take immediate decisions on the use of Naphtha or any other compatible fuel as alternate / supplemental fuel to increase and maintain the PLF of the plant as contemplated in the amending PPA dated 25-8-2004 in future thereby enabling the plant being operated at optimal level so as to ensure the advantage to the Respondent and also the assured return to the Petitioner.

e. For any reason if the TNEB were not to consider any or all of the relief claimed above by the Petitioner, then to direct the TNEB to make the payments due to the Petitioner as in prayer (a) (b) and ( c ) above and relieve the Petitioner from the obligations of the amendment PPA dated 25-8-2004.

**2. Prayer in M.P.No.1 of 2010 in D.R.P. No. 14 of 2009:-**

a. To declare Power Purchase Agreement dated 25-8-2004 between TANGEDCO and M/s.Penna Electricity Limited as unenforceable in law and unworkable.

b. To direct the Respondents to amend the Power Purchase Agreement with reference to technology.

c. To direct the Respondents to place the amended PPA to TNERC's approval.

**Facts of the case :-**

a. The Petitioner is an Independent Power Producer (IPP), operating and maintaining a Combined Cycle Gas Turbine (CCGT) Power generating station at Valantharavai Village, Ramnad District with a generating capacity of 52 MW. The said generating station of the Petitioner is dedicated to the Tamil Nadu Electricity Board (TNEB), the Respondent herein and the entire power generated is to be supplied to the Respondent only.

b. The tariff for sale of electricity by a generating company to the Board was to be determined in accordance with the norms regarding operation and the Plant Load Factor as may be laid down by the Authority and in accordance with the rates of depreciation and reasonable return and such other factors as may be determined, from time to time, by the Central Government by Notification in the Official Gazette – being the Notification dated 30-3-1992 published by the Authority, Ministry of Power in exercise of power under then Section 43 (A) (2) of the Electricity (Supply) Act, 1948.

c. The Power Purchase Agreement (PPA) in respect of the said project was signed on 29-4-1998 incorporating the provisions relevant to the technology and the tariff determined based on the factors determined by the Central Government relevant to the project. Later, the consortium led by the said M/s.DLF Power

Limited was changed to the consortium led by M/s.Arkay Energy Limited (now M/s.Penna Electricity Limited, the Petitioner herein), with the approval of GOTN.

d. Subsequent to the PPA on 29-4-1998, as the price of liquid fuel, HSFO, in respect of the said DG based power project at Hosur was on the increase, the Company was asked to find alternate fuel. Accordingly, the natural gas available in Ramnad district was identified as an alternative fuel and GOTN during 2001, approved the change of technology of the said project from DG based to Gas Based Combined Cycle Power Generation and also the shifting of the location of the project from Hosur to Valantharavai in Ramnad District.

e. Consequent to the change of technology and the location as approved by GOTN, the PPA of TNEB entered with the said M/s.DLF on 29-4-1998 was amended by TNEB and the said amended Power Purchase Agreement was signed by TNEB with M/s. Arkay Energy Limited on 25-8-2004.

f. Based on the permission given by TNEB on 17-10-2005, the GTG (in Open Cycle Operation), was synchronized with TNEB grid on 29-10-2005. Ever since the synchronization, the GTG unit of the generation station was generating and supplying continuously 30 MW into TNEB grid.

g. After carrying out and completing the construction activity relating to Steam Turbine Generator (STG) requested the permission from the Respondent for synchronizing the Steam Turbine Generator on 1-4-2006. The Respondent

granted its approval on 6-4-2006. Thereafter, the Petitioner commenced the Combined Cycle Operations of the generating station on 1-7-2006.

h. The power generated and supplied to TNEB grid on continuous basis from GTG unit in open cycle operation during the period 29-10-2005 to 30-6-2006 was 153.26 million units.

i. In respect of the power generated and supplied from the GTG unit in open cycle operation, the Petitioner claimed the payment of fixed charges in addition to the variable charges.

j. The Respondent, ever since granting of its approval on 17-10-2005 for synchronization of the GTG unit in open cycle operation, has been contending that the power generated and supplied from the GTG unit in open cycle operation would be treated as infirm power qualifying for payment of variable charges only and has been denying the fixed charges to the Petitioner.

k. Pending a decision on the payment of variable charges for the power generated and supplied from the GTG unit in open cycle operation as claimed by the Petitioner, the Respondent has been making interim payment of the variable charges that too on ad-hoc basis at the rate of Rs.0.70 per unit.

l. During July 2009 the Petitioner made a claim letter on the Respondent detailing and justifying each and every claim and demand of the Petitioner for

consideration by the Respondent for payment or in the alternative to treat the claim and demands as dispute to be resolved through arbitration. The Respondent neither has paid the claims and demands of the Petitioner as above, nor has chosen to resolve and find solution to the issues.

m. In the circumstances above stated, the Petitioner has no other alternative than to approach this Commission against the non-responsive attitude of the Respondent on the claims and demands of the Petitioner.

Hence the Petitioner has filed the above D.R.P. No. 14 of 2009.

**4. Contention of the Petitioner in D.R.P. No.14 of 2009:-**

a. The synchronization of the GTG unit of the Petitioner's generating station was approved by the Respondent. The SLDC / MLDC never instructed to stop generation from the said unit nor interfered in the generation except on certain occasion of emergency they instructed the Petitioner to reduce the power generation. Otherwise, MLDC / SLDC has been accepting the power from the unit into the grid without any demur. Besides, the GTG unit in Open Cycle Operation has been generating and supplying 30 MW continuously to the TNEB grid which the Respondent has been accepting for its commercial purposes. In the light of the above and with reference to the definition of infirm power read with Clause 5.3 of the PPA dated 25-8-2004 further read with the schedules annexed to the said PPA through the Addendum No.1 dated 17-11-2007, the power supplied and availed from the GTG unit in Open Cycle Operation at 153.26 million units during the period 29-10-2005 to 30-6-2006 cannot be categorized as

infirm power under the provisions of the said PPA dated 25-8-2004 and consequently the Respondent cannot deny the fixed charges and the actual variable charges treating such power as infirm power. The denial on the part of the Respondent is therefore opposed to the provisions contained in the PPA dated 25-8-2004 itself.

b. The power generated and supplied by the Petitioner during the period 29-10-2005 to 30-6-2006 at 153.26 million units out of the GTG unit in Open Cycle Operation was with the approval of the Respondent which was also subjected to compliance with the grid conditions as instructed by SLDC. The power generated and supplied was on continuous basis into the grid which was also accepted by the Respondent. The supply of power from the GTG unit was in compliance with the directive of the Respondent who would be entitled for the power supplied and to avail from the GTG unit in Open Cycle Operation at 153.26 million units during the period 29-10-2005 to 30-6-2006 for fixed charges as well as the payment of the actual variable charges. The denial by the Respondent is thus opposed to their own directives on the procedural requirements as contemplated in the PPA dated 25-8-2004.

c. The denial by the Respondent is opposed to the statutory directives of Government of India and the mandates of the policy of Government of India in encouraging the private participation in the electricity generation.

d. The PPA dated 29-4-1998 was with reference to DG based power project while the amendment PPA dated 25-8-2004 was with reference to CCGT power project. The amendment PPA dated 25-8-2004, the provisions applicable to gas based generation technology has to be as contemplated in the Notification of Ministry of Power dated 30-3-1992 and in the policy of the Government of India. In such circumstances and in the light of the fact that the generating station established by the Petitioner is a dedicated one to the generating capacity of the Respondent and the power generated from the GTG unit was exclusively to the commercial purposes of the Respondent, the entry into commercial operation of the plant as contemplated in the PPA dated 25-8-2004 is to be seen with reference to the Petitioner enabling the Respondent utilizing the power generated for their commercial operation. In that context, the power generated and supplied at 153.26 million units during the period 29-10-2005 to 30-06-2006 which was after carrying out the capacity test should also be construed and amounting to an entry into commercial operation entailing the Petitioner the payment of fixed charges as well as the actual variable charges for the said 153.26 million units generated and supplied during the period 29-10-2005 to 30-6-2006. The denial by the Respondent is thus on a misinterpretation of the provisions of PPA dated 25-8-2004 and non-appreciation of the statutory requirements under the notifications and policies of Government of India.

e. The Respondent are fully aware that the heat rate under Open Cycle Operation cannot be the heat rate specified for the Combined Cycle Operation and the heat rate under Open Cycle Operation would always be higher than the

rates specified in respect of Combined Cycle Operation. It is on the basis of this technicality, the guidelines of Government of India, the notification of the Ministry of Power dated 30-3-1992 and the Tamil Nadu Electricity Regulatory Commission (terms and conditions for determination of tariff) Regulations, 2005 contemplated and provided for separate heat rate for the Open Cycle Operation and Combined Cycle Operation of the units in the generating station. The Respondent keeping in line with the statutory prescriptions in this regard, have applied the principles to pay the fixed charges as well as the actual variable charges calculated on the basis of heat rate prescribed for the Open Cycle Operation to the other similarly placed generating companies in the State. However, in the case of Petitioner, the Respondent has not applied the said principles. Thus the Respondent, by the said statutory prescriptions as well as their contractual conducts have not followed the said principles of paying the fixed charges as well as the actual variable charges in respect of power availed and utilized from the Petitioner treating the power as firm power. The Respondent in the Petitioner's case, have taken a different view citing non-availability of the provisions in the PPA.

f. The Respondent despite being requested has not bothered to take any action on alternate fuel to maintain the operations of the generating capacity. The Respondent having failed in their contractual obligation as contemplated in the PPA dated 25-8-2004 cannot be allowed to deny the payment of fixed and the additional cost of generation which is not contemplated and which is under recovered by the Petitioner arising out of the short supply of gas and the consequent under performance of the generating plant.

g. The generating station of the Petitioner is capable of achieving the technical parameters and the 85% Plant Load Factor. However, on account of the short supply of gas has been under performing and achieving lesser PLF equal and corresponding to the quantity of gas received from GAIL. In the under performance of the generating station, the consumption of gas for generating 1 KWhr as contemplated in the amendment PPA dated 25-8-2004 is impractical. In such circumstances, for generating 1 KWhr, the consumption of gas within the aforesaid short supplied gas has to be more. The Respondent is aware that this has resulted in generation of less electricity not commensurating to the quantity of gas received and the payments made therefor to M/s.GAIL and the Petitioner thereby incurring additional cost of generation. In such circumstances, the reimbursement of variable charges by the Respondent based on the provisions made in the amendment PPA dated 25-8-2004 is not correct both contractually and statutorily.

h. Under the provisions of the PPA dated 25-8-2004, the Respondent are obliged to address and remedy any uneconomical and unviable operations of the plant especially when the operations of the plant being dedicated and exclusive to them. The Respondent having failed in their contractual obligations cannot take a stand that they have no obligation to pay the fixed charges and the additional cost of generation under recovered by the Petitioner arising out of under performance of the plant which is an account of the short supply of gas. Alternatively, the Respondent, after making good the claims on actual to the

Petitioner, in respect of the future operations of the generation station, should have relieved the Petitioner from the obligations of the PPA dated 25-8-2004. The Respondent neither have paid the claims and demands of the Petitioner on actual and enable the Petitioner to continue the operation economically and as a viable one nor have relieved the Petitioner from the obligations of the PPA dated 25-8-2004.

i. One of the resolve of Government of India as reflected in the policy resolution, notifications and the guidelines in matters connected with encouraging of IPP's for the benefit of the State Electricity Board is that the IPP's, arising out of the generation operation for and on behalf of the State Electricity Board should be ensured an assured return of 16% on the equity employed. One of the reason on which the Petitioner committed itself to the business of generating electricity for and on behalf of the State Electricity Board was this representations and assurances statutorily committed by the Government. The Respondent, by denying the fixed charges of Rs.18.03 crores and the cost of generation of Rs.12.77 crores under recovered by the Petitioner arising out of the under performance of the plant caused on account of commissions and omissions by the Respondent have not only resulted the additional financial burden and in view of non-payment a financial losses to the Petitioner but also made the statutory assurances and promises of the Government as an illusion. The Respondent, as a statutory body cannot be a party to flout the statutory promises and assurances of the Government.

**5. Contentions of the Respondents in Counter in D.R.P. No.14 of 2009 :-**

a. The Power Purchase Agreement with M/s.Penna Electricity Limited (formerly M/s.Arkey Energy Limited) was signed by TNEB based on the norms specified in the guidelines of GOI. As per the guidelines, the tariff payable for the IPPs is in two part system, i.e. fixed and variable charges.

b. As per para 1.3 of Ministry of Power, Government of India notification dated 30-3-1992, in respect of infirm power, that is sale of electricity prior to commercial operation of the unit, any revenue from sale of power prior to commercial operation of the unit (other than the fuel cost) should be taken as reduction in capital expenditure and not as revenue.

c. The Respondent in its letter dated 17-10-2005 communicated its approval for synchronization of Gas Turbine Generator of the Petitioner with TNEB grid reiterating the provisions in the Power Purchase Agreement for the tariff applicable for supply of the power before commercial operation. The Gas Turbine Generator of M/s.Penna Electricity Limited was synchronized with TNEB grid on 29-10-2005, for testing purpose. As per Article 1.1(Definitions) of the Power Purchase Agreement, "*infirm power*" means the electricity produced by the project and delivered to the Board prior to the date of commercial operation at the supply point, not on any request or despatch instructions of the Board, in respect of which the Board shall pay the company, variable charges.

d. As per Article 1.1 (Definitions) of the PPA "*Tariff Heat Rate*" shall be based on the lowest calorific value of the fuel determined in accordance with the fuel test pursuant to Section 7.3 (b) and shall be equal to lower of actual tariff heat rate of the project and 1980.0 kcal/Kwhr. According to the said provisions of the Power Purchase Agreement, M/s.Penna Electricity Limited is eligible for variable charges only for the power supplied before commercial operation at the tariff heat rate of 1,980 Kcal/Kwhr or actual, whichever is lower.

e. M/s.Penna Electricity Limited in their letter dated 10-11-2005 informed that they would be able to deliver continuously power at 30 MW under open cycle on firm basis and requested TNEB to give fixed cost also along with variable cost. Board has not communicated any acceptance for this.

f. After erection and commissioning the Steam Turbine Generator on 15-4-2006, the project conducted the capacity test and achieved commercial operation on 1-7-2006 with a capacity of 50.3 MW against the contracted capacity of 52.8 MW.

g. Since the company did not submit the invoices for the infirm power supplied before commercial operations, Board had not made any payment. However, based on the request of the company adhoc amount at the rate of Rs.0.70 / unit was paid to M/s.Penna Electricity Limited for the period from 29-10-2005 to 1-7-2006 for the 153,264,000 units. In a similar case, in view of the unsatisfactory power supply position prevailed during summer of 2005, Board

purchased power from M/s.Aban Power Company Limited by paying proportionate fixed charges at Rs.1.04/Kwhr (approx.), from 14-5-2005 to 14-7-2005. As per the Power Purchase Agreement, M/s.Aban Power Company Limited was eligible for variable charges only for the power supplied before commercial operation. The total units supplied by M/s.Aban Power Company Limited during this period was 76.47 mu. TNEB has paid a sum of Rs.7.18 cores to M/s.Aban Power Company Limited towards fixed charges for the 76.47 million units.

h. Based on the request of M/s.Penna Electricity Limited for payment of fixed charges before COD, Board decided to pay proportionate fixed charges for the period 1-2-2006 to 15-4-2006 subject to the condition that M/s.Penna Electricity Limited shall refund the entire sum if AG's audit has raised any objection for this payment at a later date. It is submitted that M/s.Penna Electricity Limited has not accepted this proposal and requested to pay fixed charges for entire power supplied before commercial operation.

i. In the meantime, Accountant General Audit has raised an objection for the payment of proportionate fixed charges paid to M/s.Aban Power Company Limited.

j. According to Section 20 (3), TNERC (Terms and Conditions for Determination of Tariff), Regulations, 2005, the cost of infirm power shall be the

lowest fuel cost applicable to the existing similar type of station. The revenue earned from sale of power (infirm) shall be treated as reduction in capital cost.

k. As per the above provisions the generating companies are eligible for fixed charges only after conducting capacity test satisfactorily and entering into commercial operation. Any revenue earned before commercial operation should be adjusted towards capital cost of the project. Hence the Board initiated action to recover the fixed charges paid to M/s.Aban Power Company Limited and not to reimburse fixed charges to M/s.Penna Electricity Limited and in the letter dated 16-5-2008 withdrew the acceptance for payment of proportionate fixed charges to M/s.Penna Electricity Limited. M/s.Aban Power Company Limited filed a Writ Petition before the High Court of Madras against the decision of TNEB. The court ordered that there shall be an order of interim stay till 4-8-2008 and subsequently extended the stay until further orders.

l. M/s.Penna Electricity Limited is having a Gas Supply Agreement with M/s.Gail dated 16-12-1999 and subsequent amendments for supply of 2,98,000 SCMD of natural gas under administered market price. M/s.Penna Electricity Limited in its letter dated 26-10-2007 stated that M/s.GAIL has indicated that gas availability from ONGC, Ramanathapuram was low and difficult to supply daily contracted quantity and has imposed supply reduction of 15% to the allocated daily quantity to M/s.Penna Electricity Limited from 24-10-2007 onwards. Due to the gas shortage the 52.8 MW combined cycle plant was operated under partial load.

m. During December 2007, M/s.Penna Electricity Limited has erected the 13.6 MW (2 x 6.8 MW gas engines) expansion project, approved by Board as per the provision of the tariff policy of Government of India. M/s.Penna Electricity Limited stated that due to low gas inlet pressure of about 5.5. kg /cm<sup>2</sup>, the daily nominated quantity of gas by GAIL could not be consumed by the combined cycle plant (minimum pressure required for Gas Turbine is about 9 kg/cm<sup>2</sup>) supplied and requested permission to operate 2 x 6.8. MW engines (minimum pressure required for gas engines is about 3.5 kg/ cm<sup>2</sup>).

n. Board permitted the synchronization of gas engine No.1 of the expansion project on 5-12-2007 and the commercial operation on 14-1-2008. Due to shortage of gas Board is yet to permit the commercial operation of gas engine No.2. The tariff petition filed by Board for the 13.6 MW project vide PPAP-1 of 2008 was dismissed by the Commission with a direction to approach the Commission after completing the project. M/s.Penna Electricity Limited in their letter dated 31-12-2008 informed TNEB that the 13.6 MW expansion projects' generation was interrupted due to shortage of gas from 15-12-2008. From the date of commercial operation of engine No.1 to 18-12-2008, the Petitioner recovered fixed charges amounting to Rs.6.44 crores, on the account of expansion project.

o. Subsequently on 31-7-2008, M/s Penna Electricity Limited had entered into a gas supply agreement with M/s.GAIL for supply of 80,000 SCMD of natural

gas under Market Driven Price (MDP). Now, along with market driven priced gas, M/s.Penna Electricity Limited is getting around 2,45,000 SCMD of natural gas to their plant. Using this quantum of gas the company can generate only 45 MW against the contracted capacity of 52.8 MW.

p. As per Power Purchase Agreement, the levelised fixed charges for the project is Rs.1.3768 for 15 years. The fixed charges will be paid upto 85% of the PLF and after that Rs.0.50 / unit will be paid as incentive. For the present tariff period, the fixed charges payable is Rs.1.65/Kwhr.

q. M/s.Penna Electricity Limited states that due to shortage of natural gas the plant could not be operated at optimum load and they could not achieve 85% PLF for full recovery of fixed charges. As per PPA, the company has to generate 393.2 MU per annum to achieve 85% PLF and full fixed cost.

r. During the period from 1-7-2006 to 30-6-2007, sufficient quantity of gas was available to M/s.Penna Electricity Limited to operate the power plant at 52.8 MW contracted capacity. But one of the reasons for the low generation was due to the entry into commercial operation of the project at 50.3 MW, around 95% instead of 52.8 MW, during the capacity test. The company achieved the 52.8 MW contracted capacity only on 12-12-2006.

s. M/s.Penna Electricity Limited had intimated the shortage of gas to TNEB on 26-10-2007. The reason for low generation in the 52.8 MW combined cycle plant during the period from 1-7-2007 to 15-6-2009 may be due to:

- i. shortage of natural gas to operate the plant at optimum load.
- ii. due to unforeseen shut down of the plant and other reasons attributable to the company.
- iii. operating the 13.6 MW expansion project. During this period M/s.Penna Electricity Limited received fixed charges from TNEB amounting to Rs.6.44 crores.
- iv. operating the auxiliaries of the 13.6 MW expansion project from 52.8 MW power plant generation.

Since the company could not achieve 85% for the said reasons, they are not entitled to recover full fixed charges for the above periods.

There is no provision in the Power Purchase Agreement or guidelines to compensate the loss of fixed charges due to shortage of fuel except force majeure conditions and grid dispatch conditions.

u. As per Article 1.1 (Definitions) of the PPA "Tariff Heat Rate" shall be based on the lower calorific value of the fuel determined in accordance with the fuel test pursuant to Section 7.3. (b), and shall be equal to lower of actual tariff heat rate of the project, and 1980.0 kcal / Kwhr. It is respectfully submitted that according to the provisions of the PPA, TNEB is paying the variable charges to M/s.Penna Electricity Limited from 1-7-2006 to 15-6-2009 as per the formula:

Monthly variable charges payment

$$= \frac{\text{Tariff Heat Rate} \times \text{Gas Price} \times \text{Net Metered Energy}}{\text{Calorific Value of Gas}}$$

v. M/s.Penna Electricity Limited in their letter dated 26-10-2007 intimated the shortage of natural gas to their power plant. Hence the higher heat rate during the period from 1-7-2006 to 30-6-2007 was due to the plant operating conditions attributable to M/s.Penna Electricity Limited and entry into commercial operation of the plant with 50.3 MW instead of 52.8 MW.

w. When the tariff heat rate was less than or equal to 1,980 Kcal/Kwhr for the particular month, Board fully reimburses the fuel cost to the company. In some of the months, the tariff heat rate was more than 1,980 Kcal/Kwhr (for example the actual heat rate was 2,253 Kcal/Kwhr for the month of Jan-Feb 2009 invoice). In these cases, according to the definition of tariff heat rate of 1,980 kcal/kwhr in the PPA, Board can only partially reimburse the fuel cost.

x. M/s.Penna Electricity Limited states that the unpaid gas bills accumulated to nearly Rs.12.77 crores. This may be due to the above said reasons. There is no provision in the PPA / guidelines for compensating the company for the higher tariff heat rate due to shortage of gas.

y. Using the present quantity of 2,45,000 SCMD of natural gas supplied by M/s.GAIL, M/s.Penna Electricity Limited can run the plant approximately at 80% of the contracted capacity only. As per Article 7.5 (a) of the PPA, the company may go for change in fuel due to the following reasons:-

- i. non-availability of the fuel for reasons beyond the control of the company or
  - ii. steep increase in the prices of fuel being used or
  - iii. availability of alternate cheaper fuel.
- z. For using naphtha as fuel, Board has to pay a sum of Rs.124.5 cores (approx.) per month (for the generation of 155.5 million units) as variable charges to M/s.PPN Power Generating Company, an another Independent Power Producer.

aa. As per the Petroleum Rules, 2002 of GOI, naphtha shall not be transported through road and to be transported only by pipe line to the power plant. In this case, naphtha to be transported to the nearest port of Tuticorin from the refineries and then to M/s.Penna Electricity Limited by pipeline, which involves a high capital cost and additional burden to TNEB by way of fixed charges. In TNEB's letter dated 25-2-2009 and subsequent reminders M/s.Penna Electricity Limited was requested to provide the details about the transport arrangement, tariff details and detailed project report. M/s.Penna Electricity Limited in its letter dated 30-6-2009, furnished the details and the same is under the examination by Board.

bb. The full Board of TNEB has to accord its approval for use of naphtha for mixed fuel operation, since it involves huge additional commitment to TNEB. Depending upon the decision of the full Board, the same will be considered by

the Respondent Board, subject to the outcome of the future decision of the full Board.

**6. Contentions of the Petitioner in M.P. No.1 of 2010 :-**

a. The Government of Tamil Nadu, at the instance of the Respondents, on 21-5-2002, approved the change of technology of the project from gas engine to gas turbine.

b. Consequent to the change of fuel and technology, the Power Purchase Agreement dated 29-4-1998 signed in respect of the said diesel engine generation project was amended and the present Power Purchase Agreement was signed on 25-8-2004.

c. The Tariff Regulations, 2005 of the Tamil Nadu Regulatory Commission issued under Section 61 of the Electricity Act, 2003 contemplates norms and factors separately for units / stations of a generating stations in regard to date of commercial operation, installed capacity, norms of operation, station heat rate etc. separately for open cycle / combined cycle operation of gas turbine combined cycle generating stations.

d. Despite the availability of clear and unmistakable guidelines and statutory prescriptions while amending the Power Purchase Agreement dated 29-4-1998 which was relevant to diesel engine based generation, instead of providing and incorporating appropriate provisions relatable to gas turbine combined cycle

generation in matters connected with both the operations and the payment of tariff, the provisions as contained in the Power Purchase Agreement dated 29-4-1998 was merely adopted and finalized.

e. It is only when the Respondents while granting the permission for synchronizing the gas turbine generating unit (in open cycle) took the stand that the power generated and to be supplied in open cycle mode would entitle the company to receive only the variable charges that too based on the heat rate specified for the generating station in combined cycle mode, the Petitioner realized the insufficient and unworkable provisions of PPA dated 25-8-2004 having been incorporated in the amended PPA and rendering the entire operations and the entitlement to receive the assured tariff becoming doubtful, questionable and debatable.

f. Since then on, the Petitioner has been informing the Respondents as to the mutual and bilateral mistake committed in not incorporating the applicable and appropriate provisions relevant to the technology employed in the generation in the Power Purchase Agreement dated 25-8-2004.

g. The Respondent at some point in time also offered to make payments claiming to be outside the provisions of the PPA.

h. Such attempt on the part of the Respondents gave hope and expectation to the Petitioner in receiving the assured entitlements arising out of the

generation operations, the Petitioner did not take the issue relating to the unworkable provisions of the Power Purchase Agreement with the Respondents.

i. It is a reliable understanding of the Petitioner that, the Respondents in realization of the mistake in not incorporating the relevant and appropriate provisions attributable to the technology employed in the Power Purchase Agreement sought the permission of the Government of Tamil Nadu to amend the PPA dated 25-8-2004 to provide enabling provisions for the Respondents to make the tariff payments to the Petitioner which are assured in the principles and the guidelines of Government of India which are translated as statutory assurances under the notifications of the Government and in the Regulations issued by the Commission. In this regard, it is the understanding of the Petitioner that, when the Government of Tamil Nadu desired the Respondents to decide the issue based on the prevailing guidelines, the Respondents did not take correct and required decision in the matter. If only, this Commission direct the Respondents to produce the relevant records in this connection, the records may throw further light in the matter.

j. The PPA executed on 25-8-2004 ought to have been placed before the Commission for approval and determination of the tariff in terms of the provisions contained in Electricity Act, 2003. If only the said Power Purchase Agreement dated 25-8-2004 had been placed before the Commission for approval and determination as contemplated in law, this Commission as a Regulatory Authority, would have noticed the non-conformities and the unworkable

provisions of the PPA with reference to the technology employed and directed the suitable modifications and amendments thereof to ensure the fairness and the justness of the provisions to the benefit of both the Respondents and the Petitioner. But as the PPA has not been placed before this Commission as required, it is submitted that the entire Power Purchase Agreement dated 25-8-2004 has become unworkable and unenforceable document in the eyes of law and this Commission therefore has the power to direct appropriate changes to be made in view of the statutory power enjoined upon it to regulate the electricity purchase and procurement process of a distribution licensee.

k. It was in above factual background, when the Petitioner could not get any relief from the Respondents, the Petitioner filed the above Dispute Resolution Petition in No. 14 of 2009 stating among other things, as to the incorporation / adopting of the contractual terms and conditions which were relevant to the diesel engine generated based technology as contained in the Power Purchase Agreement dated 29-4-1998 in the amended PPA dated 25-8-2004 which is in respect of gas turbine combined cycle operation generation.

l. The Respondents, despite the factual and the legal position as above, in their counter filed in the above D.R.P. No. 14 of 2009, have taken a position that the PPA signed is based on the norms specified in the guidelines and in accordance with the notification dated 30-3-1992 of Government of India and based on the provisions of PPA, the Petitioner are not entitled to the claims made in the petition.

m. In the said circumstances, the Petitioner has no other alternative than to question the appropriateness of the provisions of the PPA dated 25-8-2004 vis-à-vis the technology employed by the Petitioner in its generating station, the workability of the provisions of PPA with reference to the future operations of Petitioner's generating station till the end of the tariff period and the justifiability of the provisions of the PPA dated 25-8-2004 in matters connected with the Petitioner getting the assured and entitled tariff out of the operations to maintain not only the operations in the plant but also its financial viability to sustain its position as generating company in all respects. The Respondents are bound to make payment of a tariff arrived at in terms of Section 63 of the Act and cannot through arbitrary methods seeks to deny the right available to the Petitioner to receive payment of the entire tariff.

**7. Contentions of the Respondent in counter to M.P. No.1 of 2010 :-**

a. The amended PPA dated 25-8-2004 has been signed by the mutual understating between the Petitioner and Respondent Board after protracted correspondences and negotiations. All the amendments suggested by both the parties were incorporated in the amended PPA. Hence the Petitioner's present contention that non-incorporation of amendments for combined cycle gas plant operation is an afterthought only.

b. The project of M/s.Penna Electricity Limited was selected through competitive bidding and the original tender specifications while floating the tender is applicable to them.

c. The PPA of M/s.Penna Electricity Limited was approved by Government of Tamil Nadu on 10-6-2002, before enactment of Electricity Act, 2003.

d. The Petitioner was at full liberty to include the clauses for separate commercial operation for gas turbine and combined cycle before signing the PPA. They had never raised such a request before signing the PPA.

e. The power project of M/s.Penna Electricity Limited was selected through competitive bidding and the company was well aware of the pros and cons of the project.

f. The PPA between the Petitioner and Respondent Board is a mutually agreed one and applicable equally for both the parties. It is further submitted that at the time of granting permission for gas turbine generator unit during October 2005, the provisions of the PPA was reiterated. It is a known fact that as per the tender bidding documents, the Petitioner has to prove 90% of the contracted capacity of 52.8 MW for entry into commercial operation and subsequent recovery of fixed charges as per Section 5.3 of the PPA. Hence, the Petitioner's contention that the Respondent took the stand for variable charges only while granting permission of gas turbine generator synchronization is not correct and hence not acceptable.

g. Based on the repeated request of M/s.Penna Electricity Limited, in the letter dated 9-3-2007 Tamil Nadu Electricity Board came forward to pay proportionate fixed charges to M/s.Penna Electricity Limited for the power supplied from 1-2-2006 to 15-4-2006, with a condition that M/s.Penna Electricity Limited shall refund the entire amount if there was any subsequent audit objection. But M/s.Penna Electricity Limited has refused to receive the payment.

h. Based on the Accountant General's Audit objection in the case of M/s.Aban Power Company Limited for similar payment, the Respondent subsequently took a stand to withdraw the acceptance accorded to M/s.Penna Electricity Limited for payment of fixed charges before commercial operation. This was intimated to the Petitioner during May 2008.

i. Based on the repeated request of the Petitioner for payment of fixed charges before commercial operation, the Respondent referred this to Government of Tamil Nadu, since the PPA was approved by Government of Tamil Nadu. In reply, the Government of Tamil Nadu suggested that the Tamil Nadu Electricity Board to take a decision as per the guideline in vogue. After going through the guidelines of Government of India notification and tariff regulations of Central Electricity Regulatory Commission and Tamil Nadu Electricity Regulatory Commission, the Respondent took a stand not to reimburse the fixed charges to M/s.Penna Electricity Limited for the power supplied before commercial operation.

j. Since the PPA was approved by Government of Tamil Nadu before functioning of this Commission and enactment of Electricity Act, 2003, the Respondent had not submitted the amended PPA for approval of this Commission. In that stage, it was the responsibility of both the parties to file the amended PPA before this Commission and got it approved. In this case also, as per Section 63 of the Electricity Act, 2003 the appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. In that case also, the Commission shall adopt the tariff and PPA as per Section 63 of the Electricity Act, 2003.

k. In a similar case namely, M/s.Aban Power Company Limited was also selected through competitive bidding during 1996 and the PPA was signed on 1-9-2003. This was intimated to this Commission on 6-9-2003. The Commission in the letter dated 12-6-2003 directed the Tamil Nadu Electricity Board to explain the reasons for not obtaining the approval of the Commission for signing the PPA. The Commission further directed to furnish the details of pending cases for signing the PPA. Tamil Nadu Electricity Board in the letter dated 31-12-2003 informed the Commission that the initialed PPA and tariff was approved by GOTN and the provisions of Section 63 of the Electricity Act, 2003. At that time the Tamil Nadu Electricity Board also informed the Commission that the PPA was signed with M/s.Arkay Energy Limited (now M/s.Penna Electricity Limited) and approved by Government of Tamil Nadu on 10-6-2002 is pending for execution.

**8. Written Submission of both Petitioner and Respondent:-**

**8.1. Submission of Petitioner**

- (i) The project relating to the Generating Station of the Petitioner was initially awarded in favour of the consortium led by M/s.DLF Power Ltd., under the Tariff Based International Competitive Bidding process of TIDCO during 1996.
- (ii) The technology of the project selected was Engine based with HSFO as Fuel and the location was at Hosur.
- (iii) In respect of the said project, the said DLF Power Ltd. and TNEB signed a Power Purchase Agreement on 29-04-1998.
- (iv) However, as the price of the HSFO was on the increase, at the directives of TNEB, Natural Gas available in Ramnad District was identified by the project proponent as alternate fuel for the project.
- (v) On 28-12-2001, at the instance of TNEB, Government of Tamil Nadu approved the change in the name of the project proponent from DLF Power Ltd., to M/s.Arkay Energy Ltd., Hyderabad, change of location of the project from Hosur to Valanthuravai in Ramnad District and the change of fuel from HSFO to Natural Gas.
- (vi) On 21-05-2002, the Government of Tamil Nadu approved the proposal to change the technology of the project from Engine based with Natural Gas as fuel to Turbine based with Natural Gas as fuel.
- (vii) On 23-05-2002, M/s.Arkay Energy Ltd., and TNEB, initialled a Power Purchase Agreement for the purpose of financial closures of the project which was approved by Government of Tamil Nadu on 10-06-2002.

- (viii) Subsequently, after protracted correspondence and negotiation, a final Power Purchase Agreement was executed between TNEB and M/s.Arkey Energy Ltd., on 25-08-2004. The said Power Purchase Agreement in para-3 of its recitals stated clearly that – in view of the above changes, this Power Purchase Agreement between TNEB and the Company amends the Power Purchase Agreement dated 29-04-1998 between the Board and the Company.
- (ix) The project proposed to be established and operated under the Power Purchase Agreement dated 25-08-2004 was a multi-fuel power station with a Combined Cycle capacity of net exportable generation of 52.8 MW consisting gross Gas Turbine capacity of 38.2 MW (Open Cycle) and gross Steam Turbine capacity of 19.2 MW.
- (x) Based on the permission from TNEB, the Gas Turbine (Open Cycle Operation) was synchronized with the TNEB Grid on 29-10-2005 and the generating station commenced the Combined Cycle Generation on 01-07-2006.
- (xi) The TNEB, while giving permission for the synchronization of the Gas Turbine with Grid on 17-10-2005 stated that till Commercial Operation (COD), the energy generated by the Plant will be treated as infirm power and payment will be made for Variable Charges only as per PPA Clause 5.3.
- (xii) It was informed to TNEB that while the energy generated by the Plant during the commissioning, trial and performance establishing period could be treated as infirm power, once capacity and performance of the Gas

- Turbine is established and when supply is committed on firm basis, it should be treated as firm power.
- (xiii) However, on 28-10-2005 TNEB reiterated their stand that all power generated and supplied prior to COD will be treated as infirm power only.
  - (xiv) As there is no decision on the issue, and by then, power to an extent of close to 80 MU was generated and pumped to the Grid on continuous and firm basis, on 07-02-2006, it was informed to the TNEB that with reference to the project configuration, certain conditions of the earlier PPA which were appropriate for Gas Engine Power Plant were not amended to suit Gas Turbine Combined Cycle Power Project, payment for the Power generated and supplied should be made like in the case of payment made to M/s. Aban Power Company Limited and till such time a decision is arrived, the Board should release interim payment towards fuel cost as per the bills from M/s. GAIL.
  - (xv) On 24-07-2006, TNEB, informed that only variable charges is payable for the energy supplied before COD as per PPA provision and in view of the request made, a decision has been taken to pay the Variable Charges provisionally as a special case at Rs.0.70 paise per unit for 95,164,000 units of power delivered upto 15-07-2006 as interim payment.
  - (xvi) On 25-09-2006, TNEB further informed that for the power supplied before COD, Board is obliged to pay Variable Charges only as per Section 5.3 of the PPA. The Variable Charges payable are as per calculation provided in Section 7.3 of the PPA (reckoning the Tariff Heat Rate for Combined Cycle Plant). On the request for payment of Fixed Charges, TNEB is yet

to take a decision. The Company has not specified any separate Tariff Heat Rate for Open Cycle/Combined Cycle which was accepted by GOTN/TNEB and the PPA was signed on 25-08-2004. There is no provision for enhancing the Tariff Heat Rate in the PPA as requested by the Company. Hence the request for revising the Variable Charges by providing a Tariff Heat Rate for Open Cycle for the power supplied before COD has no basis and hence not accepted.

- (xvii) By then the project proponent was changed from M/s. Arkay Energy Limited to M/s.Penna Electricity Limited, the petitioner in the above DRP and M.P.
- (xviii) On the continued persuasion of the issue, the Respondents, on 09-03-2007 informed that their Board in its Minutes dated 22-02-2007 approved the payment of Fixed Charges for supply of 30 MW continuous power for the period before COD in Open Cycle Mode without prejudice to the provisions of PPA and subject to the condition that the Fixed Charges will be paid reckoning actual PLF, adopting the Combined Cycle Heat Rate and upon the Petitioner submitting a Corporate Undertaking to refund the entire amount along with interest at default rate as provided in the PPA in one lump sum in the event of any audit objection in future.
- (xix) The Petitioner did not agree as the said offer was with onerous condition and with reference to the financial constraints being faced on account of non-payment by the Board, kept insisted with the Respondents that the payment of the Tariff already paid by the Board to a similarly placed IPP,

namely, M/s.Aban Power Limited in a similar situation in the State is to be paid to the Petitioner also.

- (xx) While the issue relating to payment of Fixed Charges and the reimbursement of actual fuel charges paid to GAIL as Variable Charges was pending resolution, since January 2007 the generating Plant was subjected to restriction in the supply of contracted quantity of Gas by GAIL and the shortage in supply affected the efficiency of the Operating Parameters of the Generating Station. Hence the Petitioner requested the Respondent's intervention with GAIL for them not to impose any restriction to the Petitioner especially in the background of the Petitioner being an IPP and the entire generation of power was dedicated to the Respondent.
- (xxi) The restrictions in the supply of contracted quantity occurring under oral instructions became official from November 2007 and during April 2008 official cut to an extent of 15% initially and 17% subsequently in the allocated quantity was imposed by GAIL. Though the 17% cut announced officially was for the purpose of trial run of Phase II Generating Station of TNEB, the restriction in the supply of Gas continued thereafter.
- (xxii) On account of the shortage in supply of Gas for the period 1.7.2007 to 30.6.2008 the Generating Station of the Petitioner in the Combined Cycle Operation could achieve only 73.2% PLF and during the period 1.7.2008 to 15.6.2009 could achieve only 66.9% PLF. Arising out of this position, the Respondent were paying the Petitioner the Fixed Charges based on the actual PLF achieved though the Generating Station was capable of

- achieving 85% if only the required quantity of Gas was made available. This resulted in short fall in payment of Fixed Charges to the Petitioner for no fault of it.
- (xxiii) As the restriction in Gas was imposed for the purpose of and at the instance of the Respondent, and the Respondent did not and was not taking any steps to ensure the adequate supply of Gas to the Petitioner's Unit being the only IPP dedicated to the TNEB in the area (the other Generating Station in the area being captive commercial Plant), requested the Respondent for payment of Fixed Charges under the deemed generation concept.
- (xxiv) The shortage in the supply of Gas also affected the Combined Cycle Operating Station achieving the Tariff Heat Rate specified in the PPA. On account of this, as against the payment by the Petitioner for the actual quantity of Gas received from GAIL, the Respondent reimbursed by way of Variable Charges applying the Tariff Heat Rate specified in the PPA. This affected the financial viability of the Petitioner, on account of the short fall in the payment of Variable Charges. The Petitioner was requesting the Respondent to consider paying the Variable Charges to the extent of actual payments made to GAIL as per their bills.
- (xxv) It was the reliable understanding of the Petitioner that, during October 2007, in the light of Audit objections on the payment made to M/s. Aban Power Company Ltd., and the persistent request of the Petitioner herein for payment of Fixed Charges and Variable Charges at the higher Tariff, the Respondents, based on the decision taken in the Board, took up the

matter with Government of Tamil Nadu for amendment of the Power Purchase agreement to enable the Respondents for paying the Fixed charges and Variable Charges in respect of power generated and availed prior to the COD. The Government of Tamil Nadu during December 2007 directed the Respondent Board to examine the issue with reference to the guidelines in force. However, the Board in their meeting during March 2008 decided to recover the amount already paid to the said M/s.Aban Power Company Ltd., and not to pay the Fixed Charges to the Petitioner also. (As the Petitioner had no access to these records, prayed for the Hon'ble Commission to call for the records from the Respondents in para-24 of the Miscellaneous Petition in No.1/2010).

(xxvi) On 15-05-2008, the Respondents, informed that as the Petitioner did not agree to the proposal for payment of Fixed Charges vide their letter dated 09-03-2007 and as per Ministry of Power, Notifications issued by TNERC and CERC, the generating companies are eligible for Variable Charges only for the power generated and supplied before commercial operation and as per PPA, the TNEB is not in a position to pay any Fixed Charges for the power supplied prior to Commercial Operation Date. They also informed the offer made through the said letter dated 09-03-2007 should be treated as withdrawn.

(xxvii) The Petitioner, as an IPP dedicated to the exclusive commercial interest of the Respondents thought it fit to represent its plight to the Chairman of the Respondents and also the Hon'ble Minister for Power, Government of Tamil Nadu for their intervention in the matter. Accordingly, on 17-05-

2008 and 18-09-2008 submitted the representations to the Hon'ble Minister and the Chairman of the Board respectively. It is the understanding of the Petitioner that, while the Hon'ble Minister directed the Respondents to constitute a committee to take a decision on the long pending issue with the Member Account of the Board as Chairman of the Committee, the Chairman of the Respondents instructed for fresh examination of the request made by the Petitioner.

(xxviii) On 12-05-2009, the Respondents quoting the definition of Infirm Power and the Tariff Heat Rate under the Power Purchase Agreement informed that the Variable charges payable for the power generated prior to COD would be applying the Tariff Heat Rate specified in the PPA for the Combined Cycle Operation only. It was also informed that, as the Accountant General's Audit, Government of India, since raised objections for the payment of Fixed Charges to M/s.Aban Power Company Ltd., prior to COD, the Board decided to recover the amount paid to M/s.Aban Power Company Ltd., and hence, the Petitioner cannot be paid Fixed Charges for the power generated prior to COD as already informed vide letter dated 16-05-2008. It was also further informed that, TNEB cannot consider the request of the Petitioner for payment of Fixed Charges and the Variable Charges at a higher Tariff for the power supplied before commercial operation.

(xxix) As the under payment of Fixed Charges and the Variable Charges in respect of power generated under the Combined Cycle Operation was on account of the shortage in the supply of Gas on account of the cut in the

daily nominated quantity by GAIL, the Petitioner during May 2009, requested the Respondents for their concurrence for alternative fuel to augment the capacity utilization of the generating station. It is provided in schedule-8 to the Power Purchase Agreement that in the event of non-availability of Natural Gas from GAIL as per the Fuel Supply Agreement and alternate fuel is required for the plant operation, the same shall be decided by the Petitioner and the Respondents mutually and agreed upon. The Respondents did not come forward to resolve the issue relating to the generating plant under performing its capacity for want of fuel and the Petitioner as an IPP was incurring losses continuously.

(xxx) As all the genuine and sincere attempt of the Petitioner to have the issues resolved by the Administrative Authorities failed, on 06-07-2009 after narrating all the issues and making the claim of all the under payments of Fixed and Variable Costs called upon the Respondents to settle the issue and failing which to refer the matter for Arbitration as provided in the PPA. The Respondents did not respond.

(xxxi) As regards the request of the Petitioner for payment of Fixed Charges and the Variable Charges for the power generated and supplied to an extent of 153.26 MU during the period 29-10-2005 to 30-06-2006 from the Gas Turbine Generator in Open cycle Operation, the rejection by the Respondents was based on the definition of Infirm Power, Tariff Heat Rate etc., as in the Power Purchase Agreement dated 25-08-2004 and the contention of the Petitioner against such rejection was the power generated and supplied during the said period cannot be construed as

- Infirm Power even within such definitions as in the Power Purchase Agreement.
- (xxxii) The Respondents Authorities prior to granting the permission to the synchronization of the Gas Turbine Unit of the Combined Cycle Generating Station of the Petitioner, called for the particulars of the unit vide their communication dated 20-10-2005 for the purpose of furnishing the consolidated report to the Central Electricity Authority to take note of the availability of Generating capacity from the IPP's and to assess the availability of power.
- (xxxiii) The Respondents Authorities carried out a informal inspection of the Unit and they were informed about the said Unit achieving the Base Load Capacity namely 38.2 MW after conducting the required reliability test.
- (xxxiv) The Petitioner vide letter dated 10-11-2005 informed the Respondents Authorities about the capability of the plant to deliver continuous power at 30 MW under Open Cycle Operation on firm basis.
- (xxxv) The Respondents vide their letter dated 23-11-2005 directed the Petitioner to furnish detail relating to hourly Generation Log, daily report of energy meter reading, capacity declaration and details regarding tripping of machinery of the Unit.
- (xxxvi) During the period as the State was reeling under severe shortage of power the Respondents consciously availed the power from the Petitioner like they availed from a similarly placed IPP namely M/s.Aban Power Company Ltd., to whom the Respondents paid Fixed Charges also.

(xxxvii) When the Respondents took a view to pay only the Variable Charges for the power to be supplied from the Gas Turbine Generator in Open Cycle Operation and when the Petitioner protested it was at the intervention of the then Ministry of Electricity, Government of Tamil Nadu and the then Chairman of the Respondents and on the reasonable and legitimate expectation that the assurances from them would be honoured, the Petitioner generated and supplied the power to the commercial advantages and towards discharge of public duty of the Respondents.

(xxxviii) The Respondents were aware of the generating capacity created and made available to the Respondents entitling the Petitioner to get the Fixed Charges.

(xxxix) It is a matter of technicality which the Respondents are fully aware that the Heat Rate under Open Cycle Operation would be in the order of 3000 Kcal/Kwhr and hence the Respondents cannot apply the Tariff Heat Rate prescribed in the PPA at 1980 Kcal/Kwhr which was in respect of the Generation Station as a whole under Combined Cycle Operation.

(xl) The Respondents were also aware that the power generated and supplied from and out of the Gas Turbine Unit under Open Cycle Operation was on Firm basis and continuous.

(xli) The Respondents, in appreciation of the said position also consciously took a decision at their Board level to make payments of fixed charges for the power generated and supplied from the Open Cycle Operation.

(xlii) The Notification issued by Government of India dated 30-03-1992 issued under Section 43A(2) of the then Electricity (Supply) Act 1948, the Tariff

Regulations 2004 of the Central Regulatory Commission and the Tariff Regulation 2005 of the Tamil Nadu Regulatory Commission provided norms and factors including Station Heat Rate separately for Open Cycle Operation Unit and Combined Cycle Operation in a Gas based Combined Cycle Generating Station including provisions relating to Entry into Commercial Operation and the Guidelines issued by Government of India in respect of matters connected with inviting and selecting Tariff Based Competitive Bid provided for payment of Fixed Charges for making available a generating capacity to the SEB. In that context and with reference to the technology adopted in the Generating Station of the Petitioner namely Combined Cycle Generation, the Respondents cannot deny the claims made by the Petitioner,

**B. Submission of the Respondent**

- (i) The Petition filed by M/s Penna Electricity Limited is not maintainable and sustainable in the eye of law.
- (ii) The Petitioner has opted Combined Cycle operation only. If the Petitioner has opted for Open Cycle Operation, the parties would have mutually negotiated the issues at the earliest point of time, ie., at the time of signing of PPA itself. The Respondent never insisted for simple cycle operation in any stage
- (iii) As per PPA the power generated by the Respondent company before commercial operation will be infirm power and eligible for variable charges only.

- (iv) As per the guidelines in force, prior to the commercial operation of the unit, any revenue from sale of power (other than fuel cost) should be taken as reduction in capital expenditure and not as revenue. Hence the Petitioner cannot claim over and above the capital expenditure which has been quoted in 15 year's tariff recovery.
- (v) In letter dated 17.10.2005 itself the Respondents informed the Petitioner that till Commercial operation the energy generated was treated as infirm and variable charges only will be paid as per PPA.
- (vi) In the case of M/s Aban Power Company Limited TANGEDCO paid a sum of Rs.7.18 Crores for the power supplied before Commercial Operation, as per the request of the Respondent Corporation to supply power outside the purview of the PPA. However, the Account General's Audit has raised an objection for the payment made.
- (vii) On 10.11.2005 the Petitioner informed that they would be able to deliver continuously 30 MW power under open cycle on firm basis and requested to give fixed cost also along with variable charges. The Respondent Corporation had not communicated any acceptance for this offer. The petitioner supplied 30 Mw of infirm power to the TNEB.
- (viii) The Gas Turbine Generator of the Petitioner Company was synchronized with TANGEDCO grid on 29.10.2005. Since there was no provision in the PPA for open cycle operation and open cycle capacity, the Petitioner did not conduct any capacity test to prove the Open Cycle capacity for entry into Commercial Operation. Hence, at this condition also the Petitioner's request for Open Cycle Operation could not be considered.

**8.2. Issue-2 Under Recovery of Fixed charges and Short payment of Variable charges:**

**A. Submission of the Petitioner:**

(i) As regards the request of the Petitioner for payment of under paid Fixed Charges and the actual Variable Charges for the power generated and supplied under Combined Cycle Operation for the period from 01-07-2006 to 15-06-2009 (claim up to the period of filing of the D.R.P.), the rejection by the Respondents was that there are no provision in the Power Purchase Agreement dated 25-08-2004 to compensate the Fixed Charges and the Variable Charges arising out of shortage in the supply of Gas and the contention of the Petitioner against such rejection was that, the Petitioner, even within the provisions of the said Power Purchase Agreement would be entitled for such payment.

(ii) The Respondents were aware about the shortage in supply of Gas to the plant since January 2007 onwards.

(iii) The Gas bills submitted by the Petitioner to the Respondents would show the Petitioner received only 89.29% of the contracted quantity of Gas during the said period.

(iv) The Respondents were aware on account of reduction in the supply of Gas to an extent of 15% in the allocated daily quantity of Gas, the Generating

Station was operating under partial load condition only and the capacity achieved was only 45 MW as against the contracted capacity of 52.8 MW.

(v) The Respondents were aware that consequent to the under performance of the Generating Station arising out of shortage in fuel occasioned on account of the Respondents themselves, the plant was not achieving 85% PLF

(vi) The Respondents were aware from the records filed with them that the shutdown of the plant was of minor nature not affecting in any way the plant achieving the contracted PLF.

(vii) The Respondents were aware from the records filed with them that out of 85.59 SMCMD of Gas received, 80.56 SMCMD was used in the Combined Cycle Operation and only 4.99 SMCMD was used in one engine in the expansion project and use of Gas received in the said expansion project to the said limited extent could not have affected in any manner the capacity performance of the Combined Cycle Operation of the Generating Station.

(viii) The Respondents were aware from the records as to the very meager quantity of power consumed to operate the auxiliaries of the expansion and hence such extent of consumption power could not have affected the plant achieving 85% PLF.

(ix) Though the PPA dated 25-08-2004 has not contemplated any alternate fuel or part load operation of the plant, schedule-8 of the PPA specifically provided that in case the alternate fuel is required for the plant operation due to non-availability of Natural Gas under the FSA, the same shall be mutually agreed upon.

(x) The Respondents were fully aware that the Petitioner as early as on 2002, made a request for the Respondents to consider the plant using alternate fuel in the event of any short supply of Gas.

(xi) The Respondents were aware that the cut in the supply of Gas imposed officially was to accommodate the Respondents themselves and thus constitute a force majeure condition and in that context the Petitioner would be entitled to the payment of Fixed Charges under deemed generation concepts.

(xii) The Respondents were fully aware that the Petitioner had incurred the expenses towards creating the capacity. In terms of the Guidelines of Government of India, IPPs are entitled to recover the full capacity charges, once the capacity is created for the benefit of the SEB and the Respondents having been the exclusive beneficiary of the power generated out of the capacity for their commercial advantage are obliged to recoup the Fixed Costs to the Petitioner in creating the generating capacity on commercial principles.

(xiii) The Respondents were aware that the basis and the fundamental premise on which the Tariff Heat Rate was accepted and incorporated in the PPA was on the expectation that the entire contracted quantity of Gas being made available to the Petitioner for operating the plant to its full capacity.

(xiv) The Respondents were aware about the reduction in the fuel supply resulting in the plant under performing its parameters of operation. The Respondents were not willing to identify and agree upon any alternate fuel to enable the Petitioner to operate the plant to its full capacity.

(xv) The Respondents were also aware technically that while the plant under performing its operating parameters, the agreed Tariff Heat Rate cannot be achieved.

(xvi) The Respondents were also aware from the Gas bills paid and the reimbursement made against the Gas bills that the petitioner was short paid in the Variable Charges and have been incurring losses out of the operation of the plant.

**Submission of the Respondent**

(i) The Petitioner accepted the heat rate for the Combined Cycle operation, which is 1,980 Kcal/Kwhr. There is no justification for the Petitioner's claim based on the actual heat rate.

- (ii) The Respondent cannot be held liable/responsible for the non-allocation of gas by M/s GAIL to the Petitioner plant.
- (iii) M/sGAIL had made allocation of additional gas to consumers in the Ramnad Zone on 13.04.2004 based on the request by the generators. The Petitioner Group Company and TANGEDCO had also obtained additional allocation of natural gas from M/s GAIL. TANGEDCO being a consumer of M/s GAIL, it cannot be held responsible for the non-availability or short supply of natural gas by M/s GAIL.
- (iv) The under recovered additional cost of the Petitioner company for the period from 01.07.2006 to 15.06.2009 was not alone due to the shortage of gas, but due to other factors attributable to the power plant. It is submitted that even during the required quantity of gas was available to operate the plant at full load, the actual heat rate of the power plant was more than 1,980 Kcal/Kwhr.
- (v) The draft PPA initiated between TANGEDCO and M/s Penna Electricity Limited on 23.05.2002 was approved by Government of Tamil Nadu on 10.06.2002, i.e., before the Hon'ble Tamil Nadu Electricity Regulatory Commission became functional.
- (vi) The norms for the PPA dated 25.08.2004 was as per Government of India notification dated 30.03.1992. Further as per the notification, the norms are for ceiling purpose only and this shall not preclude the Boards and Generating companies from agreeing to accept improved norms. Based on this only, M/s Penna Electricity Limited had relinquished its option for Open Cycle Operation.

### **8.3. Issue 3 - Use of Complementary Fuel**

#### **A. Submission of the Petitioner**

(i) As regards the request of the Petitioner for concurrence to use Naphtha as complementary fuel to the Natural Gas to enable the plant achieving the 85% PLF in respect of future operations of the plant, the rejection by the Respondents was on a consideration of their concern about the additional costs and commitments which they may have to meet and the contention of the Petitioner against such rejection was that, the Petitioner is entitled in the present condition as an IPP for some decision of the Respondents;

(ii) The request for use of Naphtha was only to the extent of meeting the shortage in supply of Natural Gas for the plant achieved 85% PLF.

(iii) The Respondents were aware that the Combined Cycle Plant of the Petitioner cannot be operated with any other fuel other than Natural Gas and Naphtha.

(iv) The Petitioner are aware, as a consequence of shortage in the supply of Natural Gas, there is a need for identifying and using alternate complementary fuel to maintain the operation in the plant to the advantage of both the Petitioner and the Respondents.

(v) The Respondents have not appreciated that the request of the Petitioner for Naphtha as alternate complementary fuel arising out of non-availability of the fuel for the reasons beyond the control of the Company is not a request for change of fuel as provided in Article 7.5 (a) of the PPA.

(vi) The Respondents are fully aware that in the light of the Petitioner incurring losses arising out of operation of the Generating Station on account of shortage of supply in Gas, without any alternate complementary fuel to the Natural Gas cannot maintain the optimum operation of the plant and cannot continue to incur losses.

(vii) The Respondents, among their other counter contention have taken the pleas that the Power Purchase Agreement signed with the Petitioner is as per the Guidelines and as per the Notification dated 30-03-1992 of Ministry of Power and the rejection of the claims of the Petitioner were in accordance with the provisions of the Tariff Regulation of Central Electricity Regulatory Commission, Tamil Nadu Electricity Regulatory Commission etc., and further that the said Power Purchase Agreement entered into was on mutual discussions and agreement basis with the Petitioner, it become necessary for the Petitioner to file the above M.P.No.1/2010 in the D.R.P.No.14/2009, before this Hon'ble Commission praying for additional relief for the additional grounds as stated therein for the following reasons.

(viii) The Notification dated 30-03-1992 of Government of India, Ministry of Power, issued under sub-Section (2) of Section 43A of the Electricity (Supply) Act

1948, provided the factors in accordance with which the tariff for sale of electricity by generating companies to the Board shall be determined.

(ix) The said Notification, in respect of Thermal Power Generating Stations (including Gas, Naphtha and other liquid fuel based stations) provided two-part tariff for sale of electricity comprising recovery of fixed charges and energy (variable) charges based on norms namely plant load factor, station heat rate, auxiliary consumption, stabilization period, date of commercial operation etc.,

(x) The said Notification provided Station Heat Rate norms separately for open cycle / combined cycle for a Gas and Naphtha based Generating stations. The said Notification recognized the Gas Turbine as a separate unit and the Gas Turbine and Steam Turbine in combined cycle operation as separate unit. Based on this recognition, provided date of commercial operation for each unit from the date of synchronization of each unit.

(xi) The Guidelines issued by Government of India, in matters connected with invitation of Tariff based Bids contemplated separate Heat Rates for units and Generating Station.

(xii) Despite availability of the clear and unmistakable guidelines and statutory prescriptions as above, the PPA dated 25-08-2004 while amending the Power Purchase Agreement dated 29-04-1998 instead of providing and incorporating appropriate provisions relatable to the Petitioner's Gas Turbine Combined Cycle

Generating Station, merely adopted the provisions relating to the Diesel Engine based Generation Technology as contained in the said Power Purchase Agreement dated 29-04-1998 and therefore contrary to the statutory provisions.

**Submission of the Respondent**

- (i) The alternative fuel could not be considered by TANGEDCO due to the high cost of power by using naphtha.

**8.4. Issue 4 – Unenforceable agreement in Law:**

**Submission of the Petitioner:**

- (i) Despite availability of the clear and unmistakable guidelines and statutory prescriptions as above, the PPA dated 25-08-2004 while amending the Power Purchase Agreement dated 29-04-1998 instead of providing and incorporating appropriate provisions relatable to the Petitioner's Gas Turbine Combined Cycle Generating Station, merely adopted the provisions relating to the Diesel Engine based Generation Technology as contained in the said Power Purchase Agreement dated 29-04-1998 and therefore contrary to the statutory provisions.

- (ii) The amending Power Purchase Agreement dated 25-08-2004 ought to have been placed before this Hon'ble Commission for approval and determination of Tariff in terms of the provisions contained Electricity Act 2003. If only the said PPA have been placed before the Hon'ble Commission, this Hon'ble Commission as Regulatory Authority would have noticed the non-

conformities of the provisions of the PPA with the said Government of India Notifications dated 30-03-1992, the Guidelines of the Government of India and the Tariff Regulations of the CERC and TNERC and also the unworkable provisions of the PPA with reference to the technology employed. Consequently, there could have been directions for suitable modifications and amendments to ensure the fairness and justness of the provisions of the PPA.

(iii) It is only when the Respondents while granting the permission for synchronizing the Gas Turbine generating unit (in open cycle) when took the stand that the power generated and to be supplied in open cycle mode would entitle the payment of Variable Charges only that too based on the Heat Rate specified for the Generating Station in combined cycle mode, the Petitioner realized the insufficiency and the unworkable provisions of PPA dated 25-08-2004.

(iv) Though the Petitioner has been informing the Respondents as to the mistake occurred in not incorporating the applicable and appropriate provisions relevant to the technology employed in the generation in the Power Purchase Agreement dated 25-08-2004, the Respondents did not respond relating to the mistake occurred.

(v) The Respondents, instead of rectifying the mistake, kept engaged the Petitioner in arguments, protracted correspondence and denials of the claim.

(vi) The Respondents in realization of the mistake occurred when sought the permission of the Government of Tamil Nadu to amend the PPA dated 25-08-2004 and when the Government directed to Respondents to decide the issue based on the prevailing Guidelines, the Respondents, did not take correct and required decision in the matter.

(vii) Despite the intervention of the Hon'ble Minister for Electricity, Government of Tamil Nadu for a solution in the matter, the denial of the Respondents continued by citing the unworkable provisions of the PPA.

(viii) As the PPA, on account of the mistake occurred, has thus become an unworkable and unenforceable document in the eyes of law and as this Hon'ble Commission, has the power to direct appropriate changes to be made in view of the statutory power enjoined upon it to regulate the electricity purchase and procurement process of a distribution licensee.

(ix) As the Petitioner had no other alternative than to question the appropriateness of the provisions of the PPA dated 25-08-2004 vis-à-vis the technology employed, the workability of the provisions of PPA with reference to the future operations of Petitioner's generating station till the end of the Tariff periods and the justifiability of the provisions of the PPA dated 25-08-2004 in matters connected with the Petitioner getting the assured and entitled Tariff out of the operations of the Generating Station.

### **Submission of Respondent**

- (i) The Petition filed by M/s Penna Electricity Limited is not maintainable and sustainable in the eye of law.
- (ii) The Petitioner has entered into a Power Purchase Agreement dated 25.08.2004 by setting out the terms in mutual agreement. The Petitioner and the Board have also acted upon the terms of the agreement.
- (iii) It is too late for the Petitioner to plead that the provision of the PPA are unworkable and unenforceable.
- (iv) The Petitioner has approached the Hon'ble Commission after much delay and after having accepted the terms of the PPA.
- (v) The Petitioner has voluntarily relinquished their right to claim any benefits under the regulation that are in force.
- (vi) The draft PPA initiated between TANGEDCO and M/s Penna Electricity Limited on 23.05.2002 was approved by Government of Tamil Nadu on 10.06.2002, ie. before the Hon'ble Tamil Nadu Electricity Regulatory Commission became functional.
- (vii) The project of M/s Penna Electricity Limited was achieved the commercial operation after a delay of 225 days, for which the company is liable to pay liquidated damages to TANGEDCO.
- (viii) The norms for the PPA dated 25.08.2004 was as per Government of India notification dated 30.03.1992. Further as per the notification, the norms are for ceiling purpose only and this shall not preclude the Boards and Generating companies from agreeing to accept improved norms. Based

on this only, M/s Penna Electricity Limited had relinquished its option for Open Cycle Operation.

- (ix) The Hon'ble Tamil Nadu Electricity Regulatory Commission in the letter dated 12.09.2003 directed TANGEDCO to explain the reasons for not obtaining the approval of the Commission for signing the PPA dated 01.09.2003 with M/s Aban Power Company Limited. In reply, the TANGEDCO in the letter dated 31.12.2003 submitted to the Hon'ble Commission that the tariff of M/s Aban Power Company Limited was approved by Government of Tamil Nadu. Further it was also informed to the Hon'ble Commission that another PPA initiated with M/s Arkay Energy Limited (now M/s Penna Electricity Limited) approved by Government of Tamil Nadu was pending for execution.
- (x) The project of M/s Penna Electricity Limited was conceived through International Competitive Bidding as per the guidelines of Government of India and the initiated PPA approved by Government of Tamil Nadu was signed on 25.08.2004. It is submitted that as per Section 63 of the Electricity Act 2003, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

**8.5. Summary of Submission by Petitioner:-**

- (i) In view of the power generated and supplied during the period 29-10-2005 to 30-6-2006 at 153.26 Million Units being a continuous supply, on firm basis and with the request, knowledge and intervention of the

- Respondents at the relevant point in time, the said power cannot be treated as infirm power under the provisions of the PPA dated 25-8-2004.
- (ii) In as much as the Power generated and supplied from the Gas Turbine Generator in the Open Cycle Operation being firm power, as provided in the Power Purchase Agreement as well as in the said Notification and the guidelines of Government of India, the Petitioner is entitled to get paid the Fixed Charges to the extent of the generating capacity created, as an IPP, in favour of the Respondents through the said Gas Turbine Generation for the period 29-10-2005 to 30-06-2006.
  - (iii) In the light of the provisions of the Notification dated 30-3-1992 and the guidelines of Government of India, as admitted by the Respondents since is applicable to the Petitioner's Generating Station, with reference to the Technology employed in the Generating Station, the Petitioner is entitled to get paid the Variable Charges applying a Station Heat Rate applicable to the Gas Turbine Generator as a Unit as provided in the said Notification and the guidelines of Government of India for the power generated and supplied from 29-10-2005 to 30-06-2006.
  - (iv) In as much as the reduction in the supply of Gas from GAIL during the period 01-7-2006 to 15-06-2009 (for the period up to filing of the D.R.P.) when the Generating Station operated in Combined Cycle Mode, was at the instance and to the benefit of the Respondents, the said reduction would constitute a force majeure condition on the Petitioner in achieving the agreed PLF as provided in Clause 12.2.(vi) of the Power Purchase

- Agreement, thereby entitling the Petitioner to get paid the Fixed Charges under Deemed Generation as provided in Clause 7.6 of the PPA.
- (v) In as much as the reduction in supply of Gas at the instance and for the benefit of the Respondents solely caused the under performance of the parameters of the Gas Turbine and the Steam Turbine of the Combined Cycle Generating Station of the Petitioner during the period 01-07-2006 to 15-06-2009 (for the period up to filing of the D.R.P.), the Generating Station could not achieve the stipulated Station Heat Rate for the payment of Variable Charges. Despite the provision contained in the PPA for discussion and agreement between the parties for alternate fuel in the event of short supply of Gas under the Fuel Supply Agreement, the Respondents, as the sole beneficiary of the Generating Station of the Petitioner, did not come forward to decide on the alternate fuel. On account of which, the Petitioner though was made to pay the entire Bill amount of the Gas supplied, was getting reimbursed by way of Variable Charges, applying the Tariff Heat Rate as provided in the PPA. Hence the Petitioner is entitled to get paid the underpaid Variable Charges during the said period.
- (vi) For any reason, the amending PPA dated 25-8-2004 were to be construed as a final one by the Respondents, then the said PPA is to be seen as an illegal, invalid and unenforceable agreement and an unworkable document on the facts and circumstances of the Petitioner's Generating Station.

- (vii) The amending PPA dated 25-8-2004 containing provisions relating to Gas Engine Based Generation Technology, being made applicable to Gas Based Combined Cycle Technology is to be seen as bad in law in view of the same being not in accordance with the norms and factors laid in the Notification dated 30-3-1992 of Ministry of Power, Government of India issued under Section 43 A (2) of the then Electricity (Supply) Act, 1948, the Guidelines of Government of India in respect of selection through Tariff Based International Competitive Bidding and not in accordance with the Bid documents of TIDCO, particularly with reference to the Principles of Power Purchase Agreement stated in Annexure-8 thereto, based on which the Project was selected.
- (viii) The PPA dated 25-8-2004 is also has to be seen as bad in law in view of the same having not placed before the Hon'ble Electricity Regulatory Commission for approval/adoption as a statutory requirement under the Provisions of the Electricity Regulatory Commission Act 1998, Tariff Regulation, 2002 of Tamil Nadu Electricity Regulatory Commission, Section 62/63 as the case may be of the Electricity Act, 2003.
- (ix) The Power Purchase Agreement initiated during 2002 cannot be construed as executed Power Purchase Agreement and it is only the PPA dated 25-8-2004, states that the earlier Power Purchase Agreement dated 29-4-1998 is being amended by the said Agreement.
- (x) The Power Purchase Agreement dated 25-8-2004 while amending the earlier Power Purchase Agreement dated 29-4-1998, instead of providing the terms, conditions and operational norms relevant to Gas Based

Combined Cycle Operation Technology, since has merely adopted the terms, conditions and operational norms relevant to the previous Diesel Engine Based Technology Generation is to be seen as a mutual mistake of fact on the part of the contracting party and thus is a void Agreement in terms of Section 20 of the Indian Contract Act, 1872. The judgment of the Supreme Court in Tarsem Singh –Vs- Sukhminder Singh reported in 1988 (3) SCC 471 would be relevant.

- (xi) The Hon'ble Supreme Court of India in India Thermal Power Ltd., -Vs- State of M.P. and others reported in (2000) 3 Supreme Court Cases Page 379 has held that the provisions of Section 43 and 43A of the Electricity (Supply) Act indicate that the Power Purchase Agreement can be on such terms as may be agreed by the parties except that the Tariff is to be determined in accordance with the provision contained in Section 43A(2) and the Notification issued thereunder. It may be seen, in the light of the said judgment that, even assuming the mutual mistake occurred in the PPA dated 25-8-2004 is not a mutual mistake but only a conscious omission as contended by the Respondents, in so far as prescribing the norms and factors which are relevant to the technology employed and which has a direct bearing on the Tariff fixed under the PPA, the parties to the Agreement cannot have choice and could not have consented for such omission. Such omission and consent even if any, cannot be valid in law and enforceable.
- (xii) Adopting the terms, conditions and norms which are relevant to the Gas Engine Based Generations Technology to the Gas Based Combined

Cycle Technology is by relinquishment/waiver of such entitlement as contended by the Respondents, cannot be valid in the light of the principle that parties cannot contract out of statute or against statute. The judgment of the Supreme Court reported in 1991 (Supplement-2) SCC 654 would be relevant.

(xiii) The Petitioner is operating the Generating Station as an Independent Power Project to the sole and exclusive benefit and advantages of the Respondents. The impractical and the unenforceable PPA on account of not providing the appropriate and applicable terms, conditions and operating norms relevant to the technology adopted as in the Power Purchase Agreement dated 25.8.2004 by mutual mistake or otherwise, has resulted in unintended benefit and unjust enrichment to the respondents under colossal loss and damage to the petitioner. In the view of the judgment of the Hon'ble Supreme Court in Central Inland Case reported in AIR 1986 SC 1571 it may be seen such action by the Respondents is against the public policy and thus such action of the Respondents in getting the unjust enrichment and unintended benefit at the cost of the Petitioner is illegal and arbitrary attracting Section 23 of the Indian Contract Act and also in violation of Article 14 of the Constitution of India.

(xiv) Clause 17.6 contained in the Power Purchase Agreement dated 25-8-2004 provides that if any provision of the Agreement shall be held by any Court of competent jurisdiction or competent authority to be illegal, invalid or unenforceable in whole or in part, then the legality, validity and

enforceability of the reminder of the Agreement shall not be affected and the parties shall negotiate in good faith to substitute the provision satisfactory to the relevant State competent authority and producing a result which, as near as is practicable in the circumstance, balances the commercial interests of the parties. The Petitioner ever since 2005 till middle 2009 attempted to persuade the Respondents for relief in the light of the impracticality and unenforceability of the Power Purchase Agreement but in vain as the Respondents unrelentingly have been forcing the unenforceable and impractical provision of the PPA on the Petitioner. Hence the Petitioner has no other relief than to seek a declaration by this Hon'ble Commission that the Power Purchase Agreement 25-8-2004 is unenforceable in law and unworkable on the facts and circumstances of the Petitioner's Generating Station without prejudice to the claim made on the Respondents in the DRP 14/2009.

- (xv) It is a mandate on the Hon'ble Regulatory Commission under Section 61(b) of the Electricity Act, 2003 while specifying the terms and conditions in determining the Tariff is to get guided among other things on commercial principles also. The Respondents, especially, as a statutory body ignored such commercial principles in matters connected with purchase of the Power from the Petitioner's Power Generating Station and this Hon'ble Commission therefore would be entitled in law to declare the PPA as unenforceable in law as prayed in M.P.No.1/2010 in DRP No.14/2010 on account of the arbitrary, unreasonable, illegal and unenforceable actions of the Respondents.

(xvi) In regard to the period subsequent to 15-06-2009, particularly with reference to the future operations of the Generating Station of the Petitioner till the expiry of the PPA, in as much as the Respondents are unwilling to provide for alternate / supplemental fuel to maintain the PLF and also the Respondents are unwilling to negotiate for modifications of the PPA in line with the technology adopted namely Combined Cycle Operation, the Petitioner has no other alternative than to get relieved from the obligations of the PPA on the principles of doctrine of frustration.

**9. Finding of the Commission:-**

Based on the submissions of the parties the Commission frames the following issues:-

1. Whether the PPA is in accordance with Section 63 or Section 62 of Electricity Act 2003.
2. Whether the Petitioner is entitled for payment of fixed charges for the period 29-10-2005 to 30-6-2006 when the gas turbine operated separately in open cycle and whether the petitioner is entitled for payment of variable charges based on the heat rate applicable for open cycle operation.
3. Whether the petitioner is entitled for the following on account of short supply of gas by GAIL :
  - i) The payment of the actual fuel charges paid to GAIL.
  - ii) The payment of short charges recovered on account of fixed charges as well as reduction in heat rate due to part load operation both on account of reduced supply of gas by GAIL.

iii) In the event of not providing any relief on i) & ii) above, whether the PPAs could be considered as unenforceable in law and the petitioner permitted to exit the PPA.

4. Linking of alternate fuel Naphtha to enable operation of the power plant at optimal capacity, and recover full fixed charges.

The above issues are discussed item by item :-

#### **9.1 Whether the PPA is in accordance with Section 63 or Section 62 of Electricity Act 2003.**

The TNEB floated a global tender inviting bids for a diesel based power project to be located at Dharmapuri. M/s. DLF power qualified as the lowest bidder on the basis of tariff. M/s. DLF Power and TNEB signed a Power Purchase Agreement on 29-4-1998. The PPA envisages use of diesel generating sets with HSFO as fuel, location being Hosur. Subsequently, the project was acquired by M/s. Arkay Energy who in turn has organized procurement of natural gas through GAIL by entering into an Agreement. There after M/s. Arkay Energy and TNEB executed a amended power purchase agreement on 25-8-2004 with natural gas as fuel, location of the project in Ramanathapuram District. The PPA dated 29-4-1998 was apparently approved by the Government of Tamil Nadu. The amended PPA which was executed on 25-8-2004 after the enforcement of the Electricity Act, 2003 should have been submitted to the Commission for approval. This was not done by both the parties. The contention of TNEB is that this project is under Section 63 of the Electricity Act, 2003 and therefore the Commission shall only adopt the tariff is

not tenable. Although the original PPA of 29-4-1998 was based on the offers quoted in the tender, the subsequent PPA on 25-8-2004 was finalized through negotiations. Therefore, it would be untenable for the TNEB to claim that the Commission should adopt the Tariff under Section 63 of the Electricity Act, 2003. The respondent's argument that this project has to be considered as competitively bid project wherein the Commission shall only adopt the tariff seems to be a later thought. The original PPA of 29-4-1998 has been amended to some extent on 25-8-2004 to incorporate the requirements of combined cycle power project. Even this PPA has not been placed before the Commission for approval in accordance with Section 86(1) (b) of the Electricity Act, 2003, especially when the amended PPA was executed after the enactment of Electricity Act, 2003. In this connection, Commission would like to refer to its Order dated 9-5-2011 in M.P. No. 18 of 2010 wherein the Commission has directed amendment of the PPA signed in 1998 to fall in line with the TNERC (Terms and Conditions for the determination of Tariff Regulations, 2005) within a period of 3 months and submit the amended PPA for approval to the Commission in terms of Section 86 (1) (b) of the Electricity Act, 2003. Any PPA executed after the enactment of the Electricity Act, 2003 should have been placed before the Commission but both the parties in this case have failed to do the same and are blaming each other at this late stage.

**9.2. Whether the Petitioner is entitled for payment of fixed charges for the period 29-10-2005 to 30-6-2006 when the gas turbine operated separately in open cycle and whether the petitioner is entitled for payment of variable charges based on the heat rate applicable for open cycle operation.**

The power purchase agreement between the two parties was executed on 29-4-1998. This was based on the notification of the Government of India dated 30-3-1992 of the Ministry of Power issued under Section 43(A)(2) of Electricity (Supply) Act, 1948. This PPA was amended on 25-8-2004 after the enforcement of the Electricity Act, 2003. Therefore, the PPA should have been in consonance with the Electricity Act 2003 and the Regulations framed thereunder.

The proviso to Section 61 of the Electricity Act 2003 is extracted below:-

*“Provided that the terms and conditions for determination of tariff under the Electricity (Supply) Act, 1948 (54 of 1948), the Electricity Regulatory Commission’s Act, 1998 (14 of 1998) and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or until the terms and conditions for tariff are specified under this Section, whichever is earlier.”*

Thus, the validity of the action taken under the provisions enacted including notification were protected for a year after the enforcement of the Electricity Act i.e. 10-6-2004. Thereafter the notification dated 30-3-1992 of the Government of India cease to have force. The PPA signed on 25-8-2004 should have been in alignment with the Electricity Act 2003 and the Regulations framed thereunder. Although the TNERC notified Tariff Regulations on 3-8-2005, the CERC Tariff Notification was in place from 26-3-2004 and therefore, the Commission rules that the PPA should have been in alignment with the CERC Regulations notified on 26-3-2004.

This Commission notified its tariff regulations on 3-8-2005. The CERC notified its terms and conditions of tariff regulation on 26-3-2004. In view of the proviso to Section 61 of the Electricity Act, 2003 we cannot rely on the Government of India tariff notifications dated 30-3-1992 for an amended PPA which was signed on 25-8-2004. We therefore rely on the CERC Tariff Regulation. CERC notification dated 26-3-2004 envisages as follows with regard to gas turbine power project

**“Gross Station Heat Rate  
Regulation 16 (iii) (e)**

*(e) Gas Turbine/Combined Cycle generating stations*

- (i) *Existing generating stations owned by National Thermal Power Corporation Ltd.*

<i>Name of Generating Station</i>	<i>Combined cycle (kCal/kWh)</i>	<i>Open cycle (kCal/kWh)</i>
<i>Gandhar GPS</i>	<i>2000</i>	<i>2900</i>
<i>Kawas GPS</i>	<i>2075</i>	<i>3010</i>
<i>Anta GPS</i>	<i>2075</i>	<i>3010</i>
<i>Dadri GPS</i>	<i>2075</i>	<i>3010</i>
<i>Auraiya GPS</i>	<i>2100</i>	<i>3045</i>
<i>Faridabad GPS</i>	<i>2000</i>	<i>2900</i>
<i>Kayamkulam GPS</i>	<i>2000</i>	<i>2900</i>

(ii) *Generating stations declared under commercial operation on or after 1.4.2004*

	<u><b>Advanced Class Machines</b></u>	<u><b>E/EA/EC/E2 Class Machines</b></u>
<i>Open cycle -</i>	<i>2685 kCal/kWh</i>	<i>2830 kCal/kWh</i>
<i>Combined cycle -</i>	<i>1850 kCal/kWh</i>	<i>1950 kCal/kWh</i>

(iii) *Small Gas Turbine Power Generating Stations:*

(a) *Assam Gas Based Power Station, Kathalguri:*

<i>Open Cycle</i>	--	<i>3225 kCal/kWh</i>
<i>Combined Cycle</i>	--	<i>2250 kCal/kWh</i>

(b) *Agartala Gas Based Power Station, Ramachandranagar:*

<i>Open Cycle</i>	--	<i>3580 kCal/kWh</i>
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(c) *Other than (a) and (b) above:*

	<b><i>With Natural Gas</i></b>	<b><i>With Liquid Fuel</i></b>
<i>Open Cycle</i>	<i>3125 kCal/kWh</i>	<i>1.02 x 3125 kCal/kWh</i>
<i>Combined Cycle</i>	<i>2030 kCal/kWh</i>	<i>1.02 x 2030 kCal/kWh</i>

**Auxiliary Energy Consumption**

**Regulation 16 (b) (v)**

(b) *Gas Turbine/Combined Cycle generating stations:*

(i) *Combined cycle 3.0%*

(ii) *Open cycle 1.0%*

The definition of Date of Commercial Operation or COD is as follows:-

***‘Date of Commercial Operation’ or ‘COD’ in relation to a unit means the date declared by the generator after demonstrating the Maximum Continuous Rating (MCR) or Installed Capacity (IC) through a successful trial run after notice to the beneficiaries and in relation to the generating station the date of commercial operation means the date of commercial operation of the last unit or block of the generating station;***

The definition of declared capacity in the CERC Regulation is as follows:-

***Declared Capacity*** or ***DC*** means the capability of the generating station to deliver ex-bus electricity in MW declared by such generating station in relation to any period of the day or whole of the day, duly taking into account the availability of fuel;

**Note**

*In case of a gas turbine generating station or a combined cycle generating station, the generating station shall declare the capacity for units and modules on gas fuel and liquid fuel separately, and these shall be scheduled separately. Total declared capacity and total scheduled generation for the generating station shall be the sum of the declared capacity and scheduled generation for gas fuel and liquid fuel for the purpose of computation of availability and Plant Load Factor respectively.*

The corresponding definitions in the TNERC's terms and conditions of tariff are extracted below for the purpose of comparison:-

*“Date of Commercial Operation” or ‘COD’ in relation to a unit means the date declared by the generator after demonstrating the Maximum Continuous Rating (MCR) or Installed Capacity (IC) through a successful trial run, after notice to the beneficiaries, and in relation to the generating station the date of commercial operation means the date of commercial operation of the last unit of the generating station;*

**Declared capacity**

*(o) “Declared Capacity” or “DC” means the capability of the generating station to deliver ex-bus electricity in MW declared by such Generating Station in relation to any period of the day or whole of the day, duly taking into account the availability of fuel;*

*Note :*

*In case of a gas turbine Generating Station or a combined cycle Generating Station, the Generating Station shall declare the capacity for units and modules on gas fuel and liquid fuel separately, and these shall be scheduled separately. Total declared capacity and total scheduled generation for the Generating Station shall be the sum of the declared capacity and scheduled generation for gas fuel and liquid fuel for the purpose of computation of availability and Plant Load Factor respectively*

## Heat rate of gas turbine / combined cycle generating station

### *Gas-Turbine / combined cycle Generating stations*

	<i>Advanced class Machine</i>	<i>E/EA/EC/E2 class machine</i>
<i>Open cycle</i>	<i>2685 Kcal /kWh</i>	<i>2830 Kcal / kWh</i>
<i>Combined cycle</i>	<i>1850 Kcal/kWh</i>	<i>1950 Kcal /kWh</i>

The examination of the regulation of CERC indicates that gas based power project can operate in two modes. Viz., Open cycle and combined cycle. The waste heat of the open cycle operation is captured in a waste heat recovery boiler for additional power generation in the associated steam turbine generator, thereby increasing the overall efficiency of the system. As a method of enhancing the efficiency, the power station can also be designed only in combined cycle mode. It, therefore, is a decision which is taken at the very initial stage whether the gas turbine should be operated in open cycle or not. There are many projects in the country which has the facility for operation in both the open cycle mode and the combined cycle mode. It is not only during the initial commissioning that the operation of open cycle is resorted to. It is quite likely that even after the Commercial Operation of the station, at times the gas turbine may be called upon to operate in open cycle, when the bottom steam cycle is not available for any reason. As regards advance class machines, most of the plants may be designed to operate only in combined cycle mode in view of large size of the gas turbine and higher efficiencies.

The contention of the petitioner is that he has commissioned the gas turbine alone in open cycle and has been requesting the respondent TNEB for

payment of fixed charge for open cycle operation and also the variable charge based on the applicable station heat rate for open cycle operation. The respondent has stated that the open cycle operation is not envisaged in the PPA and the plant can be operated only in combined cycle mode and any power generated in open cycle can be treated as infirm power only. In this connection, it is necessary to examine the PPA with regard to the definition of infirm power. The definition of infirm power in the PPA dated 25<sup>th</sup> August 2004 is extracted below:-

*“”Infirm Power” means the Electricity produced by the Project and delivered to the Board prior to the Date of Commercial Operation at the Supply Point, not on any request or Despatch Instruction of the Board, in respect of which the Board shall pay to the Company, Variable Charges calculated as per the formula pursuant to Section 7.3.”*

It has been argued by the petitioner that the PPA contains Schedule 6 regarding availability declaration and dispatch declaration and schedule format 6.1 envisages availability declarations and format 6.2 provides for dispatch declaration Schedule. Format 6.1 of Schedule 6 provides for hourly forecast of capacity of the facility for the next 24 hours and format 6.2 brings out the hourly power dispatched from the facility for the past 24 hours. If this is the intention of the parties, then the power generated by the open cycle gas turbine cannot be termed as infirm power and can only be treated as firm power. Once this view is taken that the power generated by open cycle operation is firm power after the commercial date of operation of the gas turbine in open cycle which is the date of synchronization of the gas turbine with the grid. This cannot include the testing and trial operation period and at the same time the firm power delivered would be

related to the availability declaration and dispatches based on the schedule 6 appended to the PPA. We are inclined to agree that the power dispatched in open cycle on a firm basis as per schedule 6 of the PPA would be firm power and therefore the fixed charges are payable on a pro-rata basis in accordance with schedule 29 of the PPA which provides for fixed charges on a Rs/Kwh basis. Since the open cycle operation of the gas turbine would be producing less energy as compared to the energy produced by combined cycle operation, the fixed charges recovered would be on the lower side as compared to combined cycle operation. The Commission would like to further point out that the issue of payment of fixed charges during open cycle operation has been drawing the attention of TNEB not only in this case but also in another similarly placed project of M/s. Aban Power Ltd. In that case the Board has agreed to pay the fixed charges for open cycle operation and has actually made this payment but subsequently based on Audit objection of the Accountant General, issued a notice for recovery of the fixed charges for open cycle operation already released to M/s.Aban Ltd. M/s.Aban had preferred an appeal before the High Court of Madras on which a Stay was granted and the stay is stated to be continuing even now. In the instant case which we are dealing with, the respondent made an offer for payment of fixed charges for open cycle operation and asked for a corporate guarantee for refund of fixed charges so paid in the event of any objection by the Accountant General. The petitioner in this case has not given any such guarantee and therefore did not receive any payment and the offer of the TNEB for payment of fixed charges was subsequently withdrawn. From the above it appears that even the TNEB was convinced that the payment of fixed charges for open cycle

operation cannot be denied. After examining the above points, the Commission comes to the conclusion that the power delivered by open cycle gas turbine, after initial trial run and commissioning, is firm power when it is delivered on continuous basis in accordance with schedule 6 of the PPA. In view of this the Commission orders that the fixed charges shall be payable for the period 29-10-2005 to 30-6-2006 during which period the plant operated in open cycle. The PPA has fixed the negotiated heat rate of 1980 Kcal/Kwh for closed cycle against the CERC norm of 2030 K.Cal/Kwh. In the same manner, the variable charges for the open cycle operation is fixed at the heat rate of 3048 Kcal/Kwh against the CERC norms of 3125 KCal/Kwh in the proportion of 1980/2030.

**9.3. Whether the petitioner is entitled for the following on account of short supply of gas by GAIL:**

- i) The payment of actual fuel charges paid to GAIL.**
- ii) The payment of short charges recovered on account of fixed charges as well as increase in heat rate due to part load operation both on account of reduced supply of gas by GAIL.**
- iii) In the event of not providing any relief on i) & ii) above, whether the PPAs could be considered as unenforceable in law and the petitioner permitted to exit the PPA.**

The petitioner has sought compensation from TNEB for shortage of gas allegedly caused by the diversion of gas for the TNEB project at Vazhudhur. The petitioner has stated that he has kept the TNEB informed about the shortage of gas. In this connection, the Commission would like to observe that the petitioner has entered into a contract with GAIL for supply of gas. The same supplier has also supplied gas for the TNEB project at Vazhudhur. If the gas supplier defaulted in supply of gas to the petitioner, it was for the petitioner to seek

appropriate remedies from the gas supplier for damages on account of their supply. The TNEB, as power purchaser, has no control over the gas supplier. We are, therefore, unable to accept the contention that the TNEB should compensate the petitioner for short supply of gas.

Finally, the Petitioner pleads that the power purchase agreement is unenforceable and unworkable and therefore the Commission should declare the power purchase agreement as unworkable. We would like to refer to the Order of the Commission in DRP.Nos.12 and 13 of 2008 M/s.Raghu Rama Renewable Energy Ltd., Vs TNEB and M/s. Ind Barath Energies (Thoothukudi) Ltd., Vs. TNEB, where the Commission declined to terminate the contract for power purchase between the TNEB and the Petitioners. The Petitioners in both the cases pleaded that the performance of the contract became impossible on account of hardship. The facts of the case of the present petitioner is similar, if not identical, to the facts of the case in DRP Nos.12 and 13 of 2008. The Commission believes that contracts, which have been voluntarily executed between two parties, cannot be terminated by the Commission. We are of the firm belief that the Petitioner would have carried out due diligence exercise and weighed the pros and cons of the various clauses of the power purchase agreement.

**9.4. Linking of alternate fuel Naphtha to enable operation of the power plant at optimal capacity and recover full fixed charges.**

As regards linking of alternate fuel to enable operation of the power plant at optimal capacity, the petitioner has proposed linking of Naphtha. This issue has been going back and forth between the petitioner and the respondent.

Provision regarding change in fuel is contained in Article 7.5 of the PPA. This article covers the option for change of fuel by the Board or the Company. In case the Company desires to use an alternative fuel specified in schedule 8 for the above reasons, it shall do so only with prior written permission of the Board. In such a case the provisions of Section 7.5 shall apply.

Certain technical issues were raised by the TNEB with regard to road transportation of Naphtha as well as cost of generation with Naphtha as fuel. These issues have not been resolved between the parties. We are of the view that the techno economics can only decide the use of alternate fuel such as Naphtha which is highly volatile and also require special storage facilities and special fuel handling system. Further, some modification to the Gas turbine may also be necessary. The techno economics will have to be seen with regard to the percentage of Naphtha that can be used economically, additional capital cost involved and its impact on the fixed charge, etc. Neither these details have been worked out by the parties nor they have been placed before the Commission. The Commission is unable to pass any order on this subject in the absence of such details. It is for the parties to discuss this matter in detail and then come before the Commission, if necessary.

Ordered accordingly.

With the above findings, D.R.P. No. 14 of 2009 and M.P. No. 1 of 2010 are finally disposed of without cost.

10. **Appeal:-**

An appeal under section 111 of the Electricity Act, 2003 against this order shall lie to the Appellate Tribunal for electricity within a period of 45 days.

Pronounced in the open court on 30-12-2011.

(Sd.....)  
**(S.Nagalsamy)**  
**Member**

(Sd.....)  
**(K.Venugopal)**  
**Member**

(Sd.....)  
**(S.Kabilan)**  
**Chairman**

/ True Copy /

Secretary  
Tamil Nadu Electricity  
Regulatory Commission