### ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION 4<sup>th</sup> & 5<sup>th</sup> Floors, Singareni Bhavan, Red Hills, Hyderabad – 500 004.

O.P.No. 2 / 2002.

Dated: 12-04-2003

#### **Present**

Sri G.P.Rao, Chairman Sri D.Lakshminarayana, Member Sri K. Sreerama Murthy, Member

#### **Between**

#### APTRANSCO.

Vidyut Soudha, Khairtabad, Hyderabad – 500 082.

...Applicant

#### AND

**M/s. Vemagiri Power Generation Ltd,** 1005, 10<sup>th</sup> Floor, Dalamal Towers, 211, Free Press Journal Marg, Nariman Point. Mumbai – 400 021

...to whom notice is given.

- 1 Sri M.Venugopal Rao, S/o. M. Venkatrayudu, Special Correspondent, Prajashakti Telugu Daily, 1-7-139/43, Risalgadda, Hyderabad – 500 048.
- 2 Sri B.V.Raghavulu, Secretary, A.P.State Committee, Communist Party of India (Marxist), 1-1-60 / 2, M B Bhavan, RTC X Roads, Hyderabad – 500 020.
- Sri M.Timma Reddy,
   Convenor,
   People's Monitory Group on electricity Regulation,
   C/o. Centre for Environment Concerns,
   3-4-142/6, Barkatpura, Hyderabad 27.
- 4 Dr. V. Brahma Reddy, Vice President, Jana Vigna Vedika, 6-3-609 / 24 / 1, Anand Nagar Colony, Khairathabad, Hyderabad 500 004.

- Sri K.Raghu,
   President, APSEB Engineer's Association,
   6-3-596/21/4, Venkataramana Colony,
   Hyderabad 500 004.
- 6 Sri. P. Mohan Reddy, Associate President, Ravi Colony Welfare Assosication, Plot No. 174, Road No. 2 H, Ravi Colony, Mahendra Hills, Secunderabad – 500 026.
- 7 Sri. S.R. Vijayakar, Lok Satta, 401 / 408, Nirmal Towers, Dwarakapuri Colony, Punjagutta, Hyderabad 500 082.
- 8 Sri. Dr. T. Chandra Sekhar Rao, Camp Hyderabad, House No. MIG 1 B-53, Sector 9, MVP Colony, Visakhapatnam – 530 017.
- 9 Sri. Suravaram Sudhakar Reddy, Secretary, CPI, AP State Council, Makhdom Bhavan, Himayathnagar, Hyderabad – 500 029.
- 10 Sri. K.P. Rao, IDAS (Retd), Formerly Member (E & C), CEA and Member (Fin). Telecom Commission & Secretary to Government of India
- 11 Sri V M Ravi Shankar, Associate President, APSEB Assistant Engineers Association, H.No.1-10-247/4, Near IAS Study Circle, Ashok Nagar, Chikkadapally, Hyderabad – 50
- 12 Sri. M.V. Mysura Reddy, (MLA), Congress Legislature Party, Road NO.2, Banjara Hills, Hyderabad.
- 13 Sri. A. Punna Rao, FIE., FIPE., Dy, Chief Inspector of Boilers (Retd), 59-2-1, First Line, Ashok Nagar, Vijayawada – 520 010.
- 14 Sri. K.P. Reddaiah Yadav, Ex-MP, 8-3-976 / 85, Shalivahana Nagar, Hyderabad – 500 0073

The Commission having considered the application of APTRANSCO to give consent to the Power Purchase Agreement with M/s. Vemagiri Power Generation Ltd., and having heard the respondent and Members of the Public and duly taking into account the material on record passed the following order:

### <u>ORDER</u>

#### CHAPTER - I BACKGROUND

- The Government of Andhra Pradesh (GoAP) and the erstwhile Andhra Pradesh State Electricity Board (APSEB) noticed in 1995 that there was shortage of electricity in the State resulting in power cuts. The GoAP and APSEB considered permitting private parties to set up short gestation power projects to quickly bridge the gap between demand and supply. The APSEB called for global bids (in Bid No.CE/PLG/1/95-96) on tariff basis in May, 1995 for the establishment of short gestation gas/naphtha/fuel oil based power stations with a total capacity of about 2000 MW, as an immediate measure to bridge the demand and supply gap. The bids were received and opened on 09.02.1996. GoAP approved the setting up of power projects with Naphtha as fuel for a cumulative capacity of 1623 MW by six bidders by letter No.8919/Pr.I.1/95, dated 24.07.96.
- 2) GoAP approved the offer of M/s.Nippon Denro Ispat Limited, (NDIL), Bombay, one of the successful bidders, to set up a Power Plant at Vemagiri with a capacity of 468 MW with Naphtha as fuel.
- M/s. NDIL incorporated a new company by name "M/s. Ispat Power Ltd" (IPL) to develop, finance, construct, complete, own and operate the project. A Power Purchase Agreement (PPA) was entered into on 31-03-97.
- 4) M/s. IPL changed its name as M/s. Vemagiri Power Generation Ltd. (VPGL).
- Central Electricity Authority (CEA) accorded Techno Economic Clearance (TEC) on 14-01-1999 for the 492 MW Combined Cycle Gas Turbine (CCGT) at an estimated capital cost of US \$ 248.020 M + Rs. 638.223 Crs at an exchange rate of Rs. 42/- per US \$.
- 6) GoAP accorded approval for change of name of the company from M/s. Ispat Power Ltd to M/s. Vemagiri Power Generation Ltd., vide their letter dated 15-10-1999 u/s 15 (A) of Electricity Supply Act, 1948.

- 7) M/s. VPGL conveyed its acceptance to match the terms of the lowest bidder viz., M/s. Gautami Power Ltd., with respect to Capacity Charge, FDSC, OFC, repayment period, Station Heat Rate, Incentives and other benefits by letter dated 02-05-2000 and requested GoAP to recommend allotment of Gas.
- 8) Ministry of Petroleum and Natural Gas (MoP & NG) allotted 1.64 MMSCMD of Natural Gas on a firm basis to M/s. VPGL by letter dt 05-06-2000.
- 9) GoAP advised developers either to restrict their plant capacity to the gas allotted or to execute the project in two stages – the first stage with the available gas and balance capacity after the additional gas allotment is obtained or to join some other project / Gas allottee and implement the project as per Gas availability.
- M/s. VPGL has chosen the second option viz., to execute the project in two stages Stage I (370 MW) with the available Gas of 1.64 MCMD and stage II (150 MW) after obtaining further gas allocation.
- 11) Consequently GoAP accorded permission to implement the Project in two stages by letter dated 15-12-2000 with the following conditions (a) All the commercial terms governing the project in respect of stage I and II shall be the same as the terms and conditions awarded while permitting switch over to Gas, including the requirement of 157.2 MU per annum as Committed Incentive Energy over and above 80% PLF in the incentive regime. (b) It is the responsibility of the developer to secure the additional Gas required for stage II of the project and permission to proceed will be given only there after.
- 12) The draft Amendment Agreement to the PPA dated 31-03-97, with certain other amendments proposed by APTRANSCO and accepted by the developer, is initialed and submitted to the APERC for issue of consent under section 21 of APER Act, 1998.
- 13) The Amendments relate to change of name, enhancement of the capacity of the project (If second stage is taken into account), fixed charges, change of fuel, station heat rate, incentives, interconnection facilities, PLF, changes in

the scheduled date of completion and the date of its reckoning together with conditions related to extension for completion of evacuation facilities, payment of liquidated damages and payment of penalties, reliable capacity to be maintained throughout the agreement, financial closure etc.

- 14) The important features of the draft Amendment Agreement to the PPA are as follows. The nominal installed capacity is 370 MW with payment of capacity charge in respect of Cumulative available energy upto (but not exceeding) an amount of Cumulative available Energy, which is equivalent to PLF of 80%. Supply of 157.2 MU over and above the PLF of 80% as the CIE payable at a fixed rate of Rs.0.0699 per energy unit. FDSC is 0.6 US Cents / units payable only for the period ending on the 11<sup>th</sup> annual anniversary of the COD of the last generating unit and OFC is Rs.0.699 / unit fixed for the term of the Natural Gas is the primary Fuel and on non-availability of Agreement. Natural gas, Naphtha or Low Sulphur Heavy Stock and the like is to be used as alternate Fuel. Station Heat Rate is 1,850 k.cal/kWh. The dispatch provisions are that, no dispatch instruction shall require the Project to be operated below 60% of installed capacity or such lower declared capacity and the aggregate duration of backing down should not exceed 1200 hours in a Tariff year and the number of instructions should not exceed one per day, except in emergencies. Scheduled date of completion of the 1<sup>st</sup> (Gas turbine) unit is 24 months and that of the last unit (Steam turbine) is 27 months with provision for day for day extension for any delay arising on account of Board's default or failure of the Board to complete interconnection facilities. The Developer has to achieve financial closure not later than 12 months from the date of signing of the Amendment Agreement to the PPA Failing which there is a provision for the right to terminate the Agreement by either party upon 30 days notice without liability or obligation whatsoever. The Agreement is for a period of 15 years from the project Commercial Operation Date (COD).
- 15) The Commission decided to invite objections and suggestions on the Amendment Agreement to the PPA dated 31-03-1997 (along with three other similar PPAs) from the public and to hold a public hearing. APTRANSCO were requested (by letter dated 05.01.2002) to publish a notice in two

prominent news papers inviting public objections / suggestions. The notification was published in English and Telugu news papers on 08.01.2002. The last date for submission of objections/ suggestions was extended from 08.01.2002 to 22.04.2002 at the request of Sri.M.Thimma Reddy, Convenor, People's Monitoring group on Electricity Regulation on the ground that more time was required for the public to intervene on all the four PPAs to make the public intervention meaningful. The Commission received 11 objections with respect to the subject PPA. By letter dated 5.10.2002 APTRANSCO was requested to file replies to the Commission with copies to the objectors, M/s VPGL was also requested as above, leaving it the option of responding to them. The Commission fixed the date of public hearing as 19.12.2002.

- Since the developer had entered into a Gas Supply Agreement (GSA) with GAIL, certain issues arising out of GSA were referred to ONGC and GAIL on 09.12.2002 to be clarified before the Commission during the public hearing. The important issues included, need for the GSA to be co-terminus with the PPA term, construing firm allocation as firm supply of gas, reducing the obligations on minimum guarantee off-take, Gas availability projections upto 2020 and Gas price projections upto 2020, Operation & Maintenance costs after 31.12.2010 (being the expiry date of the GSA). ONGC by letter dated 12.12.2002, informed that the issues mentioned had arisen out of the GSA signed by GAIL with the respective customers and accordingly GAIL would be asked to make a presentation. They also stated that ONGC's representatives would remain present for any clarification in respect of gas availability and gas price projections.
- M/s. GAIL made a presentation before the Commission on 19.12.2002 and ONGC representatives were also present to answer queries. However, since their presentation did not cover all the issues raised and their statements as part of their presentation gave rise to further queries, they were, asked by letter dated 02.01.2003 to make written submissions on certain issues. GAIL responded vide letter dated 15.1.2003 and ONGC responded on 31-01-2003. In addition to the above, the Secretary, Ministry of Petroleum (MoP) was

requested to arrange for a presentation by a senior official of the Ministry on the issue of factors affecting gas prices in the near future. In response, Director, MoP& NG stated that the issue of Gas Price is under the consideration of the Cabinet and hence, MoP & NG may not be in a position to apprise the Commission on the likely gas price but that the new discoveries under NELP enjoyed the freedom to have their own market determined prices and that it would be possible for a Government representative to explain the salient points of the pricing policy, only after a view is taken by the cabinet on the pending proposals.

- 18) Since an affidavit filed by NTPC requesting for escrow coverage on par with the IPPs was pending before the Commission, NTPC was also asked by the Commission to present their case in person on 19.12.2002. However, NTPC did not appear before the Commission on the date of public hearing.
- Ocrtain other objections / suggestions were also filed before the Commission on the date of public hearing. They were made available to APTRANSCO, inter-alia, through letters dated 07.01.2003, 18.1.2003, 20.1.2003 & 23.1.2003. APTRANSCO have responded vide letters dated 27.12.2002, 10.02.2003, 22.02.2003. Since the responses furnished vide letter dated 27.12.2002 were unilateral and did not take into account the views of the developer, APTRANSCO vide letter dated 4.1.2003 were requested to respond after discussion with the developer. The responses of APTRANSCO were received on 17.01.2003, APTRANSCO was again asked vide letter dated 23.1.2003 to discuss with the developer certain further objections and forward their replies along with their remarks. The further replies are received under letters dated 10-02-2003 and 22-02-2003.

### **CHAPTER - II**

# OBJECTIONS / SUGGESTIONS MADE BY GENERAL PUBLIC AND RESPONSES BY APTRANSCO / M/s. VPGL

It may be convenient to set out the suggestions made by the general public and the responses of APTRANSCO and M/s.VPGL on different points as under.

### **GENERAL:**

# 20) Changes made in the terms of the original bid and therefore fresh bids to be called:

- a) Objection / Suggestion: State Government and APTRANSCO had permitted the IPP to change the capacity of the project, fuel and gave extension after extension, irrespective of the terms of the original bid. Thus all most all the parameters on the basis of which bids were won had changed making a mockery of the whole process. Therefore there was a need for fresh bids in order to select economical, efficient and optimal power suppliers, which will result in lowering of unit costs in as much interest rates & construction costs have come down and if provisions such as Escrow are incorporated in the bid condition itself, further reduction may take place.
- b) <u>APTRANSCO Response</u>: The allegation, that the State Government has permitted the installed capacity of the project to be changed, irrespective of the original bid, is not correct. Calling fresh Bids for additional capacities, which will be included in 10<sup>th</sup> Plan will take lot of time of 3 to 4 years to finalize the bids and award the contracts afresh. Even with this exercise, it is very doubtful, the tariff would be on par with the lowest tariff obtained in the ICB i.e., 0.60 cents FDSC plus 69.90 Ps. OFC of Gautami Power Project Ltd.
- c) M/s. VPGL Response: Regarding the changes in capacity, the bids were to be tariff based and the bidders were free to chose the optimum capacity, subject to a minimum capacity of 100 MW as per the Bid conditions. Thus capacity was left to bidders choice, and was not a critical variable for evaluation or for acceptance of the bid. As can be seen, the fixed tariff (revised) is same for all gas based power projects, irrespective of their capacity. Project capacity had to be changed from 468 MW (+/-) 5% to 370 MW for reasons beyond control of the Bidder. A chronology of events leading to such change is as under. Vemagiri Project was selected through International Competitive Bid (ICB) route for setting up of 468  $\pm$  5% MW at Vemagiri, with Naphtha as fuel. Due to increase in Naphtha prices the project fuel was

changed. GoAP in March 2000 decided not to allow projects in Naphtha and converted the project fuel to Natural Gas and recommended for Gas allocation for the full project capacity. MoP&NG allocated 1.64 MCMD of Natural Gas sufficient for 370 MW only. Given the above gas allocation, GoAP advised the developer either to restrict the plant capacity according to Gas allotted or to execute the Project in two stages with available Gas and balance after additional allotment or to join with some other Project / Gas allottee and implement as per Gas availability. The balance capacity of 468MW- 370MW= 98MW restricted the choice of a proper Gas turbine vis a vis the technology & capacity .It was therefore revised to 150MW in consultation with and approval of GoAP. Vemagiri (VPGL) is now allowed to implement phase I of 370MW capacity only. Phase II capacity of 150 MW is subject to APTRANSCO/ APERC approval & Gas availability. Thus the change in bid capacity was necessitated due to GoAP policy for change in fuel and due to inadequate allocation of gas by MoP&NG. Also due to the change in such tariff structure, significant savings, both in terms of fixed charges and energy charges would accrue to APTRANSCO and ultimately to the consumers.

### 21) Short gestation projects have lost their relevance due to Inordinate delay:

- a) Objection / Suggestion: As per the original PPA the short gestation projects should have been completed long back. With changing capacities and fuel, the project is not completed till date. Due to inordinate delay in execution, the short gestation projects have lost their meaning, since, in 1995 these projects are permitted to add capacity in a period of scarcity of power and imposition of power cuts to the industries. Further, it was also to be noted that at the time of evaluating these projects weightage was given for completing the project in short duration (20% for completion time and 80% for unit costs) at the expense of the unit cost.
- b) <u>APTRANSCO Response</u>: The delay in implementation of the project cannot be attributed to the developer.
- c) M/s. VPGL Response: VPGL signed PPA with APTRANSCO on 31.3.1997.
  As per the PPA, 26 months was permitted from PPA signing date to the project

scheduled date of completion ("SDOC"). This SDOC was to be extended correspondingly for each day of delay for obtaining full fuel linkage beyond 60 days of signing the PPA. Partial Naphtha fuel linkage (for 264.36 MW) was available on 21st July 1997. 100% fuel linkage was available only on 5.08.1998 (16 months later). The project was ready for financial closure in 1999. IFCI limited, the then Lead Financial Institution to the Project confirmed to APTRANSCO & GoAP regarding the readiness of the Project for financial closure(vide IFCI Letter ref: Credit (Infra)/ 2271/99-7000 dated 13.10.99). In the mean time, GoAP made a decision that it would permit the project only if the developer agrees to operate with Natural Gas as Primary Fuel and agrees to the tariff at par with that of Goutami Power Limited. APTRANSCO also revised the Power evacuation level from 220KV to 400KV and advised that evacuation scheme for Vemagiri project will be ready only by May'2003 (Lr. No: CE.IPC/SE.I/III/D No:46/2001 dated 7th July 2001). Based on the GoAP advice, VPGL agreed to the amended PPA terms as suggested by APTRANSCO & initialed the Amendment Agreement to the Power Purchase Agreement on 30th November 2001. Given the new regulatory regime, APTRANSCO would execute the amendment agreement only after getting the same approved by APERC. The factors explained above clearly demonstrate that the Project Company is not responsible for the delay.

### 22) <u>Liquidated Damages not collected & cannot be collected in the future:</u>

a) Objection / Suggestion: As per the original PPAs APTRANSCO should have collected liquidated damages from the IPP for delay in execution of the projects. It did not do so, thus showing undue favor to M/s VPGL. In the amended and restated PPA, the scheduled date of completion (24 months – GT, 27 months-STG) is to be reckoned from the date of financial closing. However no time limit is fixed for financial closing. This extension of date for finical closure ad inifnitum makes a mocke the scheduled date of completion of the project and the provision for the liquidated damages. This amendment is also irresponsible and undue favor was shown to the IPP, who would be free to effect financial closure at any time. This provision facilitates the IPP, with out any liability, to delay execution of the project which in turn will lead to hike in FDSC in view of the fast depreciating Re vis a vis \$.

- b) <u>APTRANSCO Response:</u> The developer could not complete the project as per PPA dt.31.3.97. Agreement was not proposed for cancellation, as it would be giving wrong signals to the financial institutions. The required Naphtha fuel linkage to the project is made available by MOP & NG on 5.6.98. The liquidated damages recoverable assuming Financial Closure on 31.3.2003 and taking upto COD date. works out Rs.262.24 Cr. In view of the change in position of the GOAP to switch over the Power Projects to run with Natural Gas as fuel, GOAP permitted them to implement in two stages 1<sup>st</sup> stage-370 MW with available Gas. The company has accepted the terms and conditions including the lowest tariff on par with M/s.Gautami Power Project Ltd.. The savings of Rs 83.286 crs per annum and 1249.29 crs for 15 years considering a generation of 80% for 1st stage of 370 MW with reduction in Tariff will offset the liquidated damages. Further, Article 1.1.54 provides for scheduled date of completion of the project to be reckoned from the date of financial closing. Article 7.1 (e) stipulates that "- and in any case cause financial closing to occur not later than twelve (12) months from the date of signing of the Agreement. Hence the project development is time bound for financial closing.
- c) M/s. VPGL Response: The delays are not attributable to the project company as explained elsewhere. The financial Closure is not postponed ad infinitum. As per the provisions of the PPA, the project developer is time bound for financial closing, and is making all the necessary efforts to achieve financial closure on the project at the earliest. Financial Closure can be attained after APERC consent to PPA is received

### 23) Undue favors shown to the IPP without terminating the PPA:

- a) <u>Objection / Suggestion:</u> Original PPA entered into by M/s.VPGL with APSEB also might have had provisions for termination of the PPA (As provided in Article 6 of the PPA for short gestation projects) in case, financial closure is not achieved within a particular period of time. However APSEB, now APTRANSCO had shown undue favor to the IPP by not terminating the agreement.
- b) <u>APTRANSCO Response:</u> The Financial Closure was to be completed by 6<sup>th</sup> June, 1999 i.e., within 12 months from the date of PPA plus 432 days due to delay in issue of fuel linkage. The project is to be implemented with Naphtha fuel linkage

dt.5.6.98 issued by the GOI as per the then liquid fuel policy. The developer represented that the lenders are insisting on execution of the tripartite escrow agreement before going in for Financial Closure. APTRANSCO and GOAP have taken a decision that the escrow cover will be provided for only as per PPA conditions. This was not acceptable to the lenders. Further, Naphtha prices have shot up abnormally, resulting in unaffordable variable charge. During the same time GOI, MOP&NG have started allotment of Natural Gas to these power projects from the new fields of ONGC in KG Basin. Therefore the options available to APTRANSCO and GOAP are:

- i) Terminating the agreement with one month notice
- ii) Allow the projects for implementation, of course with Natural Gas as fuel.

By terminating the agreement wrong signals will be sent to the lenders, which will hamper further investments. Calling fresh Bids for additional capacities, which will be included in 10<sup>th</sup> Plan will take lot of time of 3 to 4 years to finalize the bids and award the contracts afresh. Even with this exercise, it is very doubtful, new the tariff would be on par with the lowest tariff obtained in the ICB i.e., 0.60 cents FDSC plus 69.90 Ps. OFC of Gautami Power Project Ltd. In view of the above GOAP took a decision to allow implementation of the project of 520 MW with Natural Gas as fuel only and subject to the condition that the tariff is reduced from 1.58 cents FDSC (8 years) plus 54 Ps. toward OFC to 0.60 cents FDSC (11 years) plus 69.90 ps. OFC and accepting Station Heat Rate of 1850 Kcal/kWh instead of 1900 Kcal/kWh as per their original offer. When the fixed cost of the Project was reduced almost by half, it is not correct to say that favoritism was shown to the developer. Hence, the allegation that "APTRANSCO has shown undue favour to Vemagiri Power Generation Ltd. by not terminating the Agreement" is denied.

c) <u>M/s. VPGL Response</u>: The delays are not attributable to the project company as explained elsewhere.

# 24) <u>APGENCO can set up new projects if return & other statutory payments</u> made:

- a) Objection / Suggestion: Cancellation of gas-based power projects need not affect the prospects of power generation in the state. If APGENCO is given reasonable rate of return, along with other statutory payments, it can take up new coal-based power projects with lesser capital and variable costs. If the GoAP gives a one time grant of Rs 1000 crores, with its internal resources, APGENCO can invest 30% equity and borrow the balance 70% amount to invest in new projects. It can recycle future returns projects to take up new projects again. This way, by working out a long term plan on the basis of a realistic load forecast and giving long-term orders to BHEL, APGENCO can take up new projects and add 500 MW per annum to the installed capacity which will be quite adequate to meet the growing demand for power in the state. As such action must be taken to set up VTPS IV stage and KTPS VI stage with coal as fuel.
- b) <u>APTRANSCO Response</u>: APGENCO programmed RTPP Stage II of 420 MWs capacity in the 10th Plan. The initialed PPA of RTPP of Stage-II with Coal as fuel contains provisions relating to ROE etc., which is consented by the Commission. In case APGENCO comes up with any proposal for new Power projects they will be considered subject to system requirement and consent of APERC.
- c) M/s. VPGL Response: Did not respond

# 25) <u>No information whether all available reasonable options taken into account as per the guidelines:</u>

a) <u>Objection / suggestion:</u> The guidelines for Load Forecast, Resource plans and power procurement dated 28.2.2000 state that "Each Licensee must be able to demonstrate, through a process of integrated resource planning, that it has examined the economic, technical, system and environmental aspects of all available reasonable options to satisfy the energy service needs of its consumers in its area of supply, and that such examination has been carried out in accordance

with these guidelines. "No information is available whatsoever of the "all available reasonable options".

- b) <u>APTRANSCO Response:</u> The power procurement plan dt.16.1.2002, has been finalized following the guidelines issued by APERC. The APERC is reviewing the load forecast and power procurement plan and the decisions are awaited. The capacity indicated in the presentation made on 16.1.2002, in connection with BSES hearing are the requirements of the licensee which are to be added to the system. They need not match with the project capacities.
- c) M/s. VPGL Response: No comments.

### 26) Coal Projects to be preferred to gas projects.

- a) Objection / Suggestion: The unanimous opinion of the CEA, NTPC and other experts is that power planning should be done on the basis of indigenous coal, which provides for cheaper variable costs. The Commission is therefore requested not to give consent to the gas based power plants. It may be argued that the price of other fuels, including coal, also will increase. However, indigenous coal stands on a different footing. It will not have any impact of the fluctuations in exchange rate of Rupee-Dollar. Unlike petroleum products, indigenous coal price is not linked to international prices.
- b) <u>APTRANSCO Response:</u> Coal reserves in India are estimated to last for 40 to 50 years. Hence it is not prudent to depend only on coal. Alternative fuels & renewable fuels are necessarily to be thought off. Huge investments are necessary for extraction of indigenous coal, which will naturally increase the price of indigenous coal considerably. Hence it will not be prudent to drop the proposal of gas based power projects on the presumption of future hike in natural gas prices. Further, the power procurement plan of APTRANSCO also envisages generation through coal based projects of 1940 MW capacity (NTPC Simhadri 1000 MW + BPL 520 MW + RTPP Stage –II 420 MW).

c) <u>M/s. VPGL Response:</u> With gas reserves available in the K.G Basin , the same should be used for power generation instead of banking on coal alone. Gas based power generation has a shorter gestation period and is environment friendly.

### 27) APGENCO PPA to be approved first:

- a) <u>Objection /suggestion:</u> APERC is requested to approve the PPA between APGENCO & APTRANSCO first and then the PPAs between present IPPs and APTRASNCO.
- b) APTRANSCO Response: Did not respond.
- c) <u>M/s VPGL Response</u>: We request Commission to conduct public hearing for our project as soon as possible.

### <u>PPA</u>:

### 28) Fix PLF at 90% for the purpose of calculating capacity charge:

- a) Objection / Suggestion: As per Article 3.1 of the amendment agreement dated 30.11.2001of M/s VPGL, capacity charge (calculated as per Article 3.2) in respect of cumulative available energy is to be paid up to (but not exceeding) equivalent to a PLF of 80%. Further, as per Article 3.2 (A), Committed Incentive Energy (CIE)of 157.2 MUs is to be supplied by the company over and above 80% PLF. APTRASNCO shall deem the initial energy units delivered by the company, subject maximum of 157.2 MU in a tariff year at the generator terminals as CIE, which is to be paid at Rs 0.0699 per unit. Gas based projects are working at a PLF of 90% and even more, therefore, it is requested to fix PLF at 90% for M/s VPGL for the purpose of calculating capacity charge, with out any provision for deemed generation.
- b) <u>APTRANSCO Response:</u> The Capacity Charge is payable to the developer for all Capacity upto 80% of Cumulative Available Energy (CAE). The GOAP permitted the IPP to implement the Project with a capacity of 370 MW with a fixed charge of 0.60 cents plus 69.90 ps. The IPP shall deliver 157.20MU at a fixed price of 10% of OFC i.e., 6.99 Ps/unit, beyond 80% PLF actual generation. 157.20 MU are defined as Committed Incentive Units and the Tariff for these units is 6.99 paise

per Kwh. If the suggestion for fixing Capacity for recovery of fixed cost at 90% PLF, as suggested by the objector is accepted, the Cumulative Available Energy (CAE) will increase by 10% more and Fixed Charge payments per annum increase by 10% (i.e., Rs. 32 Crs. per annum), which is not in the interest of APTRANSCO, as the bid is based on Tariff.

c) <u>M/s. VPGL Response:</u> With the Amendment Agreement of 30<sup>th</sup> November 2001, the Project Company is now obliged to guarantee a PLF of 84.84% (as compared to 80% earlier) to earn its Capacity Charge at 80% PLF. Any guarantee for higher PLF by the Project Company should have reciprocal guarantee for off-take by APTRANSCO.

### 29) <u>mnitted Incentive charge should not be permitted:</u>

a) <u>Objection / Suggestion:</u> APTRANSCO has agreed to pay committed incentive charge on 157.2 MU over and above the generation at 80 % PLF to M/s VPGL. It means that even if APTRANSCO does not require this extra power, it will have to purchase it and even if it does not purchase it will have to pay. This should not be permitted.

APTRANSCO Response: As per the Bid condition incentive is to be paid for actual generation only, over and above the threshold PLF of 80%. The Committed Incentive Energy (CIE) is actual generation to the extent of 157.20 MU. The rate for this Committed Incentive Energy (CIE) is **6.99 Ps./Unit**. The total amount payable per annum for this delivered energy is: 157.20x0.0699 =Rs. 10.99 Million (or) Rs.1.099 Crores. If the provision is to be omitted APTRANSCO may have to buy this much quantum of energy to meet the system requirements from other generating sources at a minimum price of 98.70 Ps./Kwh.. Therefore the **Committed Incentive Energy** at a price of 6.99 Ps./Unit is an advantageous proposition to APTRANSCO. The incentive is structured on actual generation above 80% PLF and not on availability. The developer is required to incur additional O&M expenditure and other expenses to generate beyond 80% PLF. It is cheaper to buy the additional units required under incentive regime than to buy from another IPP.

c) M/s. VPGL Response: Committed Incentive Charges has been incorporated in the PPA amendments, as it is one of the conditions of the Goutami Project. By the amendments, the Project Company is obliged to run at a PLF of 84.84 % to earn its Fixed Charges at 80%. Thus the amendment ensures that the Project Company operates at higher efficiency norms and carries higher operating risk. This amendment enables APTRANSCO to buy extra 157.2 Million units at only 7 paisa per unit of fixed charge. As regards, incentive for actual PLF beyond 84.84%, APTRANSCO has the discretion to dispatch the plant beyond 84.84% and it would do so only if it finds the same to be as per merit order dispatch procedure of APERC. Any higher guarantee to PLF by the project would require reciprocal guarantee from APTRANSCO for off-take.

#### 30) Incentive to be nominal & Uniform and beyond 90% PLF only:

- a) Objection / Suggestion: The incentive at 90% works out to 25% of Other Fixed Charges (OFC) and remains at the same level for PLF above 90%. Further, different incentive structures are proposed, for GVK –Phase-I (0.7 % of ROE), BPL (0.525 % of ROE), RTPP –II Stage (maximum of Rs.0.215 per kWh) and BSES (2 % of OFC over 85 % for every one percent increase in PLF and above 90 %, 10 % of OFC). Incentives should be determined as a percentage of "savings" of fixed cost for generation above the threshold PLF and should be uniform for all generators including APGENCO. An incentive of 1 Paise per unit above the threshold PLF is to be permitted as recommended by K.P. Rao committee. Fixing a maximum limit of PLF for incentive purposes is also desirable from the point of view of sustainability of plant. Further, incentive should not be allowed for PLFs less than 90% in view of the recent technical developments and with due regard to the other project contracts such as EPC, Maintenance & O & M. The disincentive clauses may also be accordingly revised.
- b) <u>APTRANSCO Response:</u> Incentive is given to motivate the developer beyond 80% PLF at nominal cost, and thus benefiting the consumer with additional generation at a nominal price. The incentive structure is normally negotiated with the GOI guidelines as ceiling and it is based on actual generation. Incentive structure is to be considered along with other commercial principles negotiated as a package

and cannot be seen in isolation. The developer is obliged to supply energy to APTRANSCO at 80% PLF to recover the full fixed charge. In order to ensure this, the developer may be taking higher PLF guarantees from the EPC and O&M Contractors. He may give them incentives if higher PLFs are achieved or levy penalties if PLFs are less than the guaranteed figures. The incentives from the APTRANSCO to the developer for the units actually delivered have no direct connection with the incentives offered by the developer to the EPC and O&M Contractors.

c) M/s. VPGL Response: Did not specifically respond

# 31) Project to run strictly on merit order only by removing the must run conditions:

Objection / Suggestion: The condition that the aggregate duration of backing a) down pursuant to dispatch instructions (including ramping up time) shall not exceed 1200 hrs in any tariff year (Scheduled D: Article 3.4 (iii)) entitles the IPP to run the project at a PLF of 86.4% and has the following serious implications (i) If power is not purchased when it does not fit into merit order, APTRANSCO will have to pay full fixed charges at a PLF of 86.4% (ii) If the IPP generates power at 86.4% PLF, APTRA CO will be forced to pay both fixed and variable charges fully (iii) APTRANSCO will have to pay committed incentive charge for 157.2 MU over and above the PLF of 80% (iv) Absorbing power with high variable cost due to use of alternate fuel if permitted (v) Payment of minimum fuel off take in respect of primary fuel (being gas) in the event of not accepting the delivery of net electrical energy whether due to force majeure events or other wise. Such a must run condition in the PPA would force APTRASNCO to absorb costly power irrespective of availability of cheaper power (say, from APGENCO). This is precisely the predicament in which the Maharastra State Electricity Board found itself regarding the Dabhol power project. Purchase from M/s. VPGL has to be strictly on the basis of merit order and APTRANSCO has to be given full control on backing down as there is no technical problem to reduce generation to any level in gas based power stations.

- b) APTRANSCO Response: The Dispatch instructions of the PPA are negotiated positions. Normally, the plant would be closed for one month for annual maintenance which is equal to 8.3 % PLF. The backing down rights of 1200 hours and upto 60% of the capacity of the plant works out to 5.5%. The plant will always be available at 86.2% PLF (100-(8.3 +5.%)). The plant will be getting incentive for actual generation beyond 80% PLF (I). APTRANSCO feels that the existing provisions for backing down, meet the requirements and offer enough flexibility, since the incentive regime is only based on actual generation. APGENCO Power Stations and IPPs also will be dispatched as per an integrated merit order. APGENCO Power Stations are also paid fixed charges of Rs.2150.04 Crs./annum irrespective of generation committed to by APGENCO. It is not technically safe nor is it a prudent utility practice to operate gas Based Combined Cycle Power Stations below 60% of the capacity, with out the risk of going into an Open Cycle Mode, resulting in a higher variable cost (130 %). The APERC, in the Tariff Order for 2002-03 clearly stipulated that "while drawing a merit- order the contractual obligations and technical conditions must be taken into consideration. The Commission views the exercise of drawing up a merit-order as the optimum generation schedule, for the ensuing year of Licensees' operation that would result in minimum overall costs for the consumers keeping in mind the contractual and technical constraints". A must run condition for any station is not permitted by APERC, except the promoted category of Non-Conventional Energy (NCE) Based Projects. All the projects of Genco or IPPs will be dispatched as per the Merit Order dispatch keeping in view the interests of Consumers.
- c) M/s. VPGL Response: As has been explained, the guaranteed availability by the Project Company and off-take by APTRANSCO is at a PLF of 84.84% and Fixed Charges are payable on a capacity of 80% only if the PLF (as defined in the PPA) reaches the guaranteed level of 84.84%. As detailed else where, availability of Gas for these gas based projects should not be an issue.\_The Project is planned on natural gas as the primary fuel. Further, APTRANSCO has the right to review and approve any Fuel Supply Agreement through the Fuel Supply Committee constituted under the PPA. Further as per the Amendment Agreement to the PPA, generation of power using Alternate Fuel shall only be with prior approval of APTRANSCO The concept of guaranteed availability without any reciprocal guaranteed off-take is an

inequitable idea. In addition to the dispatch related backing down limited to 1200 hrs, planned and un-planned maintenance requirements would also limit the annual plant availability.

# 32) Excess monthly payments with adjustments at the end of the year result in loss of interest to APTRANSCO:

a) Objection / Suggestion: As per Article 5.2 (b) and 5.2 (c) monthly payments are to be made assuming a PLF of 80 %. At the end of the year, if the PLF is less than 80%, the company shall refund the excess as a credit against the amounts due in the next monthly tariff bill(s). This will result in loss of interest to APTRASNCO. Therefore the refund has to be made month wise and if there are any practical difficulties, refund may be made with interest after completion of tariff year.



- b) <u>APTRANSCO Response:</u> The Article is in line with the provisions of GOI guidelines. "The payment of fixed charges shall be on monthly basis, proportionate to the electricity drawn by the respective Boards. Necessary adjustment based on actuals shall be made at the end of each year".
- c) M/s. VPGL Response: The Article is as per the provisions of Gol guidelines regarding fixation of tariff for IPPs. As per PPA, PLF is calculated on an annual basis. The adjustment for Fixed charge in case of higher actual PLF is also payable at the end of the year. The present provision is therefore equitable. Hence the adjustment is proposed on an annual basis.

# 33) LOC & ESCROW only after examining certain issues and with out affecting consumers:

a) Objection / Suggestion: As per Article 5.9 & 5.10 Letter of Credit and Escrow accounts are to be opened. Commission is requested to examine aspects like (i) Escrowable capacity of APTRANSCO (ii) In how many PPAs and to what extent APTRANSCO has agreed to provide LC and Escrow account (iii) whether such facility has been provided to APGENCO which supplies 65% of power (iv) The escrow policy of APTRANSCO on projects for which and to what extent



APTRANSCO can afford to block its funds in escrow accounts and at what cost? APTRANSCO should permit such facility with out affecting the interests of the consumers.

- b) <u>APTRANSCO Response:</u> The Escrow facility provided in the PPA is a Bid condition and a requirement stipulated by financial Institutions. However, APTRANSCO decided that the escrow cover proposed in the PPAs is to be reduced to 100% of average monthly bill as against 120% as per the PPA. Eventually APTRANSCO would like to restrict this amount to Debt servicing plus variable charges per month subject to financial Institutions agreeing to such a provision. Further, Escrow account is a default account operative on failure of payment of energy charges through direct payment / letter of credit.
- c) M/s. VPGL Response: The Escrow Facility provided for in the PPA is as per the project ICB condition. Escrow Arrangement is a major lender requirement for financing.

### 34) MoA and its implications must be known:

- a) <u>Objection suggestion:</u> It was reported by the media that GoAP and APTRANSCO have signed a Memorandum of Agreement with the financial institutions that are extending loans to M/s.VPGL. It is not clear whether the approval of APERC has been taken for this arrangement. Unless the contents of MoA is made public, its implications for APTRANSCO and the consumers of the State can not be known.
- b) <u>APTRANSCO Response:</u> The Memorandum of Agreement is initialed and it is under the scrutiny of the lending institutions. The document is not yet signed. The MOA is to be executed for enabling the Lenders to fund the IPPs without insisting for escrow to be in place at the time of Financial Closure.
- c) M/s. VPGL Response: No comments.

# 35) The benefit of lower capital cost of Rs 1043 Crs need to be passed on to the consumers:

- a) <u>Objection suggestion:</u> The stated capital cost of the project is Rs 1043 crs. However, since the payment of the capacity charge for this project is not dependent on capital cost, it became irrelevant. The burden on APTRANSCO and the consumers will be much less if tariff is worked out based on the capital cost taking into account debt repayment obligations and return on equity as allowed to other IPPs.
- b) <u>APTRANSCO Response:</u> The IPP is selected in ICB Route on Tariff basis. The capital cost is not having any bearing on Tariff. The capital cost estimated for 370 MW project is Rs. 1043 Crs. and CEA have already certified that the tariff as per PPA dt: 31.3.97 with capital cost of 1437 Crs. is attractive compared to the tariff computed as per GOI guidelines.
- c) M/s. VPGL Response: Vemagiri Power Project was awarded on a Tariff based bid under competitive bidding basis with Naphtha as Fuel. While accepting the bid, APTRANSCO / GoAP had critically evaluated the same. Further the CEA, while according the TEC, had gone into the details of the tariff vis-a-vis the GOI guidelines. Even after that, as per the advice of GoAP, for change of fuel from Naphtha to Gas, Project company did accept the Goutami project tariff, resulting in reduction in power purchase cost to APTRANSCO over the PPA term. The fixed cost as per the PPA is one of the lowest for any Greenfield project in the country. Fixed cost of 98 paisa per unit on 1st year and 69 paisa from 11th year to 15th year is the lowest for any IPP. The Actual Capital Cost, operating costs, source of funding, cost of funds, equity composition etc., are not relevant since the tariff would remain fixed.

#### 36) The normal plant life is 18 to 20 years:

- a) <u>Objection / suggestion:</u> The normal life of any gas-based plant is 18 to 20 years against the stated life of 15 years. For example the Plant life for Spectrum Project at Kakinada is 18 years.
- b) <u>APTRANSCO Response:</u> The term of the Power Purchase Agreement for M/s.KEOPL. is 15 years as per Bid conditions. Plant life is 15 years as per GOI

notification on 'depreciation'. So far as GVK and Spectrum PPAs are concerned, the PPA's are finalised on MOU basis and tariff is based on approved capital cost. The Agreement period is a negotiated one, however it can be extended on mutually agreed terms & conditions subject to the consent of APERC.

c) M/s. VPGL Response: Plant Life: The Plant Life of 15 years as considered in the PPA is a part of the ICB condition based on which the project was awarded.

### 37) Buy-Out procedure:

- a) <u>Objection / suggestion:</u> Since already 90% of the project cost is recovered by the IPP by way of depreciation, the actual cost of the plant shall be only 10 % of the total capital cost. But as per PPA higher buy out price is in place.
- b) <u>APTRANSCO Response:</u> A developer is allowed to recover only 90% of the Project Cost through depreciation, out of which, 70% will be in Debt and 20% will be Equity. Balance 10% is still remaining in the Project. When Buy Out occurs all these factors will be considered to fix BUY OUT Price. A procedure is laid down for fixing the Buy Out Price in the PPA.
- c) M/s. VPGL Response: As per the PPA, the buy out upon the expiry of the initial PPA term would be at Terminal Value, which is 50% of the Depreciated Replacement Cost. This would take into account the accumulated depreciation of the assets over the PPA term. Further, the PPA Term is for 15 years, beyond which it can be extended by mutual agreement between the parties. As per the PPA provisions, on expiry of the PPA Term, if the PPA period is not extended, APTRANSCO has the option and no obligation to buy out of the plant. If APTRANSCO uses the option the Buy-Out would be based on formula as per PPA, which takes into account depreciation of the plant during the PPA period.

#### 38) PPA should exclude any reference to stage -II. :

- a) <u>Objection / suggestion:</u> PPA should exclude any reference to stage -II. Extension if any only to be considered after completion of stage –I. Any commitment should be given only after stage -I is set up, track record proven and they are able to tie up fuel. As such committing an agreement for extension stage is not in the interest of APTRANSCO.
- b) <u>APTRANSCO Response</u>: The total Stage II capacities of M/s.GVK, M/s.VPGL & M/s.GPPL are 503.9 MW. The implementation of these projects of Stage II is after obtaining gas linkages by the developers and as per system requirements. Thus Stage-II projects implementation is not considered in the capacity addition of 2007. This present Amendment Agreements to the PPAs through power purchase agreements for which consent is asked for, is only to the Stage-I capacities, in respect of Vemagiri Power Generation Ltd., Gautami Pvt. Power Ltd., Konaseema EPS Oakwell Power Ltd (No Second Stage) and GVK Industries Ltd. (Extn project)
- c) M/s. VPGL Response: VPGL at present is implementing Stage I of the Project with capacity of 370 MW. As per the terms and conditions of GoAP's approval, VPGL will be allowed to take up Stage II of the Project only after getting the required additional 100% Gas and after approval of the implementation schedule for the Project by APTRANSCO with reference to load requirements and availability of evacuation facilities. Further Stage II of the project is subject to APTRANSCO and APERC approval.

### 39) Over all impact on the end tariff needs to be seen :

a) <u>Objection / suggestion:</u> Before extending consent, the over all impact on the end tariff needs to be seen. This becomes important because, as, going by the proposals of APTRANSCO, the addition of gross capacity will be 1574 MW, including 98 MW of NTPC Talcher against the projected requirement of 835 MW of additional capacity by that year, resulting in surplus capacity. On this, APTRANSCO should note Hon'ble Commission's observation in its order dated 29.7.2002 on load forecast that APTRANSCO cannot plan for surplus capacity for selling power outside the

state. Therefore, scheduling of new projects should be in accordance with the estimated growth of demand.

- b) <u>APTRANSCO Response:</u> Though a surplus situation is shown in ARR 2002-03, there is actually a deficit to the tune of 4000 MU due to monsoon failure and loss of hydel generation consequent to low inflows into the reservoirs. Heavy load shedding was resorted to, to safeguard the kharif crop. The estimated projections for the year 2002-03 will be of the order of 44000 MU as against 39500 MU approved by APERC. This is a tariff based project. Hence the cost of project has no bearing on the tariff. A power surplus situation may arise for a short while by additional generation from gas power stations. It cannot be so for the entire future. In such situations, APTRANSCO can derive the benefits taking advantage of the price of power from the project (being the lowest in the entire Country for any IPP project). Any additional capacity which comes at this price is welcome and to the advantage of the State. Even as of today, APTRANSCO has made arrangements to sell power to the neighboring states at Rs.2.50 per Kwh.
- c) M/s. VPGL Response: No comments.

# 40) <u>Uniformity of back down provisions based purely on technical constraints to be ensured</u>:

a) Objection / Suggestion: There seems to be no uniformity in fixing the limits of backing down for various projects. For example, APTRANSCO is permitted to ask for backing down to a maximum of 20% of available energy in the case of BPL, while the same is fixed at 40% in case of RTPP-II stage. For BSES Andhra Power Ltd (BAPL) the aggregate duration of back down is fixed at a maximum of 280 MU in a year for a gross generating capacity between 85% to 100% and at a maximum of 1000 hrs in a year for a capacity between 60% to 85%. APERC is requested to maintain uniformity in fixing the maximum limit for backing down for projects of similar nature, taking the technical constraints (As per APTRANSCO it is not technically safe to operate the gas based plants less than 60% of the capacity) into consideration and ensure smooth operation of merit order dispatch. This is in line with the commission's observation in the tariff order for the year 2002-03.

- b) <u>APTRANSCO response:</u> The existing provisions are negotiated positions. It will be examined inline with BAPL revised provisions, subject to developer's concurrence.
- c) M/s. VPGL Response: The dispatch provisions in a power plant are typical to the machine size, technology, load at which it is operated and the grid stability and inter connectivity related. The dispatch of single machine does not affect the flexibility of grid operations nor does it limit dispatch. In a inter connected grid, merit order operations and technical limits along with commercial contracts normally determine the dispatch. The current dispatch instructions is a negotiated position and is a part of the terms and conditions of PPA approved by GoAP. Dispatch provisions are uniform for all the 4 gas projects. BAPL project has dispatch provisions similar to Lanco Kondapalli and others.

# 41) <u>Auxiliary consumption and Heat Rate - agreed parameters or Actuals</u> which ever is lower to be taken in to account :

- a) <u>Objections / suggestions</u>: For all the four gas based projects a provision may be included in the PPA that the agreed rates of heat and auxiliary consumption or the actuals, which ever is lower, should be taken into account for the purpose of calculation of tariff, to derive benefit from the modern technology being used.
- b) <u>APTRANSCO response:</u> The heat rate and Auxiliary consumption are negotiated positions and are lower than the heat rate of 2000 Kcal / kWh provided in the GOI guidelines. They are for the entire term of the agreement. It may be noted that there will be impact of several features such as relative humidity, ambient temperature, frequency and load, on the heat rate and they are more predominant in respect of gas power projects. Generally, the heat rate is guaranteed at ISO conditions by the manufacturers. Some of the Developers have requested APTRANSCO to give suitable allowance for Station Heat Rate for deviation in ambient temperature, relative humidity etc., but APTRANSCO did not agree to that.
- c) <u>M/s. VPGL Response:</u> The Heat rate of 1850 kcal / unit as per the Amendment Agreement to the PPA is lower than the figure of 1900 kcal unit as per original PPA. Further, the Heat rate as per the PPA is to remain unchanged over the

PPA term, whereas in actual operation the heat rate of the plant will degrade based on hours of operation.

### 42) Commission to the criteria to be followed by the fuel supply committee:

- a) Objections / suggestions: In order dated 13.12.2002, relating to the PPA of BAPL it was mentioned that when BAPL arranges a firm fuel tie up (with 100% fuel linkage) for natural gas and generates with alternate fuel, the tariff shall be computed based on the cost of the alternative fuel as decided by the fuel supply committee. The Hon'ble Commission leaves the issue unsettled and delegates its authority, as well as responsibility, to the fuel supply committee. Commission has to lay down the criteria to be followed by the fuel supply committee in deciding the cost of alternate fuel. Commission is requested to reconsider its decision. Commission should also have a say for itself in appointing members of the committee to ensure fairness. Further, as the power project of BAPL is completed, the Commission need not apply the criteria it adopted in granting consent to the PPA of BAPL, to the PPAs of the proposed four gas-based power projects. As these four projects have not achieved financial closure, leave alone completion, they stand on a different footing.
- b) <u>APTRANSCO Response</u>: Did not respond.
- c) M/s. VPGL Response: Not available.

### 43) Lower Interest rates should reflect in reduction of FDSC and OFC:

a) Objections / suggestions: These PPAs were drafted in the background of a high rate interest regime. During the last few years the RBI has brought down the lending rates quite substantially. Recently, it has reduced the prime lending rate to 6.5%, In response, banks and other financial institutions have brought down their lending rates to 9.25%. In this background, it is necessary to see whether the proposed fixed as well as variable charges reflect this change. In other words there is need to bring down FDSC and OFC. Since financial closure has not been effected the benefit of the lower interest rates needs to be reflected in the tariff. Other wise IPPs will have windfall profits at the cost of ordinary consumers.

Further, there should be a clause in the agreement to reduce power purchase rates on par with decreasing interest rates.

- b) <u>APTRANSCO response:</u> As already stated the present tariff is the lowest in the country for the IPP projects and the payment obligations are limited to the fixed charges and the variable charges as per PPA. Further, the Projects were awarded for implementation based on Tariff based Bids as per Gol guidelines / notification. The fuel cost is on actuals and is a pass through in tariff.
- c) M/s. VPGL Response: The tariff is not on Capital and operating cost of the company. The actual return would depend the actual Capital cost, financing cost, operating cost including cost inflation which risk is taken by the project company. Thus no return can be said to have been guaranteed. The fixed tariff is independent and unchanged for any change in project including financing cost. At its present fixed tariff it is the cheapest IPP in the country.

#### 44) COD date shall be reckoned from the the date of financial Closure:

- a) <u>Objections / Suggestions:</u> Date of completion of the project is to be reckoned from the date of achieving financial closure and not from the date of signing the PPA.
- b) <u>APTRANSCO response:</u> The developers were asked to give firm schedules and dates were incorporated in the PPA accordingly.
- c) M/s. VPGL Response: Not available.

### 45) EPC and O & M contracts to be made available:

- a) <u>Objections / suggestions:</u> EPC and O & M contracts need to be made available in as much as they are signed on the strength of the PPA. The contention that since it is a tariff based PPA there is no need to disclose them is untenable. Further, in the absence of EPC / O&M contracts, the impact on the tariff, particularly the impact of the exchange rate variation is difficult to assess.
- b) <u>APTRANSCO Response:</u> The developer is obliged to supply energy to APTRANSCO at 80% PLF to recover the full fixed charge. In order to ensure this,

the developer may be taking higher PLF guarantees from the EPC and O&M Contractors, and incentives to them if higher PLFs are achieved and penalties for less than the agreed PLF. The incentives from the APTRANSCO to the developer for the units actually delivered has no direct connection with the incentives offered by the developer to the EPC and O&M Contractors. The incentive structure is a negotiated position.

c) M/s. VPGL Response: The tariff as per the PPA is fixed and independent of the actual capital, financing and operating costs, all risks in this regard being on the project company and as such the contracts are not relevant for PPA evaluation. The project company remains unconditionally bound to the PPA terms. Further, the liabilities and risks of the Company under the PPA would be much greater than that assumed by the EPC Contractor and the O&M Contractor, whose liabilities would also be limited in value. Thus the terms of these Contracts would be different from those in the PPA. The tariff is one of the lowest for any IPP project in the country. Fixed cost of 98 Paisa per unit on 1st year and 69 paisa from 11th year to 15th year is the lowest for any IPP.

#### 46) Disincentives:

- a) <u>Objection / Suggestion:</u> According to the PPA in question disincentives will be effective if the PLF is less than 68.5%. According to the earlier versions of the PPAs, PLF of 68.5% is the threshold level and if the plant operates above this level it will be paid incentive and if it is below this level it will attract disincentives. While the threshold level for incentives is changed, for disincentives the threshold is not changed. In the background of changes made to incentives and also in accordance with relevant provisions in the EPC and Maintenance Contracts, these disincentives also need to be changed. In keeping with changing technical conditions, disincentives should be effective if PLF is below 90%.
- b) <u>APTRANSCO response:</u> In earlier PPAs like GVK Stage I capacity of 216 MW, the threshold level for recovery of Fixed Charges is 68.5% and incentive payment is for PLF above 68.5%. The Fixed Charges will be suitably reduced proportionately if the PLF is below 68.5%. The Incentive/ Disincentive structure in the present case is an improvement over GOI guidelines, as detailed below:

- i) The threshold PLF is 80%.
- ii) If the **actual** generation is above 80%, the Incentive will be paid.
- iii) If the PLF is less than 80% but more than 68.5%, then the Fixed Charges will get reduced proportionately.
- iv) If the PLF is less than 68.5% then disincentive structure as per Article 3.6 will operate.

The disincentive provision is effective in case the project is unable to achieve a PLF of 68.5% as per Article 3.6 of PPA.

PLF			Penalty (%)		
68.5%			Nil		
Below	68.5%	to	2% for every 1% shortfall in PLF		
60.5%			(i.e., for a PLF of 60.5% the		
			penalty will be 16% of the OFC)		
Below	60.5%	to	3% for every 1% shortfall in PLF		
50.5%			(i.e., for a PLF of 50.5% the		
			penalty will be16%+30%=46% of		
			the OFC)		
Below 50.5%			Same as for 50.5% i.e., 46% of the		
			OFC		

c) M/s. VPGL Response: The Company recovers its full Fixed Charges only at the Guaranteed PLF of 84.84%. Since the Fixed Charge is recovered on per unit basis, the Company recovery of Fixed Charge automatically reduces for PLF below the Guaranteed Level .The disincentive provided for PLF below 68.5%, is an additional penalty and has a compounding effect by way of further deduction from the already reduced Fixed Charges that the Company was able to earn.

### 47) <u>Fixed charge per KWH of Rs. 0.93 is not the lowest as claimed by APTRANSCO:</u>

- Objection / Suggestion: As can be seen from the letter dt. 10-12-1998 a) from Sri. T.L. Shankar, IAS, Director / APGPCL & Principal ASCI, Hyderabad to Sri .V.S. Sampath, IAS, Prl. Secretary, Energy, GoAP seeking permission to setup 172 MW gas turbine based power plant at Vijjeswaram, the levelised fixed charges for KWH is Rs. 0.80 (over a period of 15 years based on 4.85% Forex inflation and 8% discounting) which is the lowest in the country. Therefore, the bench mark fixed charge per KWH of Rs. 0.93 is not the lowest as stated by APTRANSCO. The reply of APTRANSCO that APGPCL project is on recourse finance and IPP projects are on non recourse finance is not satisfactory. The very object of privatization of generation is to produce power at a cheaper rate. It is developer's look out to procure finance at the cheapest rate. Hence, Commission is requested to fix the fixed charges for KWH as Rs. 0.80 or the cost arrived from Spectrum which is even lower than all the IPPs (GVK Stage – I, Spectrum, Lanco, BAPL) by using powers and functions provided in the Act.
- b) APTRANSCO Response: The public hearing is conducted for 4 Nos new gas projects. The irregularities pointed out pertaining to Spectrum project are noted. The letter referred is a communication between APGPCL and GoAP. APTRANSCO has not received any firm offer nor any details regarding how the levelised fixed charge is arrived at. It appears APGPCL proposed to develop III Stage extension as IPP Project and not as an expansion project. APGPCL reported levelised fixed charges of Rs. 0.80 / Kwh over a period of 15 years based on 4.85% Forex inflation and 8% Discount Factor. But for the present (for IPP projects) the forex inflation is taken as 6.68% and Discount Factor as 12% over a period of 15 years. If these rates are applied it may result in higher fixed charges of more than 80 Paise / Kwh. absence of details of fixed charge components of OFC and FDSC exact calculations can not be made. A firm offer of 93 Paise / Kwh first year fixed charges cannot be compared with the tentative offer of levelised fixed charges of 80 Paise/Kwh without any further details.

c) <u>M/s. VPGL Response:</u> APGPCL project is an expansion (brown field ) project. The financing is based on recourse financing. The 172 MW Vijjeswaram project was commissioned in 1997.

### 48) Fuel Supply Committees to be in place before consent:

- a) <u>Objection /suggestion:</u> Fuel Committees that were to have been constituted with representation from APTRANSCO and the project company with an independent expert, in accordance with PPAs to take all actions required for sourcing of fuel were not in place. APERC to see that these are in place as per the PPAs.
- b) <u>APTRANSCO Response</u>: The constitution of fuel supply committee is in process.
- c) <u>M/s. VPGL Response</u>: The relevant details requested forms part of PPA in Schedule I.

### **GAS AVAILABILITY:**

### 49) Fuel availability and its implications:

- a) Objection / suggestion:
  - i) The Gas requirements are as given below:

SI.No	Type of plants	Capacity in MWs	Annual Requirement at 85 % PLF in BCM
1	Existing *	1051	1.62
2	Other users of ONGC / GAIL	-	0.96
3	Other plants for which gas has been partly allocated **	2443	3.65

**Total** 6.23

\*APGPCL 1 & 2 (272 MWs), GVK (216 MW), Spectrum (208 MW), Kondapally (355MW)

- \*\* BAPL (220 Mw), Spectrum (220 Mw), Konaseema (445 MW), Vemagiri (520 Mw), Goutami & NCC (598 Mws), GVK (440 Mw)
- (b) As per FICCI Report 2000, the reserves in K-G basin were estimated as 37.35 Billion Cubic Metres (BCM). The reserves would (assuming 40 BCM) last for 6.4 years as against plant life of 18 years.
- (c) According to the Fourth National Power Plan 1997-2012 drawn up by the CEA, the estimated gas reserves are only 16.36 BCM and they would last not more than 3 years. With the existing commitments alone, the reserves would barely last for 6 years.

Further, in the light of non-availability of natural gas in adequate quantities (As per letter D.O No.No. L/12011/14/99-GP dated 22.1.2002 written by The Secretary of Ministry of petroleum to the Chief Secretary of GoAP), there was uncertainty of its future supply despite firm allocations, as the production of gas is likely to be adequate only for the existing gas based stations. The existing plants which are not being supplied adequate gas by GAIL are either being backed down or are using naphtha / HSD in lieu and high cost of alternate fuels. As recommended by the committee of experts comprising the Principal of ASCI, the Principal Secretary for Department of Energy (GoAP) and the Chairman and Managing Director of APTRANSCO, appointed by GoAP, no new gas based projects are to be permitted. It is also to be noted that Naphtha –based projects with a total capacity of 3000 MW are already idle in the country as the power generated by them is the costliest. As such, a reasonable ceiling of say Rs. 1 or Rs 1.20 per unit, should be fixed and for variable cost. In case, the projects use alternate costly fuel due to non-availability of gas, the variable costs to be paid to them should not exceed the ceiling limit of price of gas. Otherwise, if consent is given in their present form of the PPAs, the private sources from whom these projects expect to get gas in future are likely to fix the price of gas at a much higher price because these projects have to willy-nilly purchase gas from them.

Further, the reply of APTRANSCO clearly brings out the current production of gas as 7 MCMD and is falling short of current requirements. The gas requirements for 1500 MW works out to 7.84 MCMD against 5.67 MCMD indicated by APTRANSCO. Gas requirement of 5.67 MCMD will only enable a daily generation of 72% on average. This will lead to under utilization of assets and cost push. In fact the dispatch instructions and fixed cost computations suggest that these plants will operate at about 85% PLF. Also when there is no assured gas availability power projects should not be planned on hypothetical assumptions and expectations. Non-availability of gas can be a chronic problem and as such it should be ensured that no fixed charge should be allowed in case gas is not available.

APTRANSCO Response: The GOAP and APTRANSCO have allowed these b) least cost generation plants with natural gas as fuel with firm fuel linkages. The allocation of natural gas is made by MOP&NG. Further Gas Supply Agreements (GSAs) in uniform standard format across the country have been entered with validity upto 2010 and it is expected that GSAs will be suitably extended for the full As the MoP & NG has given the gas linkages originally, they term of the PPA. would honour the commitments. As per the indications given by GAIL the present projected availability by ONGC is about 8 to 9 MCMD of Natural Gas and the current supply is about 7 MCMD. In future, ONGC will not be the only source for gas. It is indicated that private agencies like CAIRN are expected to supply 3 to 4 MCMD from 2004 – 05. Further, the explorations being conducted by Reliance are expected to yield good results in the order of 18 MCMD by 2004-05. APTRANSCO foresees no difficulties in operating these projects with natural gas as fuel. It is not correct that the Committee of Experts appointed by GOAP concluded that "no new gas-based power projects would be permitted in view of shortage for gas, likely hike in its price and high cost of alternate fuels". As far as APTRANSCO is aware, no such recommendation has been given by the Expert Committee to the GOAP. Further, generation with alternate fuel will be as decided by the fuel supply committee and as per the merit order dispatch as approved by APERC. The total capacity of Gas stations that are already generating energy is 2196 MW. The second stage of generation sanctioned for VPGL 150 MW, GVK 220 MW and GPPL 134 MW will be implemented only after Gas is available and allotted. They need not be considered now. For the sanctioned Projects LNG is not considered. The fixed cost is 0.6 cents plus 69.9 paise and variable cost is around 76.71 paise for the gas based projects. Hence Gas Projects is the least cost generation option.

M/s. VPGL Response: "Fuels" worldwide are natural resources inter state c) control/ regulation on utilization, production and transportation. This is due to security, strategic, self-sufficiency as also for economic reasons. Even under the deregulated price regime, a Hydrocarbon Regulator will be in place, which shall address the issue of price, availability etc. Transferring the fuel risk to the project developer is not an equitable approach. Vemagiri power project has a 100% firm allocation for 370MW (+/-) 5% project capacity from the Ministry of Petroleum & Natural Gas and has a signed Gas supply contract with GAIL. Gas for the project was allocated in August 2000 on GoAP recommendation on switch over from Naphtha to Natural Gas. Supply term is up to Dec 31st 2010.Firm linkage has an advantage over Fall back and Temporary linkage, since recourse to restriction/denial is exercised last as per GOI & GAIL norms. The project, due to the delays, now has an effective gas supply term of 5.5 years now, if the COD can be achieved in June 2005. Project Company has lost 4.5 years of firm allocation of gas due to reasons beyond its control. GAIL is an aggregator. GAIL has a contract with ONGC up to 2010 based on the Long Term Oil and Gas (LTOG) plans of ONGC in the KG basin. The contract between GAIL with ONGC is to be extended. Alternate scenario is, ONGC may market the Gas directly on introduction of "common carrier concept" on gas sector deregulation. Deregulation is expected shortly. GAIL also receives and supplies from Ravva field operated by Cairn Energy, a joint venture operation of Cairn, Videocon and ONGC. The KG basin is now the epicenter of interest and activity of many Exploration and Production companies in Gas and Oil exploration ventures. ONGC has committed investments in the region of > Rs.1000 Crs for the 11<sup>th</sup> plan. Cairn Energy and Reliance have invested sums in excess of Rs.1000 Crs and are still exploring. Unconfirmed estimates of Reliable & Proven reserves in the basin are in excess of AP State demand. With this background, it is disturbing that non-availability of a supply contract beyond 2010 is construed as non-availability of Natural Gas resource. Natural Gas cannot be stored after exploration. E&P companies are incentivized to produce at higher rates based on the commercial provisions in "Production Sharing Contract" (PSC) entered into with Gol.

Project company is confident of securing Gas for the PPA term without question Reliance group has formally announced that it has struck gas with reserves of seven trillion cubic feet off India's eastern coast. Reliance has struck gas at all five exploration wells at depths of more than 6000 feet in its deepwater D-6 exploration block in the Krishna-Godavari basin.US-based oil consultancy firm Douglas & McNaughton has certified that the reserve has the potential to supply up to 40 mmscmd (million metric standard cubic metres) gas per day. The reserves are some 40 times larger than those of Bombay High, and double the total gas production of Oil and Natural Gas Corporation. Already named 'Dhirubhai-1, 2 and 3' in memory of the group's patriarch, the gas field — in which five wells have been drilled so far — is estimated to hold over seven trillion cubic feet of gas. With gas coming from the reserve found by UK major Cairn Energy in the same area, the KG Basin will be nearly brimming with gas in next 2 years. This discovery will signal a giant leap in ensuring energy security for India, as the production will account for 4 per cent of India's energy needs. Commercial production of Gas from the Reliance Gas field would commence during the period December 2003-March 2004. With more wells to be drilled by Reliance as part of its exploratory activities the Natural Gas availability in KG Basin is poised to take a quantum leap. Additionally ONGC too has struck gas in its exploratory blocks in KG Basin, which in turn would boost its existing production schedule. With this backdrop, Andhra Pradesh is poised to become hub of Gas business and will play a key role in shaping India's gas policy initiatives. With the dismantling of Administered Pricing Mechanism (APM), the pricing of products will be based on prevalent Demand-Supply conditions. This new find has effectively created a scenario, wherein industry has to respond to such massive availability - a perfect scenario of supply out stripping the demand. Close on the heels of Reliance Industries Ltd striking gas in the Krishna-Godavari basin, the Oil and Natural Gas Corporation has found oil and gas in its deep-water exploratory block off the Andhra Pradesh coast. ONGC chairman and managing director Subir Raha said: "ONGC has struck oil and gas at a deep-water exploration block. The company has already drilled wells at 900 metres below the sea bed." ONGC is in the process of estimating the oil and gas reserves in the deep-water exploratory block. The reserves are, however, expected to be lower than Reliance Industries' gas find. Raha claimed that the corporation would soon charter drill-ships to carry out further drilling at the exploration block. "We plan to drill up to 2,700 metres below the sea bed," Raha said. At present, ONGC's total gas production stands at 19 billion cubic metres. Of this, around 8 million cubic metres are produced every day from the on- and offshore fields in Andhra Pradesh. ONGC's gas production from the Andhra Pradesh fields is expected to go up to 10 million cubic metres per day in two to three years. This includes oil and gas production from the Ravva fields. Meanwhile, ONGC has increased its gas production from the Bombay High following a re-development programme. Gas production has gone up 4 per cent, valued at Rs 400 crore (Rs 4 billion). Cairn Energy had undertaken exploration activities in a 5000 sq m area, off Ravva field adjacent to the KG1 Basin. This block was awarded through NELP stage II with 100% marketing rights. The current estimates indicate a gas reserve in this block equivalent to around @7.75 MMSCMD for 10 years ( based on a reserve estimate of 1trillion cu. ft). Cairn announced the discovery on 26th June and was named as "Annapoorna" by Mr. Ram Naik, Petroleum Minister. This field is expected to commence commercial production by December 2003. The Gujarat governmentowned Gujarat State Petroleum Corporation (GSPC) is expected to get approximately six times more gas reserves from one of the blocks of the Krishna Godavari basin than what Reliance claims to have found recently. The KG OSN 2001/3 block of the Krishna Godavari basin, which is yet to be formally awarded to GSPC, is estimated to have 44 trillion cubic feet of (TCF) gas reserves. According to sources, the company has already initiated dialogues with the ministry of petroleum to finalise production-sharing contracts (PSC). The PSC is expected to be inked in the middle of December. The GSPC has made a bid for KG 3 block in collaboration with Canada-based GeoGlobal Resource and Jubilant Enpro of the Bharatia group. In this consortium, GSPC has a maximum of 80% equity stake, while the other two partners have equity stake of 10% each. All the above details on gas findings are based on news articles. Further, Gas Supply Agreement is signed with GAIL a Govt Company for 15 years covering the entire PPA term based on firm linkage obtained by VPGL and MoU is also been signed with Reliance for supply of gas. Gas availability will be ensured due to huge discovered gas reserves in the KG basin which will effectively mitigate all issues relating to non availability of gas. GoAP in fact has appointed a committee under Chairmanship of Mr. T.L Shankar to recommend how to maximize the utilization of gas in the state.

## 50) Firm allocation doesn't mean firm commitment for supply of gas:

- a) Objection / suggestion : Certain terms in the GSA are frightening, such as gas supply is "subject to sellers ability to supply the same...", the requirement of dual fuel capabilities to be designed and most significantly inclusion of non-supply of gas by ONGC as a Force Majure clause. All this goes to say that firm allocation doesn't mean firm commitment for supply of gas. Since gas as per GSAs is not dependable, reliance on Naphtha becomes inevitable which was discarded by GoAP while permitting to run on gas. GAIL must unhesitatingly guarantee assured supply of gas for the full requirement. The main issue is not whether it is fall back allocation or firm allocation but firm supply of gas.
- b) <u>APTRANSCO Response:</u> The allotment of Natural Gas to the IPPs is given by GAIL on firm / fall back basis taking into account the available Natural Gas in KG basin and expected explorations. As per the indications given by GAIL the present projected availability by ONGC is about 8 to 9 MCMD of Natural Gas and the current supply is about 7 MCMD. It is also indicated that private agencies like CAIRN are expected to develop 3 to 4 MCMD from 2004 05. Hence there is no difficulty to meet the requirement of gas for this project. The Fuel Supply Agreement is of GAIL a GOI organization, which is applicable to all generating stations, whether they belong to Government or private. The FSA is between the GAIL & Developer for supply of specific fuel only i.e., like Natural Gas. Hence in case GAIL/ONGC fails to supply adequate gas for which agreement was entered it is the responsibility of developer to source out from an alternative supplier.
- c) <u>M/s. VPGL Response: On the issue of gas availability, submissions made</u> elsewhere may be referred to. The Gas Supply Agreement has been signed with GAIL, a government entity. The agreement is in a standard format and we understand that this is uniform for all power projects.

# 51) <u>Full capacity of the existing plants to be used on gas before adding new capacities:</u>

a) <u>Objection / suggestion:</u> While existing gas based plants were allotted only a part of the gas needed by them, it is not meaningful to allot gas to other plants. Full

capacity of the existing plants needs to be used before adding new capacities. If gas is available, the same should be first allocated to the existing plants including NFCL etc., and new plants should be allotted gas only after wards. Other wise this will lead to unnecessary burden on the consumers. Further, in the circumstances, where already full installed capacities are not being used, the Minimum guaranteed off take (take or pay) Clause in the GSA for the proposed projects will mean extra burden to the consumers.

- b) <u>APTRANSCO Response:</u> Existing gas based projects are operating at about 85% PLF. In case supply to existing gas projects is limited to Firm Gas allocation, GVK & Spectrum can work up to 69% against full fixed charge recovery @ 68.5% PLF. The liability for the incentive regime up to 85% PLF may have to be borne by APTRANSCO in case they are not allowed to operate on alternate fuel in the merit order dispatch. However this situation may not arise in view of abundant resource of gas availability beyond 2004 and requirement of power in the State.
- c) M/s. VPGL Response: Not available.

### **GAS PRICE:**

### 52) Proposed price hike and its implications

a) Objection / Suggestion: The GoI, has declared its intention dismantle the Administered Price Mechanism (APM) for petroleum products, including natural gas, from April 1, 2003 and the buyer has to pay the seller a price which is market related as per the Gas Supply Agreement (GSA- Article 10.01). The GoI has reportedly proposed to hike the price of natural gas by 107 % -from Rs 2850 to Rs 5900 per standard cubic metre. In fact there are contractual commitments to allow rnational prices for NELP programs and this will also apply to ONGC / GAIL supply to avoid discrimination. The Hon'ble Chief Minister in his letter dated 19.9.2001 to the Hon'ble Prime Minister stated: "Natural gas in Andhra Pradesh is used mainly for power generation and there are already three power projects with a total installed capacity of 784 MWs supplying to the grid and the fourth, viz., BAPL. (220 MW) is expected to go on generation during October, 2001. If the proposed increase in natural gas price is given effect, it would increase payment of variable

cost additionally to the tune of Rs 563 crores in one-year. The power consumers in AP can ill afford a significant tariff hike consequent to the steep increase in the variable cost on account of natural gas price increase." The additional cost of natural gas for all the five pending gas based private power projects (including BAPL) would be around Rs 1596 crs per year, if the price of gas is increased by 107%. APTRANSCO have also furnished a computerized sheet showing the levellised cost of power at Rs 2.14 / kwh. The calculation is faulty because (a) The price of Rs 5800 / 1000 SCM should be taken into account being the price expected to prevail well before the project construction starts (b) Since the gas price is linked to international prices of a basket of fuel oils, foreign exchange variation should be applied on fuel price at 6.68% p.a as is done in other cases (c) In addition to the above, further escalation of 6% p.a (which is quite low for oil prices) has to be considered (the escalation could be in the range of 20% p.a). With the above, the variable cost may exceed Rs. 3/- and the levelised tariff will be well above Rs 4.00. It is therefore not prudent to permit gas-based power projects. If APTRANSCO / GoAP continue to insist on getting clearance for these projects, Commission should get a commitment from GoAP that the additional burden on account of hike in gas prices would not be passed on to the consumers.

b) APTRANSCO Response: The fuel policy is to be decided by GOI & increase in price of natural gas is not finalised. However GOAP have addressed their concerns to the GOI that the increase in natural gas price as proposed by MOP & NG will impose intolerable burden not only on the power consumers of AP but also in the Country as a whole since some power projects are being operated by NTPC with Natural Gas as fuel. The proposed increase will significantly retard the efforts of the State Government to mitigate the effects of tariff increase. GOI was requested to ensure that there is no increase in the price of Natural Gas. The total capacity of Gas Stations in service and stations sanctioned is 2196 MW. The second stage sanctioned for Vemagiri Power Generation Ltd. 150 MW, G V K Industries Ltd 220 MW and Gautami Power Pvt Ltd 134 MW will be implemented only after Gas is available and allotted. They need not be considered now. For sanctioned Projects, LNG is not considered. The fixed cost is 0.6 cents plus 69.9 paise and variable cost is around 76.71 paise in case of M/s.Gautami Power Private Limited. Hence a Gas Project is the least cost generation option with the present gas prices. Further, GOI

is considering establishment of a Regulatory Mechanism to over see the pricing and other related matters in the petroleum sector in the post APM period. Petroleum Regulatory Board Bill 2002 provides for: "monitor prices & take corrective measures to prevent profiteering by entities". APM and Inflation are factors requiring consideration not only for gas but also for other fuels as well and have to be taken into account. Even if the gas cost is doubled, the cost of generation in the first year will work out to only Rs.2.52 paise per kwh (FC - Rs.1.00 + VC 1.52) which is affordable and competitive. In a regulatory mechanism prices will be fixed by the Regulator taking into account the interest of all Stakeholders, consumer being one of the Stakeholders. This is a GOI policy affecting all the power projects and industries which run on Natural Gas. In a Regulatory regime, the Regulator will have to consider the interests of the Consumer. Fuel Supply Committee (FSC) would periodically review the reasonableness of the fuel pricing under the existing FSA in light of the availability and feasibility of use of alternate fuel supplies including interalia (i) domestic fuel supplies which might become available at a lower delivered cost to the project or (ii) short term spot market fuel supplies. When permitted under the PPA the FSC may require the company to utilize such alternate fuel to meet all or part of the fuel requirements of the project which is feasible and cost effective.

c) M/s. VPGL Response: The Gas supply agreement is entered between VPGL & GAIL, a Government of India undertaking. With the dismantling of administered price mechanism - APM for oil & gas, an independent Regulatory mechanism (with statutory powers) will be put in place to preside over all issues relating to Petroleum & Hydro Carbon sector and would address concerns relating to availability, prices Petroleum Regulatory Board Bill 2002, which is to be placed before the etc. Parliament provides for the regulatory powers to 'monitor prices & take corrective measures to prevent profiteering by entities. As per the new licensing policy of the Government of India, the Government (MoP & NG) shall not only approve the production plans but also the prices of the Exploration & Production (E & P) companies. Further, the gas price issue is also being looked at by a committee of ministers, in which the Ministries of Power and Fertilizers are also represented. However, most importantly, the high availability would also ensure fair pricing of gas given the macroeconomic scenario of supply vs demand.

### 53) Payment of Gas transmission charges to be linked to supply of gas:

- a) Objection / Suggestion: Under the terms of the PPA, APTRANSCO would have to pay to M/s VPGL monthly transmission charges even if natural gas is not supplied or partly supplied. This will impose undue burden on the consumers. Commission is requested not to permit this provision for payment of charges (monthly transmission and additional transmission charges) by APTRANSCO in case of non-supply of gas. In case of part supply of gas, payment of proportionate charges may be permitted.
- b) <u>APTRANSCO Response:</u> The Monthly Transmission Charges are being collected by GAIL as per the GSA. It is a standard feature in all gas supply contracts entered into by GAIL.
- c) <u>M/s. VPGL Response</u>: The Gas Supply Agreement has been signed with GAIL, a government entity. The agreement is in a standard format and we understand that this is uniform for all power projects.

# 54) <u>Take or Pay provisions in the GSA increase the fixed charges than what is stated:</u>

- a) <u>Objection / suggestion:</u> GSA consists of take or pay provisions for supply of gas. These provisions will abnormally increase the burden of fixed charges on APTRANSCO.
- b) <u>APTRANSCO Response:</u> This is a GAIL condition as stipulated by MoP & NG and is applicable for all projects whether Government / Private.
- c) M/s. VPGL Response: The Gas Supply Agreement has been signed with GAIL, a government entity. The agreement is in a standard format and we understand that this is uniform for all power projects. However, it is important to note that when the project company is unable to draw gas due to its own inability to run the plant and has to pay such minimum off-take charges, it cannot claim the same from APTRANSCO.

### **LOAD FORECAST:**

## 55) Un realistic load forecast:

- a) Objection / Suggestion: The Load Forecast of APTRANSCO continues to be unrealistic and inflated, obviously, with a view to providing justification for permitting private power projects. As per the order of the Hon'ble Commission dated 16.8.2001, APTRANSCO proposed to add an installed capacity of 4709 MW up to 2006-07 to reach a total installed capacity of 12210.19 MW. The same is reduced by APTRANSCO on 16.1.2002 to 4270 MW and 12008 MW respectively. A reserve margin of 14% is proposed by APTRANSCO, which is obviously unwarranted, in the light of the more than 30 % T & D losses in the state. The demand growth in the state continues to be sluggish. Power purchases by APTRANSCO / DISCOMS are coming down. Reduction in distribution losses have taken care of additional requirement of power by DISCOMS and the scope for further reduction continues to be substantial. For the year 2002-03 APTRANSCO projected a surplus energy of 7149 MUs in the ARR filed by it before the commission. As of now power from the existing gas-based private projects is not required. Future requirement of power can be taken care of by APGENCO and the share of the state from NTPC and other central generating units. There is no justification for permitting gas based private power projects. Further, when the NTPC –Simhadri project reaches its full production and RTPP-II, for which consent is awaited, takes off, there would be additional surplus. This aspect also needs to be taken into account. Further, the load growth of 4% as suggested by Sri. T.L.Sankar should be taken as the basis for demand projections.
- b) <u>APTRANSCO Response:</u> On January 16<sup>th</sup> of 2002, during presentation of PPA with BSES, APTRANSCO had submitted a Load Forecast with 7.38% load growth, 66% load factor and 1% LOLP towards system reliability and arrived at a capacity addition of 4270 MW for the period FY 2002 to FY 2007. APERC in their order dated 29.7.2002 had ordered APTRANSCO to adopt a load growth of 6.8% as against 7.38%, 70% load factor as against 66% and 14% reserve margin as against 1% LOLP towards reliability which resulted in a capacity addition of 3180 MW as against 4270 MW submitted by APTRANSCO. APERC directed APTRANSCO to

consider the prospects of Srisailam Left Bank Project not contributing to the system peak. APTRANSCO protested against the above Load Forecast and have submitted to APERC in its revised load forecast and power procurement plan pleading that a capacity addition of 5251 MW is needed for the period from FY2002 to FY2007. This capacity addition is estimated considering 6.8% growth rate & 70% load factor as per APERC order, the proposal for 24 hrs supply to rural areas over and above APERC order as per Govt. order (an addition of 1500 MU is estimated each year), and a reduction of about 1000 MU of hydel energy (due to impact of Almatti Reservoir etc in the upper stream riparian states of river Krishna, based on Hydrological simulation studies for 30 years. This reduction takes into account SSLBPH in a conventional mode of operation), 1% LOLP considered as reliability index as per Central Electricity Authority (CEA) norms against 14% reserve margin in APERC order. Further the estimated unserved energy is also reduced. load forecast is based on a historical trend and also the effect of power cuts and load shedding. The proposed capacity addition of 5251 MW is based on necessities and can meet the impact of Availability Based Tariff (ABT). By 2004-05 there will be shortage of about 1000 MW capacity as per APERC load forecast and hence the four gas projects are proposed (totaling to 1454 MW). This excess capacity is planned considering present scenario where a) Financial Institutions (F Is) are reluctant to fund power projects b) capacity additions did not keep pace with demand, at all India level, during 9<sup>th</sup> plan. Out of projects cleared in private sector, only 28.8% achieved capacity addition. The Demand Side Management (DSM) measures and Transmission and Distribution (T&D) loss reduction are considered in estimating the Ex-Bus energy requirement. The proposed gas projects are included in the supply expansion plan submitted to APERC.

It will not be out of place to mention that one of the objectors, Sri-S.R.Vijayakar, Loksatta has expressed the opinion that "we prefer to accept the APTRANSCO's forecast as it is specially concentrated on AP with the help of Consultants, unlike CEA's forecast which covers all the States of India. It appears more realistic under today's situation".

Hence, even with APERC's projections, about 1000 MW capacity addition is required by FY 2005. Against this capacity addition, APTRANSCO proposed the

four of Short Gestation Gas Projects- 445 MW Konaseema, 370 MW Vemagiri, 464 MW Gauthami and 220 MW GVK extn amounting to 1499 MW gross and 1454 MW net. They are also the least cost projects (fixed cost : 0.6 Cents + 69.9 paise and variable cost : 78 paise).

In the present climate of general reluctance on the part of Financing Institutions for funding power projects, it is difficult to assess with any degree of accuracy, as to how many of the proposed gas projects will be able to achieve financial closure. In the general climate of inadequate capacity addition in the region and in the country as a whole, it would be in the interests of the State to move as many projects as possible within the zone of consideration of financial closure.

c) M/s. VPGL Response: Did not respond.

# 56) Load forecast & the Least cost plans to be finalized through public process:

- a) <u>Objection / Suggestion:</u> Load Forecast plans help in analyzing any PPA from the perspective of the need for any new power project and therefore the same need to be finalized through separate public process. Further, in the power procurement plan upto 2006-07 presented during the Public hearing on 16.1.2002 with regard to BAPL plant, gas based plants are mentioned as CC-1, CC-2, CC-3, CC-4. The plan mentions only four CC plants. If BAPL is one of the these plants only three other plants are going to be added to the grid before 2006-07. But on 8.2.2002 four public notices were issued for consent to four PPAs and the reasons for placing all the four projects needs to be explained.
- b) <u>APTRANSCO Response:</u> The Commission may kindly examine the request of the objector on the issues raised in the first part of the above paragraph. There are five Combined Cycle Gas Plants sanctioned with different capacities. The implementation of these projects can start only after achieving Financial Closure. For all the five plants the PPAs are submitted to APERC for consent. The implementation of these projects depend on the communication of consent by APERC and the ability of the developer to achieve Financial Closure. Hence, the

projects are represented as CC-1, CC-2, etc. All the Projects are covered under the Power Procurement Plan for the FY 2002 to FY 2007.

c) M/s. VPGL Response: No comments

## 57) <u>If SSLB-PH is not to be reckoned for the purpose of capacity additions,</u> the issue calls for a public debate:

Objections / Suggestions: Four units of SLBPH had already been a) commissioned and the remaining two units of 150 MW each are expected to be commissioned next year. During the last rabi and this year's kharif seasons SLBPH has generated power, both peak and non-peak, though both the years are drought affected with bad monsoon (the factual position can be confirmed from APGENCO). Both the SLBPH and Srisailam Right Bank power project (7 x 110 MW) can be run in conventional mode to generate both peak and non peak power. A bad monsoon year should not be taken as the basis for judging the scope of capacity utilization of any hydel power project. Hydel power projects are basically intended to meet peak demand. With the availability-based tariff coming into effect from January next, generation of peak power will be an advantage, even if the cost per kWh is higher. Unlike Nagarjuna sagar reservoir, water in Srisailam reservoir can be used for generating hydel power and released to be stored in Nagarjuna Sagar reservoir. According to a presentation made by the Director (Hydel) of APGENCO on the occasion of commissioning of the third unit of SLBPH, the average energy available from SLBPH is 1500 MU. In the earlier procurement plan, APTRANSCO included a generation of about 1386 MU per year from SLBPH. There is no justification in not reckoning a project which was constructed at a huge cost of more than Rs 3000 Crs for capacity addition. Commission in its order directed that SLBPH's capacity for contributing to the peak needs, to be critically reviewed. As per, APGENCO a study on this subject is-expected to be completed in January next. SLBPH got clearance to be run in the pumping mode operation and as such is intended to meet peak demand. Meanwhile, it can run in conventional mode of operation. To meet peak demand, it is not prudent to set up another base load project instead of utilizing the capacity of a hydel project with an installed capacity of 900 MW. To meet peak demand with an open cycle gas based station, it would cost not less than Rs 5 per unit which is prohibitive. It seems that the proposal to exclude SLBPH for the purpose of capacity additions till 2008 is made at the behest of GoAP with a view to accommodate the four gas-based power projects in the capacity addition and power procurement plan. Even if the expected generation of hydel power comes down in a year of bad monsoon, the reserve margin of 14% permitted by the Hon'ble Commission would take care of the deficit. In any case, if the proposal of APTRANSCO not to reckon SLBH till 2008 for the purpose of capacity additions is to be accepted, the issue calls for a public debate and it is requested to hold a public hearing on the issue. Further, any right to exclude a project should be considered only after the right of APGENCO to sell power from any of the projects to buyers other than Transco / Discoms is first conceded.

b) APTRANSCO Response: The water storage and utilization pattern in the upstream riparian states also increased significantly over the recent past years compared to the historical values. The above factors result in not only reduction in the quantity of inflows into the Srisailam Reservoir but also the timing and pattern of arrival of flows into the Reservoir. In the recent past, it has been observed that there is a delay of about 6 weeks before the inflows reached Srisailam. Both Srisailam and Nagarjuna Sagar Reservoirs are multi-purpose reservoirs. Irrigation is the primary purpose and all others, namely, municipal water, power and recreation are of secondary nature. These water user groups have often conflicting and competing interests. Hydro simulation studies are carried out by SNC Lavalin, the Consultants, for the period from FY1971 to FY2002 to study the impact of above hydrological variations due to Almatty Reservoir etc. in the upstream riparian states and the results are as follows: The inflows into Srisailam Reservoir, on the average, could drop by about 140 m<sup>3</sup>/s/year. AP, on the average, could lose about 1000 MU/year due to regulation of Almatti & other reservoirs even with SLBH in conventional mode operation. As per GOAP order, the minimum draw down level of Srsailam should be above 834' while to date it was maintained at 800'. Due to the change in Minimum Draw Down Level (MDDL) of Srisailam from 800' to 834' the loss in live storage is about 51 TMC ft. In order to run SLBH in pumping mode, the water level at Nagarjuna Sagar must be higher than 531.5'. As per the design, it is feasible to run the SSLBPH in pumping mode by maintaining water level of Nagarjuna Sagar Reservoir at 531.5'. However, due to the hydraulic constraints in the riverbed, it is

not possible to start pumped mode operation when NSR level is below 531.5'. It requires six years to eliminate them. CMD of APGENCO in its letter dated 15.11.2002 had expressed his opinion that it may not be possible to have a pumped mode operation in the present planning period of 2002-07 for the reason that it needs substantial sum of money as well as time. In conventional mode Srisailam Left Bank Power House will deliver about 1000 MU on an average during monsoon period. This will meet the debt servicing of the Project. Though for the purpose of installed capacity additions, the capacity of 894 MW is shown; but the effective capacity SLBH is negligible for peaking purposes, till the hydraulic constraints in the riverbed are removed within about six years from now. This Project has been started well before the Reforms Act came into the force and investments made on this project are to be recognised. The PPAs between APGENCO and APTRANSCO for 2001-02 as well as 2002-03 provides for debt servicing of this Project. The 14% system reserve margin is based on deterministic approach. The capacity addition estimated can't meet the system peak at all times.

c) M/s. VPGL Response: Not available.

# 58) Why Public hearing with out the gen projects appearing in the revised expansion plan :

- a) <u>Objections / Suggestions:</u> In order dated 29.7.2002, the commission has stated that the Power Purchase Agreements submitted before the commission for consent and pending public hearing would be taken up by the Commission after they appear in the revised supply expansion plan. We are not able to comprehend as to what necessitated the public hearing.
- b) <u>APTRANSCO response:</u> All the proposed gas projects are included in the supply expansion plan submitted to APERC.
- c) M/s. VPGL Response: Not available.

## **MISCELLANEOUS**:

# 59) <u>Subsequent public hearing or circulation of draft final order on the new proposals requested:</u>

- a) <u>Objection / suggestion:</u> Commission is requested to hold public hearings on new proposals (received subsequent to the initial public hearing) submitted by APTRANSCO and the developers of power projects after negotiations as directed or advised by the Hon'ble commission, suo motu or at the direction of the Hon'ble commission and give an opportunity to the objectors to present their objections or suggestions. Alternately, a copy of the draft final order may be sent to the objectors to elicit their objections or suggestions within a week or ten days, examine the same and then finalize its order.
- b) <u>APTRANSCO Response:</u> Did not respond.
- c) M/s. VPGL Response: Not available.

#### 60) Names of CMDs and Board of Directors to be furnished:

- a) <u>Objection / Suggestion</u>: Names of Chairman and Managing Directors and names of Board of directors of the above 4 companies and their past experience, their status, financial soundness etc., should be furnished to decide whether these companies fulfill the qualifying requirements of the tender.
- b) <u>APTRANSCO Response</u>: The Developers have submitted the information as per the directions of APERC. This information is being sent to the Objector and also to the Commission.
- c) <u>M/s. VPGL Response:</u> Details of Board of Directors with the backgrounds & financial status of GMR group, the major promoter of Vemagiri Project are available with APTRANSCO.

### CHAPTER -III

# PRESENTATION BY STAFF & RESPONSES OF APTRANSCO AND M/s VEMAGIRI POWER GENERATION LIMITED (VPGL)

As the members of the Public were not be very conversant with some of the technical provisions of a Power Purchase Agreement (PPA), the staff of the Commission made a presentation after an independent study / assessment of the PPA from the point of view of the consumer. It was made clear at the public hearing that the views of the staff are their own and did not represent the views of the Commission. The Commission staff made a common presentation in respect of the four gas projects viz., M/s. Konaseema EPS Oak Well Power Ltd., M/s. Vemagiri Power Generation Ltd., M/s.Gautami Power Pvt Ltd., and M/s. G V K Industries Ltd. This chapter sets out the various points made by the staff in their presentation and the response of APTRANSCO and M/s Vemagiri Power Generation Ltd to the points made by the staff.

# 61) Restrict capacities to the firm gas allocation or limit the fixed charges to the capacity, firm gas allocation, can support:

- a) <u>Staff Concern / Suggestion</u>: The Developers may be required to restrict the capacities of the plants to the firm gas allocation available to them. Alternately, the fixed charge payment should be limited to the capacity of the plant corresponding to the firm gas allocation.
- b) <u>APTRANSCO Response</u>: The developers can achieve 80% to 100% PLF with existing firm allocations and KEOPL can achieve 100% PLF with the fall back allocation. In view of firm gas allocation ranging from 80% to 100% PLF for these projects, fixed charges will be paid as per PPA provisions.
- c) <u>M/s VPGL response:</u> This issue has not been specifically referred to M/s. VPGL by APTRANSCO and as such M/s. VPGL response is not available.

## 62) <u>CIE shall be 5% of the capacity on actual generation above 80%</u>:

- a) Staff Concern / Suggestion: While approving enhancement of capacity from 300 MW to 358.9 MW in respect of M/s Gautami power Limited, it was decided that fixed charges are payable up to 80% PLF on availability of 85% PLF and further that a Committed Incentive Energy (CIE) of 157.2 MU (corresponding to 5% of 358.9 MW) has to be provided. However, the CIE of 157.2 MU does not represent 5% of the capacity in all cases. It is suggested that CIE should correspond to 5% of the installed capacity, uniformly, in respect of all the gas projects and should be payable on actual generation for PLFs above 80%. Further, incentives should begin at a level above 85% at the rate of 2% for every 1% increase in PLF (I) subject to a maximum of 10%.
- b) <u>APTRANSCO Response</u>: The Company agrees that CIE for the project shall be 162.06 MU against 156.2 MU, however, CIE should be measured in MU as unit of measurement than as a percentage. However, APTRANSCO accepts the suggestion of APERC Staff that CIE should correspond to 5% of the Installed Capacity. The company has not agreed for APERC Staff suggestion for the incentive structure. APTRANSCO negotiated the incentive structure suggested by APERC staff with BAPL already and recommends that the same incentive structure may be adopted for all Gas Projects uniformly. Further the incentive regime beyond 85% PLF (I) should be on actual generation only.
- c) <u>VPGL response:</u> The Company agrees that CIE for the project shall be 162.06 MU against 156.2 MU, however, CIE should be measured in MU as unit of measurement than as a percentage. With the proposed change in the incentive regime and capping the incentive to 10% of OFC, recovery for every additional unit of actual generation translates to 6.99 paise only as against the provision to get 17.48 paise for generation over 90% PLF. This is a significant and material change in the PPA. The Incentive regimes as provided in the PPA are as per Gol norms and guidelines and were part of the GoAP / APTRANSCO bid conditions. Hence, we do not agree to the suggested change in the incentive payment

### 63) The PPA for Stage-II to be considered separately:

- a) <u>Staff Concern / Suggestion</u>: A reference is made with regard to Stage II of the Projects in the PPAs submitted for consent in respect of Stage-I. The conditions and the PPA applicable for Stage II Projects shall be considered separately based on the future conditions at the time of filing of application for consent in respect of Stage II.
- b) <u>APTRANSCO Response</u>: This is as per the terms and conditions of M/s. GPP. The tariff is the lowest in the country for IPP projects. However, the implementation of Stage II project with the same commercial principles is subject to availability of gas, load requirement and evacuation facilities and is subject to consent of APERC.
- c) <u>Company response:</u> This issue has not been specifically referred to M/s. VPGL by APTRANSCO and as such M/s. VPGL response is not available.

## 64) <u>Joint sampling to be provided for determination of Calorific value</u>:

- a) <u>Staff Concern / Suggestion</u>: It was mentioned that Calorific Value of gas for billing purposes shall be as mentioned by GAIL in the invoice. It is suggested that a provision for joint sampling by GAIL, developer and APTRANSCO may be made.
- b) APTRANSCO Response: Accepted the M/s. VPGL's view.
- c) <u>VPGL response:</u> The Company agrees to the provisions for "joint sampling" by GAIL, Developer & APTRANSCO.

# 65) <u>Greater flexibility for Despatch instructions to be provided to ensure</u> merit order Dispatch:

a) <u>Staff Concern / Suggestion:</u> As per Schedule-D (Scheduling, Co-ordination and Dispatch Procedures) no Dispatch instructions shall require the Company to operate the project at a gross generating capacity below 60% of the Project's installed capacity or such lower declared capacity for any period of time except in an emergency. Further the aggregate duration of back down shall not exceed 1200 hrs

in any Tariff year. The number of Dispatch instructions are to be limited to 1 (one) per day. These restrictions come in the way of Merit Order operation. Greater flexibility for Dispatch instructions should be provided to ensure merit order Dispatch.

- b) <u>APTRANSCO Response</u>: The Company agrees to APTRANSCO's suggestion of adopting dispatch instructions as per APERC Order on BAPL. Provisions relating to Cumulative Available Energy (CAE) of Schedule D will not affect the Dispatch Instruction.
- c) <u>VPGL Response:</u> The suggestions given by APTRANSCO during the discussion are a new set of "Dispatch Instructions". Further the suggestions reflect that APERC will also be examining the provisions in line with BAPL provisions. The suggestions are as under (a) "The aggregate duration of back down of generation pursuant to Dispatch Instructions (including ramping time) excluding the duration of any Dispatch Instruction requiring the company to operate the project at a Gross generating capacity between 100% to 85% of the projects installed capacity shall not exceed 1000 hours in any tariff year". (b) The number of Dispatch Instructions shall not exceed 2 (two) per day. However, if the company re-declares its declared capacity, APTRANSCO shall be entitled to one more Dispatch Instruction". For removal of any doubts we state that, as per the PPA provisions and as confirmed by you, APTRANSCO shall not dispatch the project below 60% of the Gross Generating Capacity and "No Dispatch Instructions shall require the Company to operate below 60% of the Project's Installed Capacity or such declared capacity ......" (PPA Schedule D article 3.4. ii – a). The provisions relating to Cumulative Available Energy (CAE) as defined in Schedule D of PPA read with the amendment of 30<sup>th</sup> November 2001 and Project's Capacity Charge recovery, Computation of PLF and PLF (I) stand unchanged and shall remain as per Article 3 of the PPA read with the amendment of 30<sup>th</sup> November 2001 and the Dispatch instructions of APTRANSCO shall not affect the company's calculation of PLF and recovery of capacity charge there off. Based on our above understanding, we agree to the changes suggested to the Dispatch provisions.

# 66) <u>Project completion dates to be linked to signing of the amended</u> agreement:

- a) <u>Staff Concern / Suggestion</u>: In the amended agreement project completion dates have been revised linking to financial closure. It is suggested that these dates be firmed up with reference to signing of the amended agreement after consent of APERC.
- b) <u>APTRANSCO Response</u>: APTRANSCO does not agree for the developers condition that the SDOC is subject to any conditions. The SDOC for Combined Cycle Operation in 31 months from the date of signing of the amended agreement after the consent of APERC is given, may be agreed to.
- c) <u>VPGL response</u>: The developer has agreed to that, open cycle operations within 28 months, combine cycle operation within 31 months from the day of execution of amended PPA depending upon execution of the tripartite Escrow Agreement or any alternate security arrangement acceptable to financial institutions funding the project, and APTRANSCO operationalising the Escrow account as per the PPA provisions i.e., 30 days prior to SDOC. As an illustration, if the Amended PPA (after APERC consent) and the tripartite Escrow Agreement (or any alternate security arrangement) is executed on 1<sup>st</sup> February 2003, the Open Cycle Operation shall be in June 2005 and Combined Cycle Operation shall commence in September 2005.

# 67) Non-availability of Gas is a definite possibility, making reliance on costly alternate fuels inevitable:

a) <u>Staff Concern / Suggestion:</u> As per GAIL presentation dated 15-01-2002, the actual availability of gas is 7.1 MCMD (current supply) against the projected availability of 8 to 9 MCMD, falling short of the total allocation in place viz., 8.69 MCMD (Firm allocation – 6.18 MCMD & Fall back allocation – 2.51 MCMD). Gas Supply Agreements (GSAs) entered into by the IPPs are due to expire by 31-12-2010. KEOPL has 1.6 MCMD as firm allocation and 0.4 MCMD as fall back allocation. Non-availability of Gas is a definite possibility, making reliance on costly alternate fuels inevitable. It is therefore suggested that the fixed charges payable to

the developer shall be limited to availability of gas. If APTRANSO requires the developer to run the plant on alternate fuel, the price has to be capped to that of Natural Gas. Further the price of natural gas, if purchased from sources other than GAIL, lesser of the prices shall be the cap. In addition to the above, an action plan to run the plant beyond 2010 is also to be indicated.

- b) <u>APTRANSCO Response:</u> The Company has provided a confirmation letter from GAIL agreeing for GSA for 15 years period to supply 1.64 MCMD of natural gas on firm basis effective from 2005. The GSA for the extended period of supply should be received before the signing the amended PPA. As an alternative, they have also entered into MOU with M/s. Reliance, which provides additional comfort. If natural gas is purchased from other sources the price shall be limited to the price of GAIL or the other source which ever is less.
- c) <u>VPGL response:</u> Vemagiri Power Project has firm allocation of 1.64 MM SCMD of natural gas from GAIL which is sufficient to operate the plant at 100% PLF. The Gas Supply Agreement with GAIL shall cover the term of the PPA. The copy of the GAIL letter confirming the same was submitted to APTRANSCO during the meeting. We would like to inform that Vemagiri Project has entered into MOU with M/s. Reliance for supply of natural gas to the project from the recently discovered gas fields in KG basin in AP. Therefore, Vemagiri Project has the necessary provision for running the plant with natural gas over the entire PPA term.

# 68) <u>Increase in gas prices in Post - (APM) scenario may result in steep increase in Tariff besides not fitting into merit order resulting in backing down:</u>

a) <u>Staff Concern / Suggestion:</u> As per media reports, the Petroleum Ministry is contemplating complete de-regulation of the Gas sector by October 2003. It is reported that Ministry proposes to increase the ceiling on prices of gas from the current level of Rs.2850/- MCM to Rs. 5800 / MCM by April 1<sup>st</sup>, 2003 and prices become completely market driven from October 2003. The levelised variable charge in a dynamic scenario and in a de-regulated regime with the gas price at Rs. 5800 / MCM, would range from Rs.1.95 to Rs. 2.03 per unit and the corresponding total charges (including fixed charges) would range between Rs. 3.00 to Rs. 3.10 per unit. Increase in gas prices in Post Administered Pricing Mechanism (APM) scenario may

result in the gas projects not fitting into the merit order resulting in their backing down. APTRANSCO is required to indicate the impact of post-APM scenario on the price of power from these gas projects.

- b) <u>APTRANSCO Response:</u> Petroleum Regulatory Board Bill 2002 provides for monitoring prices and taking corrective measures to prevent profiteering by entities. APM and Inflation are natural phenomena which affect not only gas but also other fuels. Even if the gas cost is doubled the cost of generation in the first year will work out to only Rs.2.52 paise per kwh (FC Rs.1.00 + VC 1.52) which is competitive and affordable. In a regulatory regime prices will be fixed by the Regulator taking into account the interest of all Stakeholders, one of the Stakeholders being the consumer. GOI policy affects all power projects and industries which run on natural gas.
- c) <u>VPGL Company response</u>: This issue has not been specifically referred to M/s. VPGL by APTRANSCO and as such M/s. VPGL response is not available.

## 69) <u>Minimum guaranteed off take provision to be deleted</u>:

- a) <u>Staff Concern / Suggestion</u>: The minimum off take fuel payment for a typical Gas Plant is ranging between 73 % and 74 % of the normal delivered gas costs, making a gas station a "Must Run" station. APTRANSCO and GoAP are requested to take up the issue with M/s GAIL and M/s ONGC for deletion of this clause.
- b) <u>APTRANSCO Response:</u> This contingency may not arise, as these projects are needed (as base load stations?) as per the Power Procurement Plan. However the issue will be taken up with GAIL / ONGC / GOI as suggested by the APERC Staff.
- c) <u>VPGL response:</u> This issue has not been specifically referred to M/s. VPGL by APTRANSCO and as such M/s. VPGL response is not available.

## 70) <u>APTRANSCO to explain the reasons for changes with regard to evacuation facilities:</u>

- a) <u>Staff Concern / Suggestion:</u> As per the original PPA the evacuation facility shall be provided by APTRANSCO eight (8) weeks prior to the scheduled date of completion of the first unit. This has been amended to twelve (12) weeks in the amended and restated PPA. In respect of M/s GVK Industries the evacuation facilities are to be completed prior to six months. APTRANSCO is required to explain the reasons for the above changes.
- b) <u>APTRANSCO Response:</u> This is provided based on the actual firm project implementation schedule committed by the Developers for the purpose of testing and commissioning of the units.
- c) <u>VPGL response:</u> This issue has not been specifically referred to M/s. VPGL by APTRANSCO and as such M/s. VPGL response is not available.

# 71) <u>Provide for assignment of PPA from APTRANSCO to DISCOMs with due regard to Multi-Buyer- Multi-Seller (MBMS) scenario</u>:

- a) <u>Staff Concern / Suggestion:</u> With regard to assignment, it is provided that neither party can assign any of its rights or obligations under the PPA to a third party without prior approval of the other party in writing. However, the company can assign or create security for financing the project and APTRANSCO has to cooperate reasonably. The concern is that APTRANSCO cannot assign its rights or obligations under the PPA without prior approval in writing from the developer. The suggestion is to make a specific provision for facilitating assignment of PPA from APTRANSCO to DISCOMs with due regard to the possible Multi- Buyer- Multi-Seller (MBMS) scenario.
- b) <u>APTRANSCO Response:</u> Accepted M/s. VPGL's view
- c) <u>VPGL response:</u> The Company agrees to the suggested additions to the existing Article 15, clause 15.3 on "Assignment"

# 72) <u>APTRANSCO should indicate the action plan to handle the surplus capacity:</u>

- a) <u>Staff Concern / Suggestion:</u> The State is going to have surplus capacity by 2005 if projects as planned are commissioned. APTRANSCO should indicate the action plan as to how it proposes to handle the surplus capacity.
- b) <u>APTRANSCO Response:</u> This Contingency may not arise as these Projects are within the Power Procurement Plan. Power being a vital requirement for growth, the very unlikely scenario of a power surplus due to additional generation from gas power stations, may not last long. In such situations, APTRANSCO can take the advantage of the low cost and the excess power, if any, to trade the power to the needy States / Consumers either through bilateral agreements or through the Power Trading Corporation.
- c) <u>VPGL response:</u> This issue has not been specifically referred to M/s.VPGL by APTRANSCO and as such M/s. VPGL response is not available.

### <u>CHAPTER - IV</u>

### **Commission's Analysis:**

- 73) The objections received from public and the concerns/suggestions made by the staff through their presentations on December 19, 2002 at the time of public hearing covering the four gas projects under consideration broadly revolve around the following issues:
- a) Demand
- b) Bidding process
- c) Commissioning schedules
- d) Availability of gas and price
- e) Incentives
- f) Dispatch instructions
- g) Assignment
- **74)** Of the above mentioned issues the Commission has identified (c ) to (g) as the key issues.

#### Demand:

75) APTRANSCO made a presentation at the time of public hearing on December 19,2002 estimating the projected additional capacity requirement as 5251 MW for the period from 2002-2008 by revising their earlier estimate of 4270 MW for the same period. The Commission has issued a separate order in OP No. 179 dated 8<sup>th</sup> April, 2003 after considering the submissions of APTRANSCO fixing the additional capacity required for the period 2002-07 at 5182 MW. All demand/supply expansion related issues are discussed in that order.

#### **Bidding Process:**

**76)** APTRANSCO has submitted a brief note on the process adopted by the erstwhile APSEB on bids. APSEB with the consent of GOAP called for bids on tariff basis during May 1995 for establishment of short gestation power stations. Against global tenders, 36 bids were received and the Board short-listed 23 out of them for

submission of price bids. Except one, all of them (22) submitted price bids. As consultants for APSEB, ICICI completed the evaluation of bids by giving due weightages to price and gestation periods. APSEB decided to set up projects with a total capacity less than 2000 MW and accordingly issued letters of intent to 6 developers for 8 projects for an aggregate capacity of 1623MW. Except Usha Martin Industries, all the remaining 5 developers confirmed unconditional acceptance of the finalised PPA. The letter of intent of Usha Martin was cancelled and M/s Nagarjuna Constructions, who was the bidder next in ranking, replaced Usha Martin. As Nagarjuna constructions originally quoted a capacity of 227 MW and replaced Usha Martin(100 MW), the total capacity finalised also stood revised to 1750 MW from the original 1623 MW.

77) The Commission is satisfied that a transparent bidding procedure was adopted by APSEB and APSEB took professional help from ICICI in finalising the successful bidders.

## **Key Issues:**

- 78) The Commission advised APTRANSCO to respond to the objections raised by the public and the issues and concerns raised by the staff of the Commission. APTRANSCO sent their initial responses on December 27, 2002. The Commission felt that the responses could be more meaningful and the concerns raised at the time of public hearing are better addressed only when a detailed discussion takes place between APTRANSCO and the developers. APTRANSCO was advised to resubmit their responses after discussion with the developers.
- **79)** APTRANSCO accordingly discussed with each developer and forwarded the replies by January 21,2003 for all the projects. Though there were agreements between developers and APTRANSCO on many of the issues, at the instance of the Commission, another round of negotiations was conducted by APTRANSCO with each developer to iron out the remaining inconsistencies between them.

### **80)** The response on each of the key issues is as follows:

### a) Issue 1: Commissioning Schedules:

The Commissioning schedules should be linked to the signing of the amended agreement after consent of APERC instead of linking up with the financial closure date.

### b) APTRANSCO response:

APTRANSCO has communicated that VPGL has agreed to reckon the scheduled date of commissioning from the date of signing of the PPA. They have revised the schedule date of commissioning for the first unit to 28 months from 24 months and that of the second unit to 31 months from 27 months.

## c) Commission's Analysis:

As per the existing provisions of the PPA, the scheduled date of commissioning the first unit is 24 months and that of the second unit is 27 months from the date of the financial closure. While agreeing for linking the scheduled date of commissioning to the execution of the Amendment Agreement, VPGL has extended the commissioning dates by 4 months. When short gestation projects were being short listed, due weightage was given for both the price and the gestation period while evaluating the bids and selecting the developers. Linking up the commissioning date of this project with the date of financial closure creates uncertainty about commencement of the project. Further, the scheduled date of commissioning is very crucial for determining the liquidated damages as per clause 1.1(54) of the PPA. The Commission leaves the decision of levying/waiving the liquidated damages to APTRANSCO based on the facts and circumstances of the case. But the Commission prefers linking up the Scheduled date of commissioning with the date of signing of the amended Power Purchase Agreement duly consented by APERC rather than linking up with the date of financial closure of the project. VPGL has agreed to reckon the dates from the date of signing the PPA.

The Commission advises suitable amendment in the PPA for linking up the Scheduled date of commissioning with the date of signing of the amended agreement after the consent of APERC.

## 81) Issue 2: Fuel linkage:

This needs to be addressed in two broad categories (viz.) (i) the availability of gas and the price and (ii) the fuel tie-up for this project.

### a) Availability of gas and its price:

During public hearing, serious concerns were expressed by the Commission and several objectors on the availability and the price of natural gas. ONGC and GAIL were invited for the public hearing and they participated in the same with discussions/presentations. The Commission addressed some specific queries to GAIL and ONGC and their clarifications are as follows:

- a) GAIL does not envisage any difficulty in ensuring uninterrupted supply of gas to consumers in the K.G. Basin in the long-term.
- b) All prices are expected to be market driven in the post APM scenario. GAIL would charge the price, which the market would be able to bear and no more.
- c) GAIL intends to follow the cost of service method in the post APM scenario for levying transportation charges on consumers. Any such method would be based on sound international practices for levying transportation charges.
- d) The Petroleum Regulatory Bill 2002 provides for monitoring prices and takes corrective measures to prevent profiteering by entities.
- e) ONGC explained that the Minimum Guarantee Off-take price (MGO) charged by GAIL is mainly to ensure better utilisation of the scarce natural resource and the non-utilisation of the allocated quantities could lead to wasteful flaring of gas.
- f) ONGC also explained that at present, gas is being supplied at highly subsidised price as compared to other hydrocarbon fuels or feedstock. The reciprocal comfort of guaranteed supply to the buyer would be possible in a free market where price is decided by market forces of

- demand and supply and the producers and consumers would be free to negotiate gas sales agreements on commercial considerations.
- g) ONGC supplies gas to GAIL at a uniform rate over the day with provision for minor variation (say ± 10%) to take care of the operational needs. It may not be possible to regulate/ control the gas supply based on consumer requirements since it is not operationally feasible to regulate flow from individual wells spread over a vast area. Therefore, ONGC would not be in a position to provide great flexibility in gas supply to GAIL to match the grid requirements of power producers. If this has to be tailored to the needs of the gas consumer, GAIL needs to examine the possibility of building and maintaining gas storage capacity in their system (pipeline grid, etc.) for this purpose. This would naturally increase the cost of supply.

From the explanations of GAIL and ONGC, it appears that natural gas would be available for the entire term of the project and the price would be market driven. Currently, the base price of natural gas is Rs.2850/1000 SCM and the estimated first year variable cost is Ps80/unit. The letter dated February 18, 2003 from the Ministry of Petroleum & Natural Gas indicates that the gas from Ravva Satellite field is proposed to be directly sold by GAIL (India) Limited at market determined prices. The market price of gas from the Ravva Satellite field is estimated to be around Rs 7,400 per 1000 SCM. The price of gas from Ravva Satellite would be pooled with the gas from other sources by GAIL. As a result the weighted average GAIL price of Natural gas for Andhra Pradesh is expected go up by Rs. 360 / 1000 SCM and the resultant variable cost would go up by 9 paise for the existing units. The estimated market price for Ravva Satellite gas incidentally gives an idea of what the price of natural gas would be when it is totally market driven. The Commission notes that even at the price of Rs 7,400 per 1000 SCM the variable cost of generation would be about Rs 1.50 per Kwhr a rise of nearly 70 Ps per Kwhr from the existing rate of 80 Ps Kwhr. Serious efforts are being made by APTRANSCO and GoAP to prevent or atleast postpone the increase in the price of natural gas. At the same time, it is also expected that there would be regulatory intervention 'to monitor prices and take corrective measures to prevent profiteering by entities' in determining the gas price. As the timing and revision of price for the entire gas supply in the State is not predictable, the Commission has to go by the present facts and circumstances and advise APTRANSCO to strictly follow the merit order in dispatching the energy.

## b) Fuel tie-up for this project:

The concerns of the objectors and the staff are as follows:

Gas supply agreements are due to expire by December 2010 while the term of the PPA is for a period of fifteen years from the project CoD unless terminated earlier. The developer has to indicate the action plan to run the plant beyond 2010.

### i) APTRANSCO response:

The project has firm allocation of 1.64 MMSCMD of natural gas from GAIL which is sufficient to operate the project at 100% PLF. The gas supply shall cover the entire term of PPA which is 15 years from the year 2005 as per letter dated January 9, 2003 from GAIL.

Further by way of abundant caution, VPGL has entered into an MOU with Reliance Industries Limited for supply of gas. At the time of public hearing on December 19,2002, GAIL assured that they would enter into agreement with the developers for supply of gas for the entire term of the PPA.

VPGL also agreed that if natural gas is purchased from other sources, the price shall be limited to the price of GAIL or the other source whichever is less.

#### ii) Commission's Analysis:

The gas supply agreement between VPGL and GAIL was due to expire by December 31, 2010 while the PPA term is for a period of fifteen years from the project CoD. This implied that for the balance period of the PPA, VPGL had no fuel linkage from GAIL. But VPGL has subsequently stated that the term of agreement for supply of gas with GAIL (India) Ltd was extended on January 29<sup>th</sup>, 2003 for a period of 15 years from the year 2003. The amendment also maintains that the gas supply units commence from December 31<sup>st</sup>, 2004 or from any earlier date that may be

mutually accepted between the seller and the buyer. This takes care of the objection that there is no firm fuel linkage for the entire duration of the PPA.

As per APTRANSCO, VPGL has entered into an MOU with M/s Reliance Industries Limited for supply of natural gas, which provides additional comfort in fuel tie-up. If natural gas is purchased from sources other than GAIL, then the price shall be limited to the price of GAIL or alternative fuel supplier whichever is less.

## 82) Issue 3: Committed Incentive Energy:

The next concern expressed before the Commission was that the Committed Incentive Energy shall correspond to 5% of the Installed capacity of the respective project instead of a fixed quantity of 157.2 Million Units, which happened to be 5% of the installed capacity of 358.9 MW of Gautami power Limited.

### a) APTRANSCO response:

VPGL has agreed that the Committed Incentive Energy shall be equal to the energy, which is equivalent to a PLF of 5% of the Installed capacity. This works out to 162.06 Million units.

### b) Commission's Analysis:

As per Article 3.2(A) of the PPA, "the Company shall supply in a Tariff Year at the generator terminals 157.2 Million Units over and above the PLF of 80% to APTRANSCO (hereinafter referred to as the "Committed Incentive Energy")". The concept of Committed Incentive Energy originates from the PPA of Gautami power Limited wherein it was taken, as 5% of the Installed capacity of that project which is equivalent to 157.2 MUs. But when the concept of Committed Incentive Energy was incorporated in other projects, the same quantity of 157.2 Million Units was taken as Committed Incentive Energy, while a more rational approach would have been to link up with the installed capacity of the respective project. This was pointed out at the public hearing and VPGL has agreed to the Committed Incentive Energy of 162.06 MU which is equivalent to a PLF of 5% of their installed capacity of 370 MW.

This revised position is acceptable to the Commission provided the installed capacity arrived at as per Clause 1.1.35 'Installed capacity' is not more than 370 MW. Clause 1.1.35 and Clause 3.2 (A) of the PPA may be amended accordingly.

#### 83) Issue 4: Incentives:

During the public hearing, the staff suggested the incentive @ 2% of other Fixed Charges for every 1% increase in PLF (I) above 85% subject to a maximum of 10% on Other Fixed Charges.

## a) APTRANSCO response:

The developer has agreed to the suggestion regarding incentive for performance above PLF(I) of 85% @ 2% for every 1% increase subject to a maximum of 10%.

### b) Commission Analysis:

The present incentive structure is on actual generation beyond PLF (I) of 80%. The committed incentive charge is @ 2% for every 1% increase in PLF (I) for actual generation from PLF (I) of 80% to 85%. Above 85%, the incentive will be 3% for every 1% increase in PLF (I). For PLF (I) of 90%, the incentive will be 10% +15%=25% of the Other Fixed Charges. For generation above 90%, the incentive is at the same level viz., 25% of the Other Fixed charge.

The incentive structure in the PPA for another project with gas as fuel commences only from PLF (I) of 85% @ 2% of Other Fixed charges for every 1% increase subject to a maximum of 10% of Other Fixed charges. All the four developers whose PPAs were posted for public hearing on December 19, 2002 were advised to follow the incentive rates of 2% of Other Fixed charges for every 1% increase in PLF (I) beyond 85% up to 90%. For generation above 90%, the incentive is at the level of 10% of Other Fixed charges. This means that the incentive at PLF (I) 90% is frozen for generation beyond PLF (I) 90%. VPGL has agreed to this suggestion.

The Commission advises VPGL and APTRANSCO to suitably amend the PPA by giving effect to this revised position.

## 84) Issue 5: Dispatch instructions:

The following are the broad provisions of the dispatch instructions in the PPA:

- 1. The company is not required to operate the project below 60% of installed capacity or such declared capacity for any period of time except in Emergency.
- 2. Aggregate duration of backing down should not exceed 1200 hours in a tariff year.
- 3. The number of instructions should not exceed one per day.

It was pointed out by the objectors and the staff that these conditions suggest a limited flexibility in merit order dispatch and this may even lead to backing down of the cheaper stations in a surplus supply situation. It was suggested that more flexibility should be given to the system operators so that they can follow the merit order dispatch effectively.

#### a) APTRANSCO response:

VPGL agrees to the provisions as in APERC's order dated 13.12.2002 on BSES Andhra Power Ltd (BAPL) regarding Dispatch instructions after adjusting for difference in installed capacities. APTRANSCO endorses VPGL's acceptance and recommends the same for the Commission's consideration.

### b) Commission's Analysis:

In the order dated 13.12.2002 on BSES Andhra Power Limited, the Commission accepted the following negotiated position between BAPL and APTRANSCO:

"BAPL agreed to increase the existing limit (for backing down) of 1200 hours in any tariff year to stipulate that excluding the duration of any Despatch instruction requiring the Company to operate the project at a gross generating capacity between 100% to 85% of the Project's installed capacity, the total hours of backing down shall not exceed one thousand (1000) hours in any Tariff year".

The existing provision of 1200 hours in a tariff year as the aggregate duration of backing down and restriction of the number of instructions to only one, afford the operator limited flexibility. The Commission desired that the system operator should have more flexibility in dispatching energy under the merit order.

VPGL is agreeable to the amendment in line with the Commission's order on BAPL. Such amendment, apart from increasing the number of dispatch instructions to two, provides the desired flexibility in two stages as under:

- (i) For a gross generating capacity between 85% to 100% a back down limit of a maximum of about 470 MUs in a year.
- (ii) For capacity between 60% to 85% Maximum limit for backing down of 1000 hours in a year.

This has provided more flexibility to the system operator than the earlier provision of 1200 hours in a tariff year.

This negotiated position is acceptable to the Commission. Clause 3.4 of Schedule – D of PPA may be amended accordingly.

### 85) Issue 6: Assignment:

As per the existing PPA provisions, APTRANSCO cannot assign to third party without the prior approval in writing from VPGL. A provision for assignment is required in the PPA to provide for the necessary flexibility in a Multi-Buyer-Multi-Seller (MBMS) scenario.

#### a) APTRANSCO response:

VPGL agrees to the provisions as in APERC's order in the case of BAPL

### b) Commission's Analysis:

The Commission suggested the following draft language for Assignment clause in the PPA to take care of MBMS scenario in its order dated 29.7.2002 on BAPL PPA.

"The Company acknowledges and accepts that APTRANSCO shall be entitled to assign all its rights, duties, obligations and responsibilities under this Agreement to the distribution licensees namely the four distribution companies a) Central Power Distribution Company of AP Ltd (APCPDCL) b) Southern Power Distribution Company of AP Ltd (APSPDCL) c) Eastern Power Distribution Company of AP Ltd (APNPDCL) either wholly or partly and to one or more of them and in such manner as may be agreed to between APTRANSCO and said distribution companies with the approval of Andhra Pradesh Electricity Regulatory Commission and in such an event the assignee company or companies shall be the party to fulfill all the terms and conditions and obligations on the part of APTRANSCO assumed under this Agreement".

VPGL has also agreed to these provisions. APTRANSCO and VPGL are advised to incorporate this clause in 15.3 of the PPA.

- **86) Conclusion:** Before granting consent to any PPA u/s 21(4) of the A.P. Electricity Reform Act, 1998 the Commission examines the PPA from the following three aspects:
- (a) Whether there is sufficient demand to justify the project.
- (b) Whether transparent procedures have been followed to ensure that there was proper competition among the bidders.
- (c) Whether the tariff is reasonable from the point of view of the consumers.

Regarding (a), the Commission has separately passed an order on the Load Forecast Plan submitted by APTRANSCO on 08-04-2003 (OP. 179 / 2003) and determined the additional capacity requirement for the period at 5182 MW. The Commission has also approved a Procurement Plan for the period 2002-2007. This project is included in the Procurement Plan and is scheduled to be commissioned in FY 2005-06.

With respect to (b) above, the Commission advised APTRANSCO to submit a note explaining the procedures adopted in finalising the bids. As explained in para 76, of this order the Commission has noted that six developers were selected

out of 36 original bidders and APTRANSCO utilised the services of an independent evaluator (viz) ICICI, for finalising the list of successful bidders.

Finally Regarding (c) the GoAP took a decision to permit the Developers to generate Power with Natural Gas subject to the condition that they accepted the lowest benchmark tariff of M/s. Gautami Power Limited, at Rs. 0.94 per unit at an exchange rate of US\$1=Rs.40 towards capacity charges (FDSC 0.6 cents & OFC 69.9 paise).

Commission is satisfied about the availability of natural gas for the entire period of the PPA. As regard the price, the Commission is of the view that even at market determined prices (as estimated at present) the total cost per unit would compare favourably with that of the plants using other fuels.

The price is therefore considered reasonable.

In view of the above, the Commission agrees to grant consent to the PPA (for the reasons explained in the earlier paragraphs) if the following modifications are incorporated in the PPA:

- (i) The scheduled date of commissioning is linked up with the date of signing the amendment agreement.
- (ii) The conditions on fuel are as detailed in Paras 81 (b) on Fuel tie-up.
- (iii) The Committed Incentive Energy is equivalent to a PLF of 5% (which works out to 162.06 MU) of the Project installed capacity of 370 MW.
- (iv) The installed capacity arrived at as per Clause 1.1.35 'Installed capacity' is not to be more than 370 MW.
- (v) The incentive rate is 2% for every 1% increase in PLF (I) beyond 85% up to 90%. Beyond 90% PLF (I), the incentive is 10% of Other Fixed Charges.
- (vi) Modification of Clause 3.4 of schedule D in the PPA as per Para 84 (b) so that the company can follow the merit order dispatch as required by the system operator.
- (vii) Modification of Clause 15.3 of the PPA with regard to assignment as drafted in Para 85 (b).

As the developer and APTRANSCO have both agreed to carry out amendments on these lines, Commission grants its consent in principle to the PPA of VPGL for stage I (370 MW). A copy of the amended PPA duly signed by both the developer and APTRANSCO and incorporating all the changes mentioned above may be submitted for the Commission's record.

This Order is signed by the Andhra Pradesh Electricity Regulatory Commission on 12<sup>th</sup> April, 2003.

Sd/-(K. SREERAMA MURTHY) (D.LAKSHMI NARAYANA) MEMBER

Sd/-MEMBER

Sd/-(G.P.RAO) **CHAIRMAN** 

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