INDRAPRASTHA POWER GENERATION COMPANY LTD.
(AN UNDERTAKING OF GOVT. OF NCT OF DELHI)

Sub. Annual Revenue Requirment /Tariff Petitons for the Financial Year 2006-07

'-Tariff Petition with Delhi Electricity Regulatory commission before ______ for fixation of tariff for the FY 2006-07. The necessary Draft petition has been compiled in the format give by DERC in the previous year as per the information submitted by Finance Department and by the respective stations. The filing fee of Rs. __________ is also required to be paid along with the petition. The draft petition is placed on cr side for you kind consideration and approval. It is proposed that the petition may be singed on behalf of the Company by Sh. ______________GM

Submitted for approval

(R.K. Jain)
Company Secretary

INDRAPRASTHA POWER GENERATION COMPANY LTD.
(AN UNDERTAKING OF GOVT. OF NCT OF DELHI)

No. D (T)/F.24(1)/ **Dated**
:

Delhi Electricity Regulatory Commission
Viniyamak Bhawan
C-Block, Shivalik
Malviya Nagar
New Delhi- 110 017

Sub: - Filing of ARR for Determination of Generation Tariff

As per the provisions of Electricity Act, 2003, the statements of Annual Revenue Requirement of Indraprastha Power Generation Co. Ltd. for determination of generation tariff, in _______ sets, is enclosed.

Necessary fees of Rs. ________ vide Cheque No.5________ dated _________ drawn on State Bank of India, Rajghat Power House in favour of DERC is also enclosed. We further agree to pay any other fees as may be directed by your good self in this respect.

We shall be glad to provide any other information as you may desire from time to time.

For Indraprastha Power Generation Co. Ltd.
Authorized Signatory

(VINEY KUMAR)
GM(IN-CHARGE)

Encl: As above

INDEX

INDRAPRASTHA POWER GENERATION COMPANY LTD.
(Registered office: Himadri, Rajghat Power House Complex, New Delhi-110 002)
(An Undertaking of Govt. of NCT of Delhi)

**Regd. Office: 'Himadri' Rajghat Power House Complex,
Rajghat, New Delhi – 110 002**

Petition for Approval of Annual Revenue Requirement For the FY 2006-07

The Proposal

INDRAPRASTHA POWER GENERATION COMPANY LTD.
(Registered office: Himadri, Rajghat Power House Complex, New Delhi-110 002)
(An Undertaking of Govt. of NCT of Delhi)

I-N-D-E-X

The Petition

Before the Delhi Electricity Regulatory Commission

Filing No.___________
Case No.____________

IN THE MATTER OF

Petition for approval of Annual Revenue Requirement for the Financial Year 2006-07 and for determination of tariff to be charged from Delhi Transco Ltd. (DTL) for the power being supplied to them.

AND

IN THE MATTER OF

Indraprastha Power Generation Company Ltd. (hereinafter called "IPGCL") the Company incorporated under the provisions of Companies Act, 1956 having its registered office at 'Himadri", Rajghat Power House Complex, New Delhi –110 002.

For Indraprastha Power Generation Company Ltd.

(Viney Kumar)
General Manager(I/C)

PETITIONER

PETITION UNDER SECTION 86 READ WITH SECTION 64 OF THE ELECTRICITY ACT, 2003

The Petitioner respectfully submits as under:-

1. The Petitioner herein called “Indraprastha Power Generation Company Ltd.”(IPGCL) is a Government Company within the meaning of Companies Act, 1956 and is wholly owned by the Government of National Capital Territory of Delhi. Further, it is a Generating Company as defined under Section 2(28) of The Electricity Act, 2003.

2. That consequent to Section 86(1) (a) and other applicable provisions of The Electricity Act, 2003, the appropriate Commission shall determine the tariff for supply of electricity by a generating company. The Hon’ble Commission is vested with the jurisdiction to determine the tariff of IPGCL.

3. Pursuant to the applicable provisions of the Delhi Electricity Reform Act, 2000, the Government of National Capital Territory of Delhi undertook the reform and restructuring of the erstwhile Delhi Vidyut Board (DVB), which was implemented through a statutory transfer scheme. The Transfer Scheme rules notified provides for reorganization of DVB including transfer of properties, assets, liabilities etc.
The Transfer Scheme provides for unbundling of the erstwhile DVB into 6 (Six) Companies / entities. The Generation functions along with related assets have been transferred to IPGCL.

4. IPGCL is generating electricity from its three power stations viz (i) Indraprastha (ii) Rajghat and (iii) Gas Turbine Power Station.

5. It is submitted that the power generated from these power stations is being supplied to the transmission Company i.e. Delhi Transco Limited, which is also a Govt. of NCT of Delhi Undertaking. The IPGCL and DTL have mutually finalized the draft Power Purchase Agreement which has already been submitted to the Hon’ble Commission for its approval. The IPGCL has also further submitted proposal for modifications in the said draft PPA to the Hon’ble Commission for its consideration.

6. In pursuance of understanding/agreement of the then successive entities i.e. DESU & DVB with Haryana Government at the time of installation of Unit No. 2,3 & 4 of I.P. Station, the Company is transferring 1/3rd of power being generated from these three units of I.P. Station to Haryana Government, the co-owner in I.P. Station.

7. IPGCL is filing herewith its revenue requirements for the FY 2006-07 for determination and fixing the Tariff to be charged from DTL for FY 2006-07 and truing up for FY 2005-06.

8 The present petition contains the following documents:

i) The affidavit verifying the petition duly notarized.

ii) Main Petition

iii) Station wise Forms 1 to 15

iv) Explanatory Notes

v) Copy of authorization by Managing Director, IPGCL for filing ARR proposal for FY 2006-07.

The petitioner submits that the above mentioned Annexure appended may please be read as integral part of the petition.

9. The petitioner respectfully submits the following:

i) The audited accounts for the FY 2004-05 may please be considered in truing up mechanism.

ii) ii) The actual data for the current year 2005-06 is for a period of six months from April to September, 2005 and has been taken as per the provisional accounts compiled for that period. The estimation for the FY 2005-06 as well as for FY 2006-07 are based on assumptions provided at appropriate places in this petition.

10. It is submitted that as per the directions of DERC, CEA was assigned a job to assess the O&M expenses of the Company, so as to allow reasonable expenditures as determined by CEA in the tariff of the Company. The CEA has submitted their comments in their report dt. 23.6.2005 and relevant extracts of the recommendations are as under:-

“The actual expenses on various components of O&M expenses are higher for the year 2004-05 as compared to the above normative levels. In order to ensure continued plant operation, it is prudent that the normative O&M expenses may be considered as further bench marks to be achieved over a period of time, say 3-4 years. Till then, it is recommended that well audited actual expenses may form the basis for 2004-05 with yearly targeted improvement for future”

The Company has requested the CEA on 30.9.2005 to reconsider its report in the light of anomalies in the report. The CEA has agreed to reconsider the report, if the DERC desire so. The IPGCL has already requested DERC to take up the matter with CEA, in the interest of survival of the Company. In the meanwhile, DERC is requested to allow the actual O&M expenses for FY 2004-05, 2005-06 and 2006-07 and the bench marks refixed by CEA may be considered as normative to be achieved in next 3-5 years.

11. It is submitted that the power stations of IPGCL are 15 to 35 years old. It is submitted that these power stations are having higher heat-rate and auxiliary consumption as compared to the newly set up bigger units elsewhere, due to their age as well as of small capacities and obsolete designs. In view of it, the Hon’ble Commission is requested to allow the actual heat rate and auxiliary consumption.

12. It is submitted that loan funds and Equity Funds of the Company being much less as compared to the new power plants of similar capacity, the amount of interest on loans and Return on equity are also much less as compared to the new power plants.

13. It is submitted that if new power plants of these capacities are established in the present scenario, it may cost many times that of present value of our plants. Hence, the depreciation amount claimed by the Company is much less as compared to the new power plants.

14. It is submitted that Repair and Maintenance Expenses of the plants will increase for some years for enhancing the plants constant availability and their PLF. The Company recently entered into an agreement with NTPC on the directives of Ministry of Power, Govt. of India for the programme “Partnership in Excellence” to provide consultancy for enhancing efficiency and reliability of IP and Rajghat Power Stations. The Company shall undertake measures as per their advise. The Hon’ble Commission is requested to allow the expenditures on this account.

15. It is submitted that the Company is now taking up steps to Renovate and Modernize all its power plants to make them energy efficient and meet the stringent standards of environmental norms. The whole process may take about 4 to 5 years to come in line and meet the equivalent efficiency criteria of other similar plants.

16. It is submitted that IPGCL has made a fresh proposal to GNCTD for carrying out Limited Repair and Maintenance Works on unit No. 2,3,4 and 5 of I.P. Station at an estimated cost of Rs. 110 Cr. to have reliable generation of around 170 MW for a period of about 5 years. This proposal is in place of the earlier proposal for comprehensive R & M of I.P. Station which was already been vetted by CEA. The MOEF clearance has already been sought for continued operation of IP Station and the same is awaited. The approval of the GNCTD is also awaited in this matter.

    It is further submitted that R& M proposal for RPH and GT Station are being got vetted from CEA on the directives of DERC. The cost impact of all proposals have not been considered in this ARR and in case the same are implemented after final approvals, the necessary impact may please be allowed in the ARR.

17. It is submitted that due to recruitment in executive cadres to increase the efficiency of plants by better technical management the establishment cost has increased. A hike of approximately 6-7% is being granted towards DA every year on the pattern of Central Government. Similarly, average annual increment works out to be approx. 3% Since the Company has taken measures to curtail OT and Holiday pay etc., an overall increase of only 5% has been estimated for FY 2005-06 and 2006-07. The Hon’ble Commission is requested to allow the enhanced establishment cost.

18. It is submitted that GAIL (India) Ltd has been presently imposing cuts of about 15 to 20% on the supply of CNG / PMT on day to day basis. The cuts are progressively

increasing due to depleting gas reserves. The generation estimates are based on present cuts imposed by GAIL. However, the estimated generation may reduce in case the gas availability is further restricted by GAIL which will have cascading effect on the heat rate and auxiliary consumption. The Hon'ble Commission is requested to consider these facts while fixing the tariff.

19. It is submitted that due to gas restrictions and power evacuation problem in GT Station, the heat rate of GT Station will be in the range of 2250 Kcal/Kwh (NCV basis). The Hon'ble Commission is requested to consider and allow the projected heat rate.

20 It is submitted that as per the directions of Delhi Pollution Control Committee, it is proposed to use imported coal in FY 2005-06 in Coal based Generating units of I.P. Station initially on experimental basis by blending it with the indigenous coal. If the same is found viable, the Company may start the use of imported coal in its power plants by blending during the FY 2006-07. IPGCL also proposes to use chemicals for fuel conditioning / gas conditioning to reduce the emission levels in coal based plants to meet the stringent norms fixed by Delhi Pollution Control Committee. It is estimated that the annual financial impact on account of regular use of imported coal will be about Rs.25 Cr. The Hon'ble Commission is requested to take note of this fact while fixing the tariff of the Company and allow the cost of imported coal taken in FY 2005-06 on experiment purpose and during the FY 2006-07, in case the Company use the imported coal as per DPCC directions.

21. It is submitted that the Hon'ble Commission has fixed the generation target of 870MU for the year 2005-06 in respect of Rajghat Power Station for recovery of fixed charges. The Generation target was earlier fixed on the assumption that both machines shall be overhauled in March and April 2005. However, due to shortage of power during this period, IPGCL was not allowed to avail shutdown by DTL for overhauling the machines. Later the Unit-2 was taken for overhauling in the month of July, 2005. Both the units have chronic problems of high axial shift/ vibration leading to reduction in load. After attending to the above problems, Unit –2 has been stabilized in the last week of November, 2005 and now generating full load. It is proposed to carry out overhauling of unit-1 from April, 2006 and the same is expected to take 3 months. Due to long shutdown of Unit to rectify the chronic problems and

the other Unit being generating less load due to above reasons and the O/H has been postponed to next year, the Rajghat Power Station would able to generate 550 MU only in FY 2005-06 . The Hon'ble Commission is requested to consider and allow the actual generation of the Rajghat Power Station for the recovery of full fixed cost as the major overhaulings are for overcoming the long pending problems in the plant and was beyond the control of the Company.

22 It is submitted that 2% rebate for timely payment is being allowed to DTL. The Hon'ble commission is requested to consider and allow this financial burden in the tariff as the Company accounts its expenditures net of all rebates and similarly the rebates/ discounts allowed to by Company in its revenue earnings should be considered and allowed in the tariff.

23 It is submitted that the Company is required to pay Fringe Benefits Tax(FBT) to Income Tax authorities as per the Finance Act, 2005 and Water cess on the water drawn from the Yamuna River. The Hon'ble Commission is requested to allow the expenditures on account of cess taxes as pass through to DTL as per actuals.

24. It is submitted that the loss on account of 3% extra moisture in washed deshaled coal used in the Stations and 0.8% on transit loss may be considered and allowed.

25. It is submitted that generation incentives on generation beyond the targets may please be considered and allowed.

26. It is submitted that if the foregoing factors are not taken into consideration while determining the tariff, the survival of our plants will have a major setback and defeat the purpose of the power reforms carried out by GNCTD.

27. It is submitted that fuels used by the Company are subject to price variation from time to time. It is submitted that Hon'ble Commission may please approve Fuel Price Adjustment formula as given in draft PPA to compensate the wide variation in fuel cost.

28. It is submitted that the rate may also be approved for generation in open cycle in case of non-availability of the steam turbines in GT Station and the power demand warrants so.

29. The petitioner undertakes to submit any other information/document as and when directed/required by the Hon'ble Commission during the course of proceedings for taking just and proper decision in the matter.

30 The Petitioner reserves the right to amend this petition by reasons of any subsequent developments.

The petitioner respectfully prays the Hon'ble Commission to please:

a) Approve the tariff of IPGCL for FY 2006-07 and revise the tariff for FY 2005-06 in truing up after considering our submissions in the petition;
b) Allow the financial impacts for FY 2004-05 as prayed in our review petition, pending with Hon'ble Commission, in this ARR for FY 2006-07;
c) Approve Fuel Price Adjustment Formula;
d) Approve open cycle tariff for GT Station;
e) Approve the loss of 3% due to moisture content in deshaled coal and 0.8% in transit;
f) Allow the rebate given to DTL for timely payment, in the tariff;
g) Pass through the liability of FBT and Water cess to DTL on actual payment basis;
h) Approve incentive on the generation beyond target and
i) Pass any such further order (or) orders as the Hon'ble Commission may deem just and proper in the circumstances explained above.

For Indraprastha Power Generation Company Ltd.

(Viney Kumar)
General Manager(I/C)

PETITIONER

INDRAPRASTHA POWER GENERATION COMPANY LIMITED

ARR 2006-07

EXPLANATORY NOTES

ASSUMPTIONS

9. **Energy Generation:**

The Company has considered generation during the FY 2006-07 as per the targets proposed to be fixed by CEA.

	Gross Generation (M. Units)	Net Generation (M. Units)
I.P. Station	900	778
Rajghat Power Station	800	700
G.T.P. Station	1500	1453.50
	3200	2931.50

In the case of Gas Turbine Station, the proposed generation is based on the assumption that the Company would continue to receive APM gas and LNG with the anticipated level of cuts only. Any further cut would affect the generation. In GTP Station, generation from five GTs have been considered due to cuts in gas supply.

1. **Fixed Asset:**

As per the Delhi Electricity Reforms (Transfer Scheme) Rules, 2001, the Gross Fixed Assets of the Company as per notified Balance Sheet is Rs.510 Cr. as on 01.7.2002. The Chartered Accountants Firm M/s J.L. Garg & Company, appointed by the Company for allocating the gross value of Fixed Assets has allocated Rs. 510 Cr. as under:-

Station	(Rs. Cr.)
I.P. Station	30.00
R.P. Station	203.47
G.T.P. Station	268.20
General Fixed Assets	8.33
Total	510.00

----

4. Loan from Holding Company:

As per Delhi Electricity Reform (Transfer Scheme) Rules 2001, the secured loan payable to holding Company as on 01.7.2002 is Rs.210 Cr. There is moratorium on payment of interest and repayment of principal for 4 years. Interest @ 12% p.a is payable w.e.f. 1st July 2006 on the outstanding loan. The loan is repayable in 18 half yearly equal instalments starting from FY 2006-07. The loan of Rs.210 Cr. has been bifurcated station wise as under, based on gross fixed assets of the Company.

Station	(Rs. Cr.)
I.P. Station	1.81
R.P. Station	89.33
G.T.P. Station	118.86
Total	210.00

5. Loan From Delhi Government

The Plan Funds Loan from Delhi Government were taken @ 13% interest in the FY 2002-03 & from FY 2003-04 and thereafter the plan funds interest rate is @ 11.5%. A penal interest of 2% is chargeable in case of default in timely payment of interest or principle amount. Presently no amount on account of penal interest has been accounted in the ARR. The plan fund loans from Delhi Govt., stations wise are as under:-

(Rs. Cr.)

Stations	Year 2002-03	Year 2003-04	Year 2004-05	Year 2005-06	Year 2006-07
I.P. Station	3.00	15.00	15.00	6.50	40.00
Rajghat Power Station	7.50	7.25	-	15.00	10.00
G.T.P. Station	29.87	8.75	12.60	16.50	20.00
Consultancy for new projects	-	0.25	-	-	-
Total	**40.37**	**31.25**	**27.60**	**38.0 0**	**70.00**

Loan amount of Rs. 25 lakh for consultancy of new project has been clubbed with the loan amount of RPH in the tariff formats as there will be no significant overall impact on the tariff of the station.

2. **Equity:**

As per the transfer scheme, the subscribed and paid up capital of the Company as on 01.7.2002 is Rs.140 Cr. The total equity is bifurcated plant wise as under on the basis of total net fixed assets of Company:-

Station	**(Rs. Cr.)**
I.P. Station	1.20
R.P. Station	59.56
G.T.P. Station	79.24

	140.00

Return on Equity has been accounted @ 14% on the paid up capital of Rs.140 Cr..

7. **Working Capital Loan:**

The rate of interest on the working capital has been taken as 10.75%, based on P.L.R of SBI as on 1.4.2004. The PLR of SBI as on 1.4.2004 was 10.25% on monthly rest basis which works out to 10.75% on annualized basis.

3. **Depreciation**

As per Electricity Act, 2003 and after the repeal of the Electricity Supply Act, 1948, the Power Sector utilities are required to follow the Companies Act, 1956 in the matter of depreciation. The Ministry of Power in its draft Tariff policy has mentioned that for tariff determination, depreciation rate would be as per Schedule XIV of the Companies Act, 1956. All power sector entities will be treated as 'continuous process plant' for the purpose of determination of depreciation rate. If the above is finally accepted by the MOP in the tariff policy, the uniform rate of depreciation in the case of machineries for power entities would be 5.28%. Accordingly the depreciation in this petitions has been calculated as per the rates provided in the Companies Act, 1956. The Hon'ble Commission may kindly approve the same.

Depreciation on the additions during the financial year have been provided on the half of the amount assuming that the additions are made evenly throughout the year. Since IP Station has outlived its useful life, the 95% of Rs. 29Cr. additional capitalization on account of IPGCL share in ESPs have been depreciated during FY 2005-06.

8. O&M Expenses:

d) **Corporate Office Expenses** – The key Executive functionaries including Managing Director, Director (T), Director (F), Company Secretary etc. of both IPGCL and PPCL are common and the expenses of Corporate Office are also common. Besides this, the activities of Administration, Finance, Stores, Medical Deptt., Civil etc. are also looked after by IPGCL. As decided by the Board of Directors, the corporate office expenses of IPGCL are to be shared between IPGCL and PPCL.

The share of the corporate office expenses of IPGCL has been further allocated under three power stations on the basis of net power generation.

c) **Water Charges:**

Barrage at ITO is being maintained by Haryana Irrigation Department for meeting the water requirements of IPGCL and its O&M expenses are reimbursed by IPGCL. Besides this, water charges are also being paid to Delhi Jal Board for domestic water consumption. Both the charges have been considered in the tariff calculation for FY 2005-06 and 2006-07 under the Head "water charges".

Voluntary Retirement Scheme (VRS):

During the FY 2003-04, the Company had given VRS to 383 employees and the Company paid compensation of about Rs. 21 Cr. to these employees. The Company had also paid the terminal benefits, which will be reimbursed to the Company later on by DVB Terminal Benefits Trust on the scheduled date of superannuation of the employee. The Company is also now paying pension to these retirees till the date of their normal superannuation. The Ex-gratia payment to VRS employees and interest loss on this account is about Rs. 25 Cr. This outgo is proposed to be offset in the ARR by the saving in the salaries in five years. The establishment expenses of IPGCL have been hiked by Rs. 5 Cr. in FY 2005-06 and FY 2006-07 to offset the expected savings on account of outgoing VRS employees.

a) <u>Manpower Cost:-</u>

The Company is following the Central government rules in respect of allowances. The Company has to pay DA hike of about 3 to 4% on half yearly basis. Also the annual increments have an impact of about 3.0%. on annual basis. The Company has taken austerity measures to reduce overtime and holiday pay. It is estimated that increase in salary will be partially offset with savings on OT and holiday pay. Accordingly an increase of only 5% p.a. has been estimated in the employee cost in FY 2005-06 and FY 2006-07. The employees cost as shown in Form 10 includes additional Rs.5 Cr. Towards VRS savings as per details given hereunder.

Station		**2005-06**			**2006-07**	
	Estimated Employee Cost	**+ VRS Saving**	**= Total Employee Cost**	**Estimated Employee Cost**	**+ VRS Saving**	**= Total Employee Cost**
I.P	29.82	2.55	32.37	31.31	2.55	33.86
RPH	13.51	1.16	14.67	14.19	1.16	15.35
GTPS	5.51	0.46	5.97	5.78	0.46	6.24
HQ	9.65	0.83	10.48	10.13	0.83	10.96

b) Repair & Maintenance:

The Indraprastha Power Station of the Company is more than 35 years old and Delhi Pollution Control Committee (DPCC) had earlier ordered for its closure within six months of the commissioning of the Pragati Power Plant. Later the DPCC agreed to allow for operating the I.P. Station on the condition that the Company will install additional ESPs at I.P. Station to restrict the stack emission level to 50 mg/Nm^3 . In view of the closure ordered by DPCC, major Repair and Maintenance/ Renovation and Modernization works were not taken up. IPGCL has submitted a limited R&M Scheme of Rs.110 Cr. to Govt. of GNCTD for continued operation of IPStation for next five years. The financial impacts of the same has not been accounted in the ARR as the scheme is still subject to approval. In case the scheme is approved, the same is proposed to be implemented in 18 months time and the expenditure on the scheme is proposed to be divided in five years time as deferred revenue expenditure.

In Rajghat Power Station, the chronic problems of axial shift / high vibration have been resulting in reduction of load during last several years and the matter was taken up with OEM, M/s BHEL. As advised by them, major overhauling of boiler and turbine of both units including RLA study of turbines, cutting of condenser neck joint, re-floating of turbines, opening of vertical joint to set right and assembling, adjustment of cold pull of main steam piping etc. by OEM, M/s. BHEL at an estimated cost of Rs. 13 Cr. for both units are being carried out with loan from PLAN FUND. After completion of works, Unit No. 2 has been re-commissioned in the first week of November 2005. Unit No. 1 shall be taken up for similar works in April 2006 after watching the performance of Units –2. The cost on account of major R&M works at Rajghat has been included in the ARR.

In GT Station, the Repair & Maintenance expenditure during FY 2006-07 will be high as three hot gas path inspection and two major inspection of gas turbines will be due in the year.

11. Renovation & Modernization:

The Company proposes to incur the following capital expenditures on renovation and modernization/ repair and maintenance of the power plants to achieve optimum level of performance and enhanced life .

Station	(Estmated Amount)
I.P. Station	Rs.110.00 Cr.
R.P.Station	Rs.212.57 Cr.
G.T.P.Station	Rs.140.00 Cr.

10. Variable Cost:

The financial impacts of the above proposal have not been reflected in the ARR.

a) Imported Coal

As per the directions of DPCC, the Company is required to import coal for reducing the pollution level. Presently it is proposed to import one rake of coal for blending with the indigenous coal, on trial basis. The action for import has been initiated and Rs. 1.74 Cr. towards this trial run has been included in FY 2005-06. The quantity of imported coal for trial run is 3500 MT with GCV of 6,300 Kcal (appx.) The cost estimates for regular use of imported coal in FY 2006-07 have not been considered in the petition. If the Company is required to use imported coal based on trial run analysis, the cost impact have to be incorporated accordingly.

b) Supply of CNG / PMT /LNG - The total (APM+PMT+LNG) allocation for GTPS was 1.44 MMSCM per day which is sufficient to run six gas turbines. This allocation was reduced to 1.34 MMSCMD during the year. Out of the total allocation of 1.34 MMSCMD the contracted quantity of R-LNG is 0.6 MMSCMD and the balance i.e. 0.74 MMSCMD comes from APM and PMT. However GAIL, due to depletive gas reserves subject these quantities to daily cuts depending on the availability. The average daily cuts for CNG (APM+PMT) is 15%. The gas restrictions are leading to round the clock part load running of all the six gas turbines at 90% capacity, resulting in 2% loss in performance. Due to evacuation constraints (insufficient capacity for evacuation during off peak hours i.e. 2200 Hr to 0800 Hr) the gas turbines have to be backed down by 10% for 10Hrs daily, which results 1% further loss in performance.

It is estimated that these cuts will increase progressively. A cut of 15% and 20% on CNG / PMT has been estimated in the supply during FY 2005-06 and 2006-07.

The Company entered into an agreement on 07.01.2004 with GAIL for supply of LNG and the supply commenced from mid March, 2004. The contracted quantity of LNG is 0.6 MCMD. The Company is obliged to bear the cost of this contracted quantity even if there is no off take of supply. In our ARR, we have considered that the Company will first off take the LNG with cuts , if any, and rest will be drawn from CNG/PMT. This assumption has been taken on the basis of agreement with GAIL.

c) Heat Rate:

The Heat Rate of the Power Stations have been assumed for the FY 2005-06 and 2006-07 on the basis of actual heat rate achieved during the period April to Sept. 2005. and anticipated improvements in the working.

Gas Turbine Station – The heat rate considered is as under :

	2005-06	**2006-07**
G.T. Station	2250.00	2250.00

It is hoped that after the major overhauling, the PLF and heat rate of Rajghat Power station will improve considerably. In the case of GT Station, the heat rate is correlated with PLF and the PLF of the station might be affected in the future due to gas restrictions.

Due to the above constraints the heat rate estimated /proposed for the year 2005-06 and 2006-07 would be 2500 Kcal/Kwh, whereas the heat rate allowed by DERC for the year 2005-06 is 2450 Kcal/Kwh Gross).

RPH and IP Station - In both the Stations, the heat rate anticipated including transit, wind age and moisture losses are as under :-

I.P. Station	3850.25	3626.49
Rajghat Power Station	3441.44	3290.36

The Company is incurring handling as well as transit losses in coal. The CERC in their guidelines has allowed 0.8% of the coal dispatched towards normative transit and handling losses.

The deshaled washed coal is being used at our thermal plants. The coal contained extra surface moisture besides the normal moisture. As per NCL, 3% extra moisture is there on account of deshaling.

Presently, the actual losses on account of superficial surface moisture, transit and handling etc. which are much higher than the norms have been accounted in the heat rate of the Stations since there is no provision for accounting these losses separately in the ARR.

The heat rate of IP Station and Rajghat Power Station after deduction of the transit and handling loss to the extent of 0.8% and superficial surface moisture to the extent of 3% due to deshaling the coal are as under :-

Heat rate after deduction of 3.8% loss on Coal Quantity

	FY2005-06	**FY 2006-07**
I P Station	**3709**	**3493**
Rajghat Power Station	**3314**	**3167**

In the ARR, the above heat rate after deduction of 3.8% losses has been considered and financial impact of the same has been reflected by increasing the coal prices by 3.8% during FY 2005-06 and 2006-07.

The Hon'ble Commission is requested to allow the losses on account of the above.

d) Gross Calorific Value of Fuel

The GCV of the fuels for FY 2005-06 and 2006-07 have been assumed, based on the actuals received during the period April to Sept. 2005.

e) Auxiliary Consumption

The auxiliary consumption for FY 2005-06 and 2006-07 based on actual during April –September, 2005 is projected as under:-

	2005-06	**2006-07**

I.P. Station	14.8%	13.5%
Rajghat Power House	14%	12.5%
G.T. Power Station	3.1%	3.1%

f) The fuel prices estimated to be prevailing at the end of FY 2005-06 have been considered for FY 2006-07 with escalation of 5%. These prices have been further hiked by 3.8% to offset the moisture and transit losses.

6. Rebate on timely payment

Rebate of 2% is being allowed to DTL for timely payment . An average 1.5% rebate has been considered in the computation on the value of the total net energy sent out. The Financial implication on this account has been reflected in form No.-6 for Interest on Loans, as there is no separate provision for reflecting this expenditure in the ARR.

12. Fringe Benefit tax and Water Cess

The Fringe benefit tax(FBT) has been imposed in the Finance Act 2005 which is applicable from FY 2005-06 onwards. The Company is depositing FBT with the authorities.

The IPGCL is also required to pay water cess to Delhi Pollution Control Committee on the raw water drawn from the Yamuna River. The Company has received the following demand notices in the FY 2005-06.

(Amount in Rs. Lakh)

Period	**Year 2003**	**1.1.2004 to 31.3.2005**
I.P. Station	145.78	313.93
Rajghat Power House	71.39	41.62
G.T. Power Station	-	2.89

Liability on account of FBT and water cess have not been accounted in the ARR as it is assumed that both cost will be passed through to DTL on actual payment basis.

13. Escalation Factors

The Company has estimated price escalations as under:-

(a) 5% on the fuel price estimated to be prevailing at the current year end.

(b) 5% on the employee cost.

(c) Other expenditures, on estimated basis.

INDRAPRASTHA POWER GENERATION COMPANY LIMITED

ARR 2006-07

EXPLANATORY NOTES

ASSUMPTIONS

1. Fixed Asset:

As per the Delhi Electricity Reforms (Transfer Scheme) Rules, 2001, the Gross Fixed Assets of the Company as per notified Balance Sheet is Rs.510 Cr. as on 01.7.2002. The Chartered Accountants Firm M/s J.L. Garg & Company, appointed by the Company for allocating the gross value of Fixed Assets has allocated Rs. 510 Cr. as under:-

Station	(Rs. Cr.)	After HQ Allocation(Rs.Cr.)
I.P. Station	30.00	30.50
R.P. Station	203.47	206.85
G.T.P. Station	268.20	272.65
General Fixed Assets	8.33	-
Total	510.00	510.00

2. Equity:

As per the transfer scheme, the subscribed and paid up capital of the Company as on 01.7.2002 is Rs.140 Cr. The total equity is bifurcated plant wise as under on the basis of total net fixed assets of Company:-

Station	(Rs. Cr.)
I.P. Station	1.20
R.P. Station	59.56
G.T.P. Station	79.24
	140.00

Return on Equity has been accounted @ 14% on the paid up capital of Rs.140 Cr..

3. Depreciation:

As per Electricity Act, 2003 and after the repeal of the Electricity Supply Act, 1948, the Power Sector utilities are required to follow the Companies Act, 1956 in the matter of depreciation. The Ministry of Power in its draft Tariff policy has mentioned that for tariff determination, depreciation rate would be as per Schedule XIV of the Companies Act, 1956. All power sector entities will be treated as 'continuous process plant' for the purpose of determination of depreciation rate. If the above is finally accepted by the MOP in the tariff policy, the uniform rate of depreciation in the case of machineries for power entities would be 5.28%. Accordingly the depreciation in this petitions has been calculated as per the rates provided in the Companies Act, 1956. The Hon'ble Commission may kindly approve the same.

Depreciation on the additions during the financial year have been provided on the half of the amount assuming that the additions are made evenly throughout the year. Since IP Station has outlived its useful life, the 95% of Rs. 29Cr. additional capitalization in I.P.Station on account of IPGCL share in ESPs have been depreciated during FY 2005-06.

4. Loan from Holding Company:

As per Delhi Electricity Reform (Transfer Scheme) Rules 2001, the secured loan payable to holding Company as on 01.7.2002 is Rs.210 Cr. There is moratorium on payment of interest and repayment of principal for 4 years. Interest @ 12% p.a is payable w.e.f. 1st July 2006 on the outstanding loan. The loan is repayable in 18 half yearly equal instalments starting from FY 2006-07. The loan of Rs.210 Cr. has been bifurcated station wise as under, based on gross fixed assets of the Company.

Station	(Rs. Cr.)
I.P. Station	1.81
R.P. Station	89.33
G.T.P. Station	118.86
Total	210.00

5. Loan From Delhi Government:

The Plan Funds Loan from Delhi Government were taken @ 13% interest in the FY 2002-03 & from FY 2003-04 and thereafter the plan funds interest rate is @ 11.5%. A penal interest of 2% is chargeable in case of default in timely payment of interest or principle amount. Presently no amount on account of penal interest has been accounted in the ARR. The plan fund loans from Delhi Govt., station` wise are as under:-

(Rs. Cr.)

Stations	**Year 2002-03**	**Year 2003-04**	**Year 2004-05**	**Year 2005-06**	**Year 2006-07**
I.P. Station	3.00	15.00	15.00	6.50	40.00
Rajghat Power Station	7.50	7.25	-	15.00	10.00
G.T.P. Station	29.87	8.75	12.60	16.50	20.00
Consultancy for new projects	-	0.25	-	-	-
Total	**40.37**	**31.25**	**27.60**	**38.0 0**	**70.00**

Loan amount of Rs. 25 lakh for consultancy of new project has been clubbed with the loan amount of RPH in the tariff formats as there will be no significant overall impact on the tariff of the station.

6. Rebate on timely payment:

Rebate of 2% is being allowed to DTL for timely payment . An average 1.5% rebate has been considered in the computation on the value of the total net energy sent out. The Financial implication on this account has been reflected in Form No.- 6 for 'Interest on Loans', as there is no separate provision for reflecting this expenditure in the ARR.

7. Working Capital Loan:

The rate of interest on the working capital has been taken as 10.75%, based on P.L.R of SBI as on 1.4.2004. The PLR of SBI as on 1.4.2004 was 10.25% on monthly rest basis which works out to 10.75% on annualized basis.

8. O&M Expenses:

a) Manpower Cost:

The Company is following the Central government rules in respect of allowances. The Company has to pay DA hike of about 3 to 4% on half yearly basis. Also the annual increments have an impact of about 3% on annual basis. The Company has taken austerity measures to reduce overtime and holiday pay. It is estimated that increase in salary will be partially offset with savings on OT and holiday pay. Accordingly an increase of only 5% p.a. has been estimated in the employee cost during FY 2005-06 and FY 2006-07.

Voluntary Retirement Scheme (VRS):

During the FY 2003-04, the Company had given VRS to 383 employees and the Company paid compensation of about Rs. 21 Cr. to these employees. The Company had also paid the terminal benefits, which will be reimbursed to the Company later on by DVB Terminal Benefits Trust on the scheduled date of superannuation of the employee. The Company is also now paying pension to these retirees till the date of their normal superannuation. The Ex-gratia payment to VRS employees and interest loss on this account is about Rs. 25 Cr. This outgo is proposed to be offset in the ARR by the saving in the salaries in five years. The establishment expenses of IPGCL have been hiked by Rs. 5 Cr. in FY 2005-06 and FY 2006-07 to offset the expected savings on account of outgoing VRS employees.

The employee cost for FY 2005-06 and 2006-07 as shown in Form 10 includes additional Rs.5 Cr. towards VRS savings as per details given hereunder.

Rs.(Cr.)

Station		**2005-06**			**2006-07**	
	Estimated Employee Cost	**+VRS Saving**	**=Total Employee Cost**	**Estimated Employee Cost**	**+VRS Saving**	**=Total Employee Cost**
I.P	29.82	2.55	32.37	31.31	2.55	33.86
RPH	13.51	1.16	14.67	14.19	1.16	15.35
GTPS	5.51	0.46	5.97	5.78	0.46	6.24
HQ	9.65	0.83	10.48	10.13	0.83	10.96

b) Repair & Maintenance:

The Indraprastha Power Station of the Company is more than 35 years old and Delhi Pollution Control Committee (DPCC) had earlier ordered for its closure within six months of the commissioning of the Pragati Power Plant. Later the DPCC agreed to allow for operating the I.P. Station on the condition that the Company will install additional ESPs at I.P. Station to restrict the stack emission level to 50 mg/Nm^3 . In view of the closure ordered by DPCC, major Repair and Maintenance/ Renovation and Modernization works were not taken up. IPGCL has submitted a limited R&M Scheme of Rs.110 Cr. to Govt. of GNCTD to continue operation of IP Station for next five years. The financial impacts of the same has not been accounted in the ARR as the scheme is still subject to approval. In case the scheme is approved, the same is proposed to be implemented in 18 months time and the expenditure on the scheme is proposed to be divided in five years time as deferred revenue expenditure.

In Rajghat Power Station, the chronic problems of axial shift / high vibration have been resulting in reduction of load during last several years and the matter was taken up with OEM, M/s BHEL. As advised by them, major overhauling of boiler and turbine of both units including RLA study of turbines, cutting of condenser neck joint, re-floating of turbines, opening of vertical joint to set right and assembling, adjustment of cold pull of main steam piping etc. by OEM, M/s. BHEL at an estimated cost of Rs. 13 Cr. for both units are being carried out with loan from PLAN FUND. After completion of works, Unit No. 2 has been re-commissioned in the first week of November 2005. Unit No. 1 shall be taken up for similar works in April 2006 after watching the performance of Units –2. The cost on account of major R&M works at Rajghat has been included in the ARR.

In GT Station, the Repair & Maintenance expenditure during FY 2006-07 will be high as three hot gas path inspection and two major inspection of gas turbines are due during the year.

c) Water Charges:

Barrage at ITO is being maintained by Haryana Irrigation Department for meeting the water requirements of IPGCL and its O&M expenses are reimbursed by IPGCL. Besides this, water charges are also being paid to Delhi Jal Board for domestic water consumption. Both the charges have been considered in the tariff calculation for FY 2005-06 and 2006-07 under the Head "water charges".

d) Corporate Office Expenses:

The key Executive functionaries including Managing Director, Director (T), Director (F), Company Secretary etc. of both IPGCL and PPCL are common and the expenses of Corporate Office are also common. Besides this, the activities of Administration, Finance, Stores, Medical Deptt., Civil etc. are also looked after by IPGCL. As decided by the Board of Directors, the corporate office expenses of IPGCL are to be shared between IPGCL and PPCL.

The share of the corporate office expenses relating to IPGCL has been further allocated under three power stations on the basis of net power generation.

9. Energy Generation:

The Company has considered generation during the FY 2006-07 as per the targets proposed to be fixed by CEA.

	Gross Generation (M. Units)	Net Generation (M. Units)
I.P. Station	900	778
Rajghat Power Station	800	700
G.T.P. Station	1500	1453.50
	3200	2931.50

In the case of Gas Turbine Station, the proposed generation is based on the assumption that the Company would continue to receive APM gas and LNG with the anticipated level of cuts only. Any further cut would affect the generation. In GTP Station, generation from five GTs have been considered due to cuts in gas supply.

10. Variable Cost:

a) Imported Coal

As per the directions of DPCC, the Company is required to import coal for reducing the pollution level. Presently it is proposed to import one rake of coal for blending with the indigenous coal, on trial basis. The action for import has been initiated and Rs. 1.74 Cr. towards this trial run has been included in FY 2005-06. The quantity of imported coal for trial run is 3500 MT with GCV of 6,300 Kcal (appx.) The cost estimates for regular use of imported coal in FY 2006-07 have not been considered in the petition. If the Company is required to use imported coal, based on trial run analysis, the cost impact have to be incorporated accordingly.

b) Supply of CNG / PMT /LNG

The total (APM+PMT+LNG) allocation for GTPS was 1.44 MMSCM per day which is sufficient to run six gas turbines. This allocation was reduced to 1.34 MMSCM during the year. Out of the total allocation of 1.34 MMSCMD the contracted quantity of R-LNG is 0.6 MMSCM and the balance i.e. 0.74 MMSCM comes from APM and PMT. However GAIL, due to depleting gas reserves, subjected these quantities to daily cuts, depending on the availability. Presently, the average daily cut for CNG (APM+PMT) is 15%.

It is estimated that these cuts will increase progressively. A cut of 15% and 20% on CNG / PMT has been estimated in the supply during FY 2005-06 and 2006-07 respectively.

The Company entered into an agreement on 07.01.2004 with GAIL for supply of LNG and the supply commenced from mid March, 2004. The contracted quantity of LNG is 0.6 MCMD. The Company is obliged to bear the cost of this contracted quantity even if there is no off take of supply. In our ARR, we have considered that the Company will first off take the LNG with cuts , if any, and rest will be drawn from CNG/PMT. This assumption has been taken on the basis of agreement with GAIL.

c) **Heat Rate:**

The Heat Rate of the Power Stations have been assumed for the FY 2005-06 and 2006-07 on the basis of actual heat rate achieved during the period April to Sept. 2005 and anticipated improvements in the working.

Gas Turbine Station

The heat rate considered is as under :

2005-06 (Kcal/Kwh)	2006-07 (Kcal/Kwh)
2250	2250

The gas restrictions are leading to round the clock part load running of all the six gas turbines at 90% capacity, resulting in 2% loss in performance. Due to evacuation constraints (insufficient capacity for evacuation during off peak hours i.e. 2200 Hr to 0800 Hr) the gas turbines have to be backed down by 10% for 10Hrs daily, which results 1% further loss in performance.

Due to the above constraints, the heat rate estimated /proposed for the year 2005-06 and 2006-07 would be 2500 Kcal/Kwh, whereas the heat rate allowed by DERC for the year 2005-06 is 2450 Kcal/Kwh(Gross).

RPH and IP Station

In both the Stations, the anticipated heat rate after including the losses on account of transit, windage and moisture are as under :-

	FY-2005-06 Kcal/Kwh	2006-07 Kcal/Kwh
I.P. Station	3850.25	3626.49
Rajghat Power Station	3441.44	3290.36

The Company is incurring handling as well as transit losses in coal. The CERC in their guidelines has allowed 0.8% of the coal dispatched towards normative transit and handling losses.

The deshaled washed coal is being used at our thermal plants. The coal contained extra surface moisture besides the normal moisture. As per NCL, 3% extra moisture is there on account of deshaling (Annex-I).

In the data submitted for FY 2004-05 and April to September 2005, the actual losses on account of superficial surface moisture, transit and handling etc. which are much higher than the norms have been accounted in the heat rate of the Stations.

During FY 2005-06 and 2006-07, the heat rate of IP Station and Rajghat Power Station after deduction of the transit and handling loss to the extent of 0.8% and superficial surface moisture to the extent of 3% due to deshaling the coal are as under :-

	FY 2005-06	**FY 2006-07**
I P Station	3709	3493
Rajghat Power Station	3314	3167

In the ARR, the above heat rate after deduction of 3.8% loss has been considered and financial impact of the same has been reflected by increasing the coal prices in the same ratio during FY 2005-06 and FY 2006-07.

The Hon'ble Commission is requested to allow the losses on account of the above.

d) **Gross Calorific Value of Fuel:**

The GCV of the fuels for FY 2005-06 and 2006-07 have been assumed, based on the actuals received during the period April to Sept. 2005.

e) **Auxiliary Consumption:**

The auxiliary consumption for FY 2005-06 and 2006-07 is projected as under:-

	2005-06	**2006-07**
I.P. Station	14.8%	13.5%
Rajghat Power House	14%	12.5%
G.T. Power Station	3.1%	3.1%

f) Fuel Prices:

The fuel prices estimated to be prevailing at the end of FY 2005-06 have been considered for FY 2006-07 with escalation of 5%. The price of coal have been further hiked by 3.8% to offset the moisture and transit losses during these years.

11. Renovation & Modernization:

The Company proposes to incur the following capital expenditures on renovation and modernization/ repair and maintenance of the power plants to achieve optimum level of performance and enhanced life .

Station	(Estmated Amount)
I.P. Station	Rs.110.00 Cr.
R.P.Station	Rs.212.57 Cr.
G.T.P.Station	Rs.140.00 Cr.

The financial impact of the above proposal have not been reflected in the ARR.

12. Fringe Benefit tax and Water Cess

The Fringe benefit tax(FBT) has been imposed in the Finance Act 2005 which is applicable from FY 2005-06 onwards. The Company is depositing FBT with the authorities.

The IPGCL is also required to pay water cess to Delhi Pollution Control Committee on the raw water drawn from the Yamuna River. The Company has received the following demand notices in the FY 2005-06.

(Rs. Lakh)

Period	Year 2003	1.1.2004 to 31.3.2005
I.P. Station	145.78	313.93
Rajghat Power House	71.39	41.62
G.T. Power Station	-	2.89

Liability on account of FBT and water cess have not been accounted in the ARR as it is assumed that both cost will be passed on to DTL on actual payment basis.

13. Escalation Factors

The Company has estimated price escalations as under:-

a) 5% on the fuel price estimated to be prevailing at the current year end.
b) 5% on the employee cost.
c) Other expenditures, on estimated basis.

For Indraprastha Power Generation CompanyLtd.

(Viney Kumar)
General Manager(I/C)

(Petitioner)