NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA

November 24, 2006
Case No. NEPRA/TRF-56/JPCL-2006

Petitioner

Jamshoro Power Company Limited (JPCL), Mohra Jabal Dadu Road, Jamshoro.

Authority

Nasiruddin Ahmed
Member

Abdul Rahim Khan
Member

Zafar Ali Khan

Member

Saeed uz Zafar
Chairman

Background

Consequent to the restructuring of WAPDA, its thermal generation section has been split up into three independent generation companies. Jamshoro Power Company Limited ("JPC") being one of the four companies was registered under the Companies Ordinance 1984 on August 3, 1998 and commenced its commercial operations on March 1, 1999. It was organized to take over all the properties, rights, assets, obligations and liabilities of 2 thermal power station i.e. Thermal Power Station, Jamshoro and Gas Turbine Station, Kotri with a total nameplate capacity of 1054 MW – owned by Water and Power Development Authority (WAPDA).

2. JPC was granted a Generation Licence No. GL/01/2002 on July 1, 2002 by National Electric Power Regulatory Authority (NEPRA), to engage in the business for a term of nineteen (19) years, pursuant to Section 15 of the 1997 Regulation of Generation, Transmission and Distribution of Electric Power Act.

3. JPC filed a petition on June 20, 2006 with the Authority seeking revision of Return on Equity part of Capacity Charge due to change in its equity. The Authority on June 26, 2006 admitted the petition for consideration. Salient features of the petition were advertised in the newspapers to inform all interested/affected persons/parties and stakeholders to seek their participation in the tariff-setting proceedings as commentators or as interveners. Individual letters were also sent to the concerned Government Ministries, Chambers of Commerce & Industries, Chambers of Agriculture, and Representatives of professional bodies and Experts for soliciting their views on the petition. In response thereof, three communications were received. The Authority conducted a formal hearing in the matter on July 13, 2006 for providing an opportunity of personal hearing to the parties to the proceedings, commentators and experts.

SUBMISSIONS OF JPCL

4. JPCL's petition contains a proposal for:

a) revision in Return of Equity part of Capacity Charge of JPCL Tariff due to i) conversion of current liabilities of JPCL to Equity; and ii) conversion of a foreign re-lent loan to equity.

b) Extension of validity of the Tariff Determination by five (5) years from current date.

Equity

5. JPCL submitted that the equity of the Company as at 30th June 2003 was Rs. 6.101 billion, which was taken into account by NEPRA while assessing the amount of Rs. 778.000 million on account of return on equity @ 12.75% p.a.

Increase in Equity of the Company

6. According to JPCL during the financial year ended 30 June 2005, the equity of the Company has increased from Rs. 6.101 billion to Rs. 7.736 billion due to conversion of the Company's current liabilities payable to WAPDA to equity. JPCL stated that WAPDA recently informed the Company that a foreign re-lent loan (US-AID 391-k-193) amounting to Rs. 4.968 million had been converted to GOP equity into WAPDA and that accordingly, the on-lent loan to JPCL was converted to equity with effect from 01 July, 2005. Long-term loans and other long-term liabilities of the Company have not otherwise been affected.

Increase in Equity not Addressed in Current Tariff

7. According to JPCL existing tariff does allow for indexation to account for change in the CPI and US$/Rupees exchange rate, but it does not provide any mechanism to compensate for change in the revenue requirement after variation in the volume of equity without affecting the long term loans. Hence, fresh determination of JPCL tariff is required w.e.f 1st July 2005 and with CPI factor w.e.f 1st January 2006.

Increase in Revenue Requirement

8. JPCL submitted that as a result of increase in equity from Rs. 6.101 billion (as at 30 June 2003) to Rs. 7.741 billion (as at 01 July 2005), the return of equity of JPCL has increased to Rs. 987.000 million as compared to the

original assessment of Rs. 778.000 million at the time of the tariff determination. Thus the fixed component of the revenue requirement has risen from Rs. 2,695 million to Rs. 2,904 million. Therefore, the Return on Equity part of Capacity Charge needs to be revised.

Extension of Validity of Tariff Determination

9. According to JPCL the current Tariff Determination was deemed to apply w.e.f from 1st July 2004 for five years, i.e. up to 30 June 2009. Little more than three (3) years remain until that end date. Bidders of JPCL have attributed little value to the Company's PPA given its limited tenor; indeed they have likely discounted their valuations due to uncertainty as to the Company's revenues beyond what is now a "near-term" date.

10. JPCL further stated that at extension of the end date of the revised tariff determination by five (5) years (i.e. up to 30 June 2014) would provide a more secure long-term basis on which JPCL will be able to plan and implement the rehabilitation works identified as being required to achieve the efficiency improvements assumed in the tariff set in the tariff determination. Such revised end date would not be inconsistent with current assessment as to when a wholesale electricity market could realistically be in place in Pakistan.

Determination Sought

11. JPCL has prayed:

a) Revised return on enhanced equity of Rs. 7,741.168 million @ 12.75% p.a. be allowed with effect from 1st July 2005 for the remaining period of Tariff Determination of JPCL. The revised equity return amount would be subject to CPI indexation every six (6) months going forward with the first indexation adjustment occurring in January 2006.

b) Validity of the revised tariff determination be extended five (5) years up to 30 June 2014.

Existing and Proposed Tariff

12. JPCL has submitted following comparison of existing and proposed tariff:

Existing Tariff Determined by NEPRA		**Proposed (Revised) Tariff**	
Net Dependable Capacity (KW)	840,000	Net Dependable Capacity (KW)	840,000
Amount of Equity as at 30-6-2003 (Rupees)	6,100,502,325	Amount of Equity as at 01-7-2005 (Rupees)	7,741,167,830
Rate of Equity Return (p.a.)	12.75%	Rate of Equity Return (p.a.)	12.75%
Reference amount of Equity Return for the year (Rupees)	777,814,046	Proposed Amount of Equity Return for the year (Rupees)	986,998,898
Reference Equity Return (Rs./kw/month)	52.3589	Proposed Equity Return (Rs./kw/month)	97.9166

SUBMISSIONS OF COMMENTATORS:

Central Power Purchasing Agency (CPPA)

13. CPPA has submitted following comments:

a) The Company is in the process of privatization in the near future and there is no mention in the tariff application regarding proposed tariff's impact on the enhancement of the value of plant and its effect on the bid price.

b) The tariff allowed by NEPRA to the Company on March 29, 2004 was for 5 years w.e.f. 1st July 2004 to recover the cost incurred by the Company for the operation of the plant. The Company has not provided the revised revenue stream and its utility in case of revised tariff allowed by NEPRA.

c) The Company has requested increase in the Escalable Component due to (i) conversion of current liabilities of JPCL to Equity (ii) conversion of a foreign re-lent loan to equity. It is stated that JPCL has already been allowed Rs. 0.4962/kW/month as Non-Escalable Component (Foreign) to recover the cost debt service of the Company. JPCL in its revise tariff petition has not indicated its impact on the Non-Escalable portion of Capacity Charge.

d) The Company requested for extension in effectiveness of the tariff date from June 2009 to June 2014. The subject matter remained under discussion during a meeting held on 13 June 2006 at Privatization Commission, Islamabad charged by Member Privatization Commission. The Committee was apprised that NTDC has already agreed to an extension of the PPA subject to tariff determination by NEPRA.

National Tariff Commission

14. National Tariff Commission, Government of Pakistan has submitted following comments on the JPCL's tariff petition:

- The equity of JPCL is being increased due to conversion of current liabilities of Rs. 1.632 billion and foreign relent loan of Rs. 4.968 million into equity. These transactions at the one hand result into increased equity and on the other hand would result into a reduction in the debts of the Company and debt servicing cost. The second aspect of transaction is not reflected in the petition.
- The Authority (NEPRA) had earlier in fact deliberated on these issues at para 50 and 80 of its earlier determination in Case No. NEPRA/TRF-18/JPC-2003 dated 31-12-2003. In para 50 it was observed that in case of rescheduling or refinancing of existing loans the capacity purchase price (including debt servicing cost) would be adjusted accordingly. While in para 80 it is stated that reference tariff is determined in a manner that total costs (both equity and debt servicing) are recovered during the five year period.
- The Consumer Rights Commission of Pakistan (CRCP) raised serious concerns regarding valuation of assets of the company (inherited) from WAPDA (please refer to para 19 of earlier determination dated 31-12-03). It is imperative that this issue be given due consideration before any revision or extension of tariff, on permanent basis, as this may become a reference for further determination.

Privatization Commission

15. Privatization commission has submitted following comments regarding the subject petition:

a) Proposed Revision in Escalable Return of Equity (ROE) part of the Capacity Charge

16. As highlighted in the petition, the equity of JPCL increased for Rs 6.101 billion as at 30th June 2003 to Rs 7.741 billion on 1st July 2005 resulting from the conversion of (i) current liabilities of JPCL to equity and (ii) the foreign relent loan to equity as authorized by WAPDA. The converted amounts are presently part of the Deposit for Shared account and shares

have yet to be issued against them pending approval for relevant authorities. In the near term, we envision that further adjustment may be made in JPCL equity base as the privatization transaction moves forward. These may include any revision in the BTA adjustment account and corresponding finalization of the equity account prior to issuance of shares. To address such circumstances, it would be more efficient and cost-effective for the ROE component of the determined tariff to be automatically adjusted, in place of the current petitioning process.

b) <u>Cost of Equity Calculation</u>

17. We would also like to draw your attention to the ROE currently being provided to JPCL. An analysis of risk-free investment in the local market shows that presently one (1) year Treasury Bills are offering a return of 8.79%, while returns on three (3) to ten (10) year Pakistan Investment Bonds range form 9.10%-9.60%[2]. Furthermore, the three (3) year KIBOR is currently at 10.03%[3]. as corporate lending is generally at a spread of 300 basis points above the inter-bank rate, it would appear that JPCL is faced with an anomalous situation where in the marginal cost of debt is higher than its deemed cost of equity which is currently determined at 12.75% p.a. given the increasing trend in local interest rates, it is likely that fresh capital investment in JPCL by private investors would be considered unattractive unless the permitted ROE is increased.

18. Attachment 1 presents a comparison of the cost of equity calculation in JPCL's determination (31st December 2003) with a Cost of Equity calculation based on current market information. For consistency, both calculations are based on a modified Capital Asset Pricing Model ("CAMP"). As indicated in the attachment, JPCL's estimated Cost of Equity works out to 20.6% p.a. at present (i.e. 785 basis points greater than 12.75% p.a).

19. Finally we understand that independent Power Producers ("IPPs") are currently being offered an after-tax return on equity of 15% p.a for new IPP project investment in Pakistan. In light of the above we propose that the permitted ROE for JPCL should be consistent with the returns being offered to IPPs. Given current market trends and various investment considerations,

an escalable ROE of 15% p.a. would be fair and reasonable and would help ensure the financial and operational sustainability of JPCL as well as will be consistent with the objectives of investment and privatization policies of the Government of Pakistan. Furthermore the revised escalable ROE tariff component should be clearly spelt out at the outset to provide clarity and a degree of certainty in revenue projections.

c) <u>Extension in Validity of Tariff determination</u>

20. As previously argued the privatization Commission also supports JPCL' s request for an extension is validity of the tariff determination for further five (5) years i.e. up to 30th June 2014, as compared to the current tariff determination which is applicable up to 30th June 2009. Such an extension would improve incentives for the new investors to rehabilitate JPCL's plant and expand capacity. This would be consistent with the GOP's privatization Policy to attract high quality buyers and encourage major investment in view to the looming power shortage scenario.

21. A reasonable degree of revenue stability and certainty would enable investors to plan and manage investments; particularly capital expenditure required to improve availability and performance of its plant, and to service existing debt.

22. Further considerations include the likely date for introduction of a Wholesale Electricity Market ("WEM"). Current assumptions hint at a commencement after 2009, given the practical preparation that needs to be made. Our expectation is that by 2014, the WEM would have been introduced and achieved a reasonable maturity level, to enable competitive market participation by JPCL.

23. In the interest of all stakeholders, a clear determination form NEPRA is required, enabling JPCL to continue selling power to NTDC at least until 30th June 2014 at a pre-approved multi-year tariff. Leaving any of these matters open will effectively put JPCL in the same position as if the PPA were to terminate in 2009 (as JPCL would only have assured revenue stability until that point) with all the attendant negative consequences for its stakeholders.

<u>LILLEY International (Pvt.) Ltd.</u>

24. LILLY International (PVT) Ltd. requested the rejection of the application of JPCL till:

- WAPDA calls fresh bids for leasing out the JPCL for the period of 20-30 years instead of ROMM basis at the exiting/current tariff; or
- WAPDA gives the undertaking that after revision and extension of validity of tariff determination the JPCL will not be leased out without calling the bids in this regard.

ISSUES ARISING OUT OF THE PROCEEDINGS

25. The following main issues have emerged from the contents of the tariff petition:

i) Return on Equity
ii) Extension of validity of the Tariff Determination by five (5) years from current date.

26. The main issues are discussed in the succeeding paragraphs.

<u>Return on Equity</u>

27. The Authority in its determination dated 29-03-2004 adopted ROE approach for determination of JPCL's tariff. The ROE was assessed to ensure JPCL an overall return of 12.75% per annum during the control period. The Authority has also considered the JPCL's request at paragraph 7 for provision of some adjustment mechanism in order to capture the possibility of the variation in JPCL's assets and liabilities that may take place in future, is valid. In order to provide such an adjustment mechanism some of the tariff components other than ROE such as insurance, interest and depreciation were also required to be reassessed and are being reassessed.

28. The examination of the information provided by the petitioner revealed that JPCL did not consider the impact of reduction in cost of debt as a result of swap. This point was also been highlighted by the CPPA in its comments reproduced at paragraph 13C above. During the hearing JPCL was directed to provide relevant details and impact on the other tariff components, which

JPCL did not provide. In the absence of such information, the Authority has relied on the available information and analysis done by NEPRA experts.

29. The Authority has considered JPCL's request to allow 15% ROE as has been allowed to new IPPs and is of the opinion that JPCL's request does not have merit for consideration. The new IPPs are exposed to more credit risk having up to 80% of project financing through long term borrowing. In JPCL's case it is the other way around because most of its debts have already been paid off or converted into equity. JPCL's submissions (given on pages 5 & 6 of its communication dated 21/09/06) have been critically examined and analysis is given as under;

- The US risk free rate is not 5.10%, it has now fallen to 4.5%. The temporary hike in risk free rate during summer was due to expectations of tightening of monetary policy by the Fed. Recently, the risk free rate (yield on US treasuries) has plunged as the market has cast away any expectations for further tightening. The longer term outlook for yields includes lessening risk for Fed tightening which has spurred the drop in long term yields and therefore a return to a 5%+ yield for the 10 year seems less likely.

- Beta of 1.34 as calculated by JPCL is obviously erroneous. Beta for companies in electricity business all over the world is generally less than 1. Furthermore, beta is dependent on the capital structure and decreases with increase in equity level. Due to the recent Debt-Equity swap, the capital structure of the company has been completely transformed and equity has risen substantially. Therefore, beta calculated four years ago is not useful anymore.

- There is no justification for lambda to be greater than one given that all the revenue sources for JPCL are domestic and all fuel costs are passed-through.

- The effect of inflation differential is already included in the country risk premium and adding it again would amount to double counting.

- 3% premium over 6-month KIBOR is generally used for project financing for new IPPs. Corporate lending spread is much lower than this.

- Comparing the cost of equity of JPCL with that of Greenfield IPPs is an apples to oranges comparison. There is a huge difference between a company which is 80% debt financed and a company which is 80% equity financed. Equity capital becomes much more at risk with increasing amount of leverage and therefore cost of equity increases for companies whose capital structure mostly comprises debt.

- For the sake of consistency, the cost of equity for JPCL in the present determination has been calculated using local market data in the same way as is being done for IPPs instead of foreign market data as was the case in the previous determination.

30. Based upon the above analysis and using beta for JPCL 0.47, a risk free rate of 9.85% and a market premium of 7% the Authority has assessed the cost of equity of 13.11%, which is being allowed to JPCL.

31. On the basis of evidence provided by the petitioner, the Authority accepts the request for modification in the reference amount of equity. Accordingly equity of Rs. 7,741 million as at 01-07-2005 is being adopted as such for return calculation. Applying ROE of 13.11% to the revised equity, the return on equity part of Capacity Purchase Price has been assessed as Rs. 1014.8451 million or Rs. 100.6911 per kW per month.

32. According to JPCL further debt-equity swaps are likely in future and the cost/return of equity allowed to it will have to be adjusted in future with increase in the level of equity. Having considered JPCL's concern the Authority has decided to allow JPCL one time adjustment for any variation in equity level according to the following mechanism:

$$ROE_{(REV)} = \text{Rs. } 100.6911/\text{kW/Month} * \text{Ave. Equity}_{(REV)} / \text{Rs. } 7{,}741 \text{ million}$$

Where:

$ROE_{(REV)}$ = Revised Return on Equity

Ave. $\text{Equity}_{(REV)}$ = Revised Average amount of Equity at the start and at the end of the year in million rupees

Financial Charges

33. The debt-equity swap has also impact on financial charges component of capacity charge. The variation in equity as a result of debt-equity swap will correspondingly change the debt. JPCL as a going concern may require long-term loans during the control period, which will again result in variation in financial charges; therefore the reference interest component of capacity charge would require adjustment. Based upon the projections for 2006-07 submitted by JPCL, the reference interest component of capacity charge is being revised as Rs. 262 million or Rs. 25.9952 per kW per Month. The revised interest component of capacity charge shall be adjusted according to the following mechanism;

$$Interest_{(REV)} = Rs.\ 25.9952/kW/Month * FC_{(REV)} / Rs.\ 262\ Million$$

Where:

$Interest_{(REV)}$ = the revised interest component of Capacity Purchase Price

$FC_{(REV)}$ = the revised financial charges in million rupees.

Depreciation

34. Depreciation is also a component, which may change as a result of addition or deletion in the fixed assets and would be required to be adjusted accordingly. The reference depreciation part of capacity charge is being revised and a mechanism is being provided for adjustment on account of future variation. For assessment of revised reference depreciation component of capacity charge, the Authority has adopted depreciation of Rs. 711 million as projected by JPCL for the year 2006-07. Accordingly, the revised Depreciation Component of Capacity Charge has been assessed as Rs. 70.5441 per kW per month. The adjustment for variation in depreciation component of capacity charge will be made according to the following mechanism:

$$Dep._{(REV)} = Rs.\ 70.5441/kW/Month * AGFA_{(REV)} / Rs.\ 17{,}899\ million$$

Where:

$Dep._{(REV)}$	=	the revised Depreciation component of Capacity Purchase Price
$AGFA_{(REV)}$	=	the revised average gross fixed assets in Million rupees.
$AGFA_{(REF)}$	=	the reference average gross fixed assets of Rs. 17,899 million

Insurance

35. Insurance is usually paid on book value and is subject to change every year. The insurance part of capacity charge would therefore be required to be adjusted accordingly. The Authority has therefore decided to revise reference insurance part of capacity charge and provide a mechanism for adjustment on account of future variation in insurance. For assessment of revised reference insurance component of capacity charge, the Authority has adopted insurance of Rs. 75.48 million calculated on the basis of 1% of net fixed assets in operation of Rs. 7,548 million. Accordingly, the revised Insurance Component of Capacity Charge has been assessed as Rs. 7.4891 per kW per month. The revised reference insurance component of capacity charge will be adjusted according to the following mechanism:

$$Insur._{(REV)} = \text{Rs. } 7.4891/\text{kW}/\text{Month} * NFAIO_{(REV)} / \text{Rs. } 7{,}548 \text{ million}$$

Where:

$Insur._{(REV)}$	=	the revised Insurance component of Non-Escalable part of Capacity Purchase Price
$NFAIO_{(REV)}$	=	the revised Net Fixed Assets in Operation in million rupees.
$NFAIO_{(REF)}$	=	Net Fixed Assets in Operation of Rs. 7,548 million

Mode of Adjustment

36. JPCL shall submit written request for one time adjustment at the time of privatization in tariff components of ROE, interest, depreciation and

insurance duly certified by the Auditors. The Authority shall give its decision within 10 working days of the receipt of the request.

Extension in Tariff Control Period

37. The Authority has considered JPCL's request for extension in tariff control period till 30th June 2014. Privatization Commission has also supported JPCL's request. Since the JPCL's privatization has not been done and it will take some time, the Authority is of the view that the JPCL's request is reasonable and therefore decided to extend the tariff control period from 30th June 2009 till the date of introduction of Wholesale Electricity Market or 30th June 2014 whichever is earlier.

ORDER

38. The tariff control period is extended till 2014. The modified tariff table is as follows:

Capacity Purchase Price (CPP)		**Reference Tariff** **Rs./kW/Month**	**Indexation**
Fixed O&M		66.6840	CPI
Insurance		7.4891	Nil
ROE		100.6911	Nil
Financial charges		25.9952	Nil
Depreciation		70.5441	Nil
Total Capacity Purchase Price (A+B)		**271.4035**	
Energy Purchase price (EPP) (Rs./kWh)	**Fuel**	**Variable O&M**	**Total**
Block 1 – Jamshoro Unit 1 FO	5.0090	0.0605	5.0695
Block II – Jamshoro Unit 2-4 GAS	2.8769	0.0605	2.9374
Block II - Jamshoro Unit 2-4 FO	5.1063	0.0605	5.1668
Block III - Kotri Units 3-7 GAS	2.7980	0.0605	2.8585
Block III - Kotri Units 3-7 HSD	10.9632	0.0605	11.0237
Block IV - Kotri Units 1-2 GAS	5.7776	0.0605	5.8381
Block IV - Kotri Units 1-2 HSD	22.6374	0.0605	22.6979

TARIFF ADJUSTMENTS

The following adjustments would be allowed in tariff:

Heat Rates (One Time Adjustment)

i. The fuel cost component of EPP part of the tariff will be adjusted after the test for determining the actual heat rates of each block, is carried out by the JPCL and is approved by the Authority. This one time adjustment shall be made according to the following formula:

$$FCC_{Ref\ (Rev)} = FCC_{(Ref)} * HR_{(revised)} / HR_{(allowed)}$$

Where:

$FCC_{Ref\ (Rev)}$ = Reference Fuel Cost Component revised pursuant to heat rate tests

$FCC_{(Ref)}$ = Fuel Cost Component as determined in this determination

$HR_{(allowed)}$ = Heat Rates as per the current determination

$HR_{(revised)}$ = Heat Rates determined pursuant to the test

Net Dependable Capacity (one time adjustment)

ii. The CPP is determined on estimated Net Dependable Capacity of 840 MW. The actual Net Dependable Capacity will have to be tested by the JPCL within six months of the notification of Tariff rates as determined by the Authority. Upon determination of Net Dependable Capacity as confirmed by NTDC consequent to the test carried out by the JPCL in the presence of representatives of JPCL and NTDC and to the satisfaction of the Authority, each component of the notified CPP would be adjusted as per the following formula:

$$C_{Ref\ (Rev)} = C_{(Ref)} * 840\ MW / B$$

Where

$C_{Ref\ (Rev)}$ = The new adjusted CPP (Rs/kW/month)

$C_{(Ref)}$ = The CPP determined by the Authority in this determination (Rs/kW/month)

B = Net Dependable Capacity in Mega Watts as a result of the test carried out by the JPCL

Return on Equity

iii. The revised ROE component of capacity charge shall be adjusted according to the following mechanism:

$ROE_{(REV)}$ = Rs. 100.6911/kW/Month * Ave. $Equity_{(REV)}$/ Rs. 7,741 million

Where:

$ROE_{(REV)}$ = Revised Return on Equity

Ave. $Equity_{(REV)}$ = Revised Average amount of Equity at the start and at the end of the year in million rupees

Financial Charges

iv. The revised interest component of capacity charge shall be adjusted according to the following mechanism:

$Interest_{(REV)}$ = Rs. 25.9952/kW/Month * $FC_{(REV)}$ / Rs. 262 Million

Where

$Interest_{(REV)}$ = the revised interest component of Capacity Charge

$FC_{(REV)}$ = the revised financial charges in million rupees

Depreciation

v. The adjustment for variation in depreciation component of capacity charge will be made according to the following mechanism:

$Dep._{(REV)}$ = Rs. 70.5441/kW/Month * $AGFA_{(REV)}$ / Rs. 17,899 million

Where

$Dep._{(REV)}$ = the revised Depreciation component of Capacity Charges

$AGFA_{(REV)}$ = the revised average gross fixed assets in Million rupees.

$AGFA_{(REF)}$ = the reference average gross fixed assets of Rs. 17,899 million

Insurance

vi. The revised reference insurance component of capacity charge will be adjusted according to the following mechanism:

$Insur._{(REV)}$ = Rs. 7.4891/kW/Month * $NFAIO_{(REV)}$ / Rs. 7,548 million

Where

$Insur._{(REV)}$ = the revised Insurance component of Non-escalable part of Capacity Charges

$NFAIO_{(REV)}$ = the revised Net Fixed Assets in Operation in million rupees.

$NFAIO_{(REF)}$ = Net Fixed Assets in Operation of Rs. 7,548 million

JPCL shall submit written request for one time adjustment at the time of privatization in tariff components of ROE, interest, depreciation and insurance duly certified by the Auditors. The Authority shall give its decision within 10 working days of the receipt of the request.

Fuel Cost

viii. Fuel Cost Component of EPP part of the tariff for each Block will be adjusted on account of the fuel price variations, according to the following formula:

$FCC_{(Rev)} = FCC_{(Ref)} * FP_{(Rev)} / FP_{(Ref)}$

Where:

$FCC_{(Rev)}$ = the applicable Fuel Cost Component as revised in accordance with the revised fuel price.

$FCC_{(Ref)}$ = the Fuel Cost Component as indicated in the reference tariff or that adjusted pursuant to the heat rate tests

$FP_{(Rev)}$ = the fuel price as notified by the relevant authority per unit of fuel (residual fuel oil and natural gas)

$FP_{(Ref)}$ = the reference fuel price per unit of fuel (residual fuel oil and natural gas) as mentioned below:

Gas	Rs. 264.87/MMBTU
HSD	Rs. 36.96/ litre
RFO	Rs. 18,938.81/M.Ton (Ex-GST)

For the purpose of fuel cost adjustment, JPCL would submit to the Authority relevant purchase orders, in case of change in furnace oil/HSD prices. The scheduled delivery date of furnace oil/HSD will be considered as effective date of adjustment. In case of change in gas prices, JPCL would submit relevant notifications of OGRA and other gas suppliers and the effective date of fuel cost adjustment in that case would be the date on which new gas prices become applicable.

Inflation Indexation

viii. The fixed O&M component of CPP will be adjusted on account of Inflation (CPI) only, in future. Indexation adjustment due to inflation will be made twice a year on January 01 and July 01. The adjustment will be on the basis of the latest monthly CPI as notified by the Federal Bureau of Statistics (FBS). As per present practice according to which CPI is updated on 11th of every month, the indexation on January 01 will be based on CPI for preceding November while the indexation on July 01 will be based on CPI of preceding May. The first adjustment on account of inflation will be carried out on January 01, 2007 on the basis of CPI as notified by the Federal Bureau of Statistics (FBS) for the month of November 2006. JPCL must submit a request at least 15 days prior to the applicable date indicating the level of indexation estimated for the period. The mode of indexation for escalable component will be as under:

$$O\&M_{(REV)} = O\&M_{(REF)} * CPI_{(REV)} / 132.97$$

Where,

$O\&M_{(REV)}$	=	the revised applicable Escalable Component of the Capacity Purchase Price
$O\&M_{(REF)}$	=	the Reference O&M Component of the Capacity Purchase Price or adjusted as a result of the IDC testing as determined by the Authority
$CPI_{(REV)}$	=	the Revised Consumer Price Index
$CPI_{(REF)}$	=	the Reference Consumer Price Index as notified by Federal Bureau of Statistics for the month of March 2006 i.e. 132.97

<u>Taxes</u>

ix. If JPCL is required to pay any income tax to the Federal Government, the exact amount paid by the company will be reimbursed by CPPA to JPCL after approval of the Authority. JPCL would be required to submit its claim for approval supported by the original receipts of payment. The Authority will allow the payment to be recovered as Rs./kW/per month through non-escalable component of the CPP for the particular month in which the claim is submitted.

JPCL would be allowed to immediately apply the tariff determined as revised on account of any adjustment or indexation allowed by the Authority, subject to any difference in the tariff notified by the Federal Government as per section 31 (4) of the NEPRA Act. In case the notified rate is different from the one already allowed for immediate application the requisite adjustment in tariff shall be made as soon as possible but no later than the succeeding billing month.

October 31, 2006
Case No. NEPRA/TRF-56/JPCL-2006

Determination of Member Abdul Rahim Khan in the matter of Tariff petition submitted by Jamshoro Power Company Limited (JPCL)

JPCL (at para 5 of its Tariff revision Petition) has sought relief and requested for determination on the following two specific points:-

- Revised return on enhanced equity of Rs.7,741.168 million @12.75% p.a.
- Validity of the revised Tariff determination be extended for a further period of five years i.e. up to June 2014.

JPCL has further provided, at para 6 of its petition, the existing tariff and the proposed tariff.

The Authority's determination on the above points is set out in the following paragraphs.

Revision of the parameters of the Multi Year Tariff.

1. One of the main purpose or justification of a Multi year formulae based tariff (MYT) is to remove or reduce regulatory uncertainty. In the context of an entity being shifted from Government to Private ownership through a transparent bidding process, the MYT and its undisturbed application over the control period is an essential pre-requisite to attract investors in the first place.

2. The sanctity and inviolability of MYT during a control period is the main element on which the decision of an investor to compete for investment in an ongoing utility hinges. In Pakistan such strength and sanctity of MYT has been established through various meetings / discussions of NEPRA with the Privatization Commission (PC) and their advisors i.e. International Finance Corporation (IFC), representing the point of view of the investors, in which

an understanding was imparted that the Regulator would not alter the Multi Year Formulae during the committed duration or control period unless justified on account of unforeseen events. The understanding has further been reinforced with the successful privatization of KESC where the investor was able to bid on the MYT determined by NEPRA, based on the Multi Year formulae and the principles & indexations stipulated therein.

3. The Authority believes that eroding the aforesaid understanding of the investors and diluting the commitment of the Regulator through an intermediate variation of tariff formulae and associated parameters prior to the completion of the control period is neither in the interest of Privatization of JPCL nor the Public. Therefore in dealing with the requested intermediate alteration of the MYT, one has to ensure whether there is a need or adequate justification to do so on the basis of unforeseen events.

4. Considering the case from the perspective of the Revenue requirement, the Authority has learnt in a recent hearing with respect to an EXWAPDA GENCO that cash transactions on the basis of Revenue and costs are still not being independently carried out by the GENCOS. Therefore, JPCL, as an independent entity is not directly facing any problems arising out of inadequacy of Revenues from the tariff. Such an assessment can only be carried out when Revenues are accrued on the basis of notified tariff of JPCL and input costs are paid directly by JPCL.

5. The main concern therefore, remaining to be considered is the attraction of the private investor. Here it has to be seen whether denying the adjustment of equity and return thereof, consequent to the revised gearing (due to reallocation of assets and liabilities within the EXWAPDA entities), would hamper Privatization in any significant manner.

6. Since the intending investors would bid on the basis of an expected revenue stream derived from any tariff that is given, a higher or lower tariff would

result only in a correspondingly higher or lower bid received from the highest bidder. It is not clear whether the proceeds from Privatization would be ploughed back to the Power Sector or to the Generation companies, therefore in all fairness it should be seen that a reasonable return on the investment is the basis of determining the tariff and such tariff is neither lowered nor inflated only with the expected proceeds in view in favour of one stakeholder to the detriment of others.

7. With capital attraction and facilitation of Privatization in view, the need to adjust the Revenue Requirement and tariff in order to make the return commensurate with the revised Debt / Equity profile is recognized. However the Authority has been informed that the debt/equity of JPCL has still not been finalized and one or several further restructuring of the balance sheet, debt/equity swap or revision of allocation of assets and liabilities between the companies unbundled from WAPDA is expected. In such a case it would be prudent and fair to wait for the finalization of the debt/equity profile of JPCL so that the return allowed conforms to the debt/equity structure on which the investors are going to bid.

8. In view of the aforesaid the quantum of return on equity (based on 12.75%) mentioned at page 7 of the petition as item (B) of the Proposed (revised) tariff may be allowed to be adjusted to arrive at a revised fixed charges (Rs/kW/month) attributable to Return on Equity as mentioned at item (E) of the proposed (revised) tariff (page 7 of the petition). Such adjustment shall be made if required during the currency of the present notified MYT upon the finalization of Debt/equity structure of JPCL prior to privatization and its communication to NEPRA by P/C. Further that such adjustment will not be applicable to the period prior to the decision of NEPRA *ex post facto* and that prudency review / assessment of Revenue requirement would only be carried for the purpose of the next multi year period commencing after the expiry of the first five year period. If the transaction is matured and ready for bidding earlier the first MYT period can be terminated and subsequent to a prudency review based on the performance of the earlier control period, a second MYT

period shall be allowed to be initiated from the date the Private Investor takes over the management of JPCL.

Extension of the MYT (Request for validity of the revised tariff determination be extended for a further period of five years.)

9. During the proceedings, meetings and discussion held between Privatization Commission, Ministry of Water & Power, Ministry of Finance and other stakeholders during years 2003 and 2004 the main concern, expressed by the P/C and IFC on behalf of the intending / investors / bidders, was the reopening / alteration of the Multi Year tariff formulae by NEPRA during the currency of a Multi Year tariff (MYT) award and a reasonable control period.

10. The deliberation culminated in the summary for the Cabinet Committee on Privatization and a tacit understanding given by NEPRA and accepted by all the stakeholders that the Multi Year tariff formulae would not be altered during the currency of the MYT, unless due to unforeseen event. A period of five years was considered reasonable and appropriate to attract the desired investment and was agreed to by all the parties.

11. It is therefore of utmost importance that mid term adjustment not explicitly mentioned in the notified tariff formulae is not perceived by the intending investors as a violation of the understanding and commitment of the Regulatory Compact. Such a perception can only be avoided if grounds proffered by the petitioner are adequate and cogent to qualify as an unforeseen event.

12. The distinction between a Multi Year tariff and a long term Bilateral wholesale contract between two entities (Generating c/o and Bulk purchaser) needs to be appreciated. The period of a five year Multi-year tariff was agreed to by all parties and stakeholders and no convincing justification to allow a MYT period for more than five years or to allow an extension of the current MYT period to 10 years has been provided by the petitioner. JPCL

will be at liberty to carry out a long term contract for sale purchase with any one or more Distribution companies and or Bulk Power Consumers or Purchasers. The formula based tariff approved for JPCL for a period of five years up to 2009 was based on a set of assumptions laid down in its determination. In effect, such multi-year tariffs call for a restricted no. of year bound commitment of sale by a generating company in a regulated market. The control periods are only disturbed when there is a justified and dire need to intervene and change the same prior to their expiry date. The intervention in the control period in the middle of the first five year period and the request to extend it for another period of five years from the date of such intervention would not only amount to violating the commitment of the first MYT but also make the second MYT vulnerable to such interventions in the future. An essential prerequisite for considering such an action would be to reassess the Revenue Requirement and readjust the base tariff to which a formulae is applied for the next control period. Such a review would also consider if a modification in the adjustments to the formulae are required on the basis of information gathered from the previous control period both w.r.t. efficiency gains as well as any difficulty experienced w.r.t. compensation for major additional investment made during the control period. Not carrying out such a review would be against the established norms of tariff determination as the term of the multi-year tariff would in effect get extended to a total period of 10 years and would validate a tariff without reviewing the Revenue Requirement and performance of the Generating Company upon the expiry of the existing control period.

13. The change in Debt/Equity (D/E) profile needs to be incorporated into the tariff for a correct and fair evaluation of the assets. However it has been informed by the petitioner and confirmed by the P/C that further restructuring of the balance sheet and variation in the rate is expected before the transaction of JPCL is finalized for initiating the bidding process. An adjustment at this stage in the basic parameter of return would therefore be required to be adjusted again at a later stage. Therefore, accepting the

need of an adjustment due to restructuring of the Debt/Equity ratio, it would not be prudent to make such an adjustment prior to the finalization of the D/E ratio on which the bidding documents are based.

14. It is also evident that if the current 5 year Multi-year period is allowed to continue w.r.t. Revenue Requirement and base elements of the formulae, a prudency review would be required prior to the commencement of the next MYT period on 1st July 2009. To allow a reasonable time for all the stakeholders to examine the performance of the JPCL during the first MYT period a tariff revision petition can be submitted to the Authority after July 2008 as soon as provisional accounts for the year FY-07 and audited accounts for the earlier three years can be made available. In case the transaction of JPCL is finalized and is ready for offering before that time, JPCL may submit a tariff revision petition earlier to carry out a prudency review such that the next MYT period of five years can be allowed from the date JPCL is privatized.

15. Regarding the period of next review the demand for extending beyond six years is not considered as reasonable, therefore the next MYT can be allowed and indicated for the purpose of inviting bids on the basis of a six year control period after the date of the privatization.

16. In view of the aforesaid:-

(i) A mid control period adjustment in tariff on account of Debt / Equity variation is not warranted at this stage and is not allowed.

(ii) JPCL will be allowed to terminate its first MYT control period and shall be allowed a second MYT of six years either on the expiry of the current five year period or after a final Restructuring of the Debt / Equity profile is carried out and the JPCL transaction is expected to be ready to be offered for bidding within a period of six months whichever of the two falls earlier.

(iii) JPCL will be allowed the next six year MYT commencing from the date of privatization if the transaction is finalized prior to the expiry of the first / current Multi-year tariff.