



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No. NEPRA/TRF-173/WAPDA(Hydro)-2011/10525-10527

November 10, 2011

Subject: **Determination of the Authority in the Matter of Tariff Petition filed by WAPDA Hydroelectric for approval of Bulk Supply Tariff for the FY 2011-12 [Case # NEPRA/TRF-173/WAPDA(Hydro)-2011]**
Intimation of Determination of Tariff pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)

Dear Sir,

Please find enclosed the subject Determination of the Authority (24 pages) in Case No. NEPRA/TRF-173/WAPDA(Hydro)-2011.

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

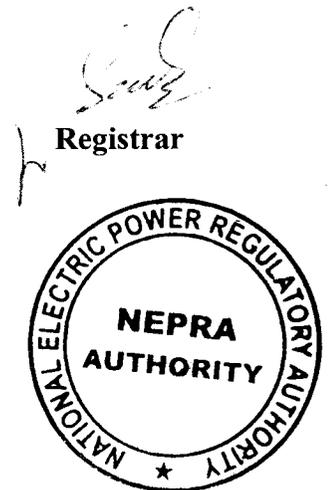
3. Please note that only Order of the Authority at para 18 of the Determination relating to the fixed charge and variable charge needs to be notified in the official gazette.

Enclosure: As above

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

CC:

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



**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)**

No. NEPRA/TRF-173/WAPDA (Hydro) – 2011

DETERMINATION

OF

TARIFF PETITION

Filed by

WAPDA HYDROELECTRIC



**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)**

Case No. NEPRA/TRF-173/WAPDA (Hydro) – 2011
November _____, 2011

Petitioner

WAPDA Hydroelectric, Water and Power Development Authority (WAPDA),
713-WAPDA House, Lahore

Authority

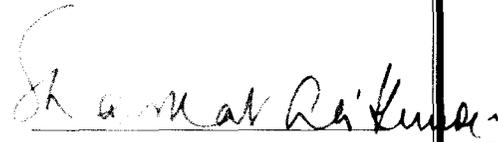
Ghiasuddin Ahmed
Member


2/11/2011

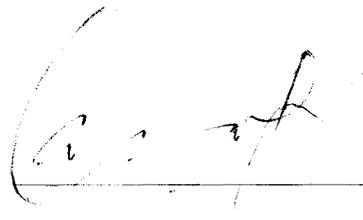
Maqbool Ahmad Khawaja
Member

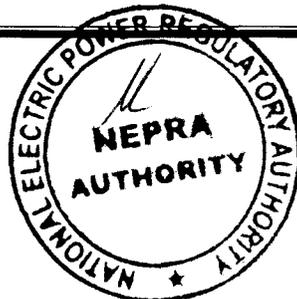


Shaukat Ali Kundi
Vice-Chairman/Member


04.11.2011

Khalid Saeed
Chairman





DETERMINATION OF THE AUTHORITY
IN THE MATTER OF TARIFF PETITION FILED BY WAPDA HYDROELECTRIC FOR
APPROVAL OF BULK SUPPLY TARIFF FOR THE YEAR 2011-2012

BACKGROUND

WAPDA Hydroelectric (hereunder referred to as "The Petitioner") filed a Tariff Petition before the Authority on May 20, 2011, under Rule 3 of the NEPRA Tariff Standards & Procedure Rules, 1998 ("The Tariff Rules") for determination of Bulk Supply Tariff for the financial year 2011-12 in respect of its hydropower plants with an aggregated capacity of 6,750 MW.

2. The Authority admitted the Petition on June 02, 2011. In accordance with sub-rule (5) of Rule 4 of the Tariff Rules, the Authority directed to publish an advertisement in the daily newspapers containing title and brief description of the Petition for information & invitation to all the stakeholders for their participation in the tariff setting process, either through their comments or becoming a party to the case as Interveners. Accordingly Notice of Admission was published in the daily newspapers on June 10, 2011. Separate notices were sent to the person/parties who in the opinion of the Authority were likely to be affected or interested in the Petition. In response thereof, the Authority received intervention requests and comments from various parties as mentioned in the ensuing paragraphs. The Public Hearing of the Petition was held on 4th July 2011 and was accordingly attended by the interveners, the Petitioner, commentators, and other stakeholders.

3. WAPDA Hydroelectric through its instant Petition has sought approval of its tariff for the financial year of 2011-12. Previously the Authority had approved its tariff for FY 2009-10 vide its determination dated September 17, 2010. The Petitioner has provided its audited accounts for FY 2009-10 and provisional/actual accounts for FY 2010-11 in support of its claim of revenue requirement for FY 2011-12.

4. **SUMMARY OF THE PETITION**

4.1 The Petitioner submitted that due to various factors its current revenue requirement has increased substantially necessitating upward revision in its bulk supply tariff. The petitioner claimed that based on budget estimates its revenue requirement for FY 2011-12 has increased to Rs. 80,065 million. This requires an increase in tariff from the presently determined average sale rate of Rs. 1.18 per kWh to an average sale rate of Rs. 2.601 per kWh. The following table shows a breakup of previously approved and presently claimed tariff and its components:

Tariff	APPROVED FOR FY 2009-10	CLAIMED FOR FY 2011-12	DIFFERENTIAL
Variable Charge	0.059 Rs./kWh	0.130 Rs./kWh	+ 0.071 Rs./kWh
Fixed Charge	414.020 Rs./kW/Month	939.030 Rs./kW/Month	+ 525.010 Rs./kW/Month
Average Sale Rate	1.180 Rs./kWh	2.601 Rs./kWh	+ 1.421 Rs./kWh

4.2 The Petitioner in its submission has sought relief in respect of the following components of tariff.

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4.2.1 Increase in Regulatory Asset Base

The Authority in its previous determination for FY 2009-10, dated September 17, 2010, had determined WAPDA's Regulatory Asset Base at Rs. 143,054 million. The Petitioner submitted that due to more capital investment in the ongoing projects its Regulatory Asset Base (RAB) , as per its audited accounts of FY 2009-10, has increased to Rs. 160,508 million from the Authority's approved RAB of 143054 million. In view of additional capital investment planned for the future through Public Sector Development Program "PSDP", its Regulatory Asset Base is expected to further expand to Rs. 182,396 million and Rs. 213,593 million in FY 2010-11 and FY 2011-12 respectively. The Petitioner submitted that Khan Khwar Hydel Power Station (72 MW) and Mangla Dam Raising Project have been completed and transferred to Fixed Assets in Operation during FY 2010-11, whereas Allai Khwar Hydropower Plant (121 MW), Jinnah Hydropower Plant (96 MW) and Gomal Zam Dam Project (17.4 MW) will be completed during FY 2011-12. The petitioner also mentioned that three other power projects namely, Duber Khwar HPP (130 MW), Rehabilitation of Jabban HPS (22 MW), and Golen Gol HPP (106 MW) will be completed within the next three years and because of this the Capital work in progress is also expected to increase substantially as compared to figures of FY 2009-10.

4.2.2 Increase in O&M cost of the Organization

The petitioner has requested that various components of its O&M cost are expected to increase significantly in FY 2011-12. The petitioner claims that its Employees Cost will increase to Rs. 7,500 million in FY 2011-12 as against Rs. 2,351 million previously allowed by the Authority. In support of its claim for increase in Employees Cost, the Petitioner submitted that in addition to a 10% increase in employee pay, allowances and benefits projected for FY 2011-12, an average of 1,250 posts of various capacities remained vacant during the past two years which it has planned to fill up during FY 2011-12. Moreover, the inclusion of new hydro power stations in the system requires it to increase the sanctioned manpower strength.

Furthermore, the petitioner has requested the Authority to allow an increase in "Repair & Maintenance" component of O&M cost, from Rs. 1,111 million allowed in the previous determination to Rs. 2,261 million for FY 2011-12. In this regard, the petitioner has submitted that replacement and refurbishment activities at Tarbela power station, currently underway, are likely to continue during FY 2011-12, and similar activities are planned for Mangla and Warsak for the same time period.

The petitioner has also requested the Authority to allow an increase in "Establishment & Administration cost" component of O&M , from Rs. 652 million previously allowed by the Authority to Rs. 868 million for FY 2011-12, citing inflation as the main reason for this increase. The Petitioner has consequently requested the Authority to allow an increase in its O&M cost from Rs. 4,114 million allowed for FY 2009-10 to Rs. 10,629 million for FY 2011-12. Following is a breakup of O&M costs of WAPDA Hydroelectric:

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O & M Cost	<u>Determined</u> <u>FY 2009-10</u> (Mln Rs.)	<u>Audited</u> <u>FY 2009-10</u> (Mln Rs.)	<u>Estimated</u> <u>FY 2010-11</u> (Mln Rs.)	<u>Budgeted</u> <u>FY 2011-12</u> (Mln Rs.)
Employee Cost	2,351	5,921	6,667	7,500
Repair & Maintenance Costs	1,111	512	1,231	2,261
Admin Expenses	652	1,328	772	868
Total O&M Expenses	4,114	7,761	8,670	10,629

4.2.3 Increase in Rate of Return

The Petitioner stated that the Authority, in its previous determination, has provided Return on Assets (ROA) at the rate of 13.715 % which was calculated on the basis of Weighted Average Cost of Capital (WACC) by assuming 45:55 debt equity ratio. The Authority had determined this WACC by keeping in view the petitioner's cost of debt of 9.70% and 17% as cost of equity. However, the petitioner in its fresh petition now claims that its cost of debt has risen due to the fact that it has taken new loans for the upcoming projects which have a higher debt servicing cost (in the range of 14% - 17%). As a result the petitioner claims that its cost of debt has inflated to 12.70%. The Petitioner has requested that keeping in view its increased cost of debt, and the resultant increase in revenue requirement for the next two years, its WACC should be increased to 15.076%.

4.2.4 Regulatory Revenue Gap

The Petitioner has sought a Regulatory Revenue Gap adjustment due to mismatch of revenue sources during FY 2009-10 and FY 2010-11 with the actual Revenue Requirement determined by NEPRA in its previous determination, which was based on estimates for FY 2009-10. The Authority vide Para 46 (ii) of its last determination dated September 17, 2010 for WAPDA Hydroelectric had allowed that any over/under recovery of revenue requirement due to the variation in actual Net Energy Production (NEP) from the estimated amount of 28,550 GWh will be adjusted at the time of next tariff determination. The Petitioner has therefore requested for an adjustment of accumulated amount of Rs. 24,324 million on account of revenue shortfall of Rs. 11974 million for FY 2009-10 and Rs. 12350 million for FY 2010-11

4.2.5 Increase in Depreciation Charge and Ijara Rentals

The Petitioner has stated that an increase in depreciation charge and Ijara rental is expected due to the addition of assets of Khan Khwar Hydel power station and Mangla Dam Raising project. The petitioner has further assumed the completion of three hydel projects, namely, Allai Khwar, Jinnah and Gomal Zam Dam, during FY 2011-12 to arrive at an estimate of Rs. 6900 million for depreciation charge and Ijara rental for FY 2011-12.

4.2.6 Net Hydel Profits (NHP)

The Authority, in its previous determination, had allowed the Petitioner Rs. 6,000 million in its revenue requirement for payment of Net Hydel Profit (NHP) to the Government of Khyber Pakhtunkhwa (KPK) province till such time the same is decided

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by the CCI. The petitioner, in the instant petition, has requested an allowance of the same amount for FY 2011-12.

4.2.7 Increase in Water Use Charges (WUC)

The Authority, in its previous determination, had allowed the petitioner Rs. 720 million in respect of Water Use Charges (WUC) to be paid to the Government of Azad Jammu & Kashmir (AJ&K) at a rate of Rs. 0.15/kWh on the basis of 4800 GWh estimated net energy production (NEP) of Mangla. The Petitioner in its fresh petition has claimed Water Use Charges of Rs. 836 million on the basis of NEP of Mangla at 5573 GWh.

4.2.8 Reduction in Other Income

The Authority in its previous determination has considered dividend received by WAPDA as part of "Other income" source for inclusion in its revenue assessment. The Petitioner has stated that since the dividend income of WAPDA is earned from assets that are not part of the regulatory asset base and, therefore, should not be deducted from the revenue requirements of WAPDA hydroelectric.

4.2.9 On the basis of above, the Petitioner submitted the following breakup of costs for its total revenue requirement of Rs. 80,065 million and proposed tariff for the FY 2011-12.

COST/REVENUE REQUIREMENT	EXISTING (Rs. Mln)	PROPOSED (Rs. Mln)
O&M Costs	4,114	10,629
Depreciation & Ijara rental	5,398	6,900
Water Use Charge (WUC)	720	836
Net Hydel Profit (NHP)	6,000	6,000
Other Income	(2078)	(825)
Return on Investment	19,620	32,201
Net revenue gap/(surplus) FY 2008-09	(74)	
Net revenue gap FY-2010		11,974
Net revenue gap FY-2011		12,350
Total	33,700	80,065
TARIFF:		
Fixed Charge - Rs./kW/Month	414.02	939.030
Variable Charge - Ps/kWh	5.90	13.00
Average sale rate – Rs./kWh	1.18	2.601

5. INTERVENTION REQUESTS & COMMENTS

5.1 The Authority received and approved two intervention requests in response to the notice of admission and public hearing as mentioned hereunder.

- i. Intervener No. 1:
Dr. Qazi Ahmed Kamal
Karachi Chamber of Commerce and Industry (KCCI)



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- ii. Intervener No. 2:
Mr. Zia-ur-Rehman

5.2 In addition, written comments were received from the Government of Khyber Pakhtunkhwa (Finance Department), Lahore Electric Supply Company (LESCO), Quetta Chamber of Commerce & Industry and NTDC/CPPA. The summary of comments offered by the Interveners as well as other commentators is given hereunder.

Intervener No. 1:

5.2.1 The Intervention Request of KCCI (represented by Mr. Qazi Ahmed Kamal) was based on the following points:

- i. WAPDA's Non-Operational assets do not qualify for a Return on Assets.
- ii. NEPRA should continue to deduct Dividend Income received by WAPDA Hydroelectric from its annual revenue requirement.
- iii. Delays in projects impose a serious burden on the end consumers.

5.2.2 In summary, the intervener argued that the Petitioner should not be allowed a return on its Work-In-Progress (WIP) for projects which are still under construction because these projects do not produce any output that can be sold. The Intervener also pleaded that the dividend income of WAPDA Hydroelectric from investment in Kapco should be deducted from its overall revenue requirement by classifying it as "other income" because this income is being generated from Hydel income that has been invested somewhere else. The intervener suggested that the exclusion of WIP from calculation of return on assets, coupled with the deduction of dividend income from the Petitioner's total revenue requirement will result in a much lesser tariff hike than what has been claimed by the Petitioner in the instant Petition. The Intervener also raised concerns about the delay of numerous WAPDA Hydroelectric projects, stating that most of the Petitioner's ongoing projects are behind schedule by three to four years and as a result the Petitioner has incurred 20% to 30% in cost escalation which will ultimately be passed on to the end consumer.

Intervener No. 2:

5.2.3 Mr. Zia-ur-Rehman, the second Intervener, based his pleadings, inter alia, on the following points:

- i. The Petitioner's Balance Sheet shows large, unutilized reserves which should have been utilized in the construction of new projects instead of availing more loans.
- ii. Projection of Net Hydel Profits is unrealistic and without legal grounds.
- iii. The proposed tariff is too high and will diminish the benefits of Hydel Generation.
- iv. Various O&M costs are absolutely without basis.

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5.2.4 Almost the same issues were also raised by other commentators in their written comments to the Authority. LESCO in its comments, however, sought settlement of the issue of pensioner's pertaining to the period prior to WAPDA disintegration in 1998.

5.3 The petitioner submitted its response to the objections raised by the Interveners as well as other commentators vide its letters GMF(P)/CPCC/4525/11-13 dated July 2, 2011 and GMF(P)/CPCC/4525/62-64 dated July 9, 2011. A copy of WAPDA Hydroelectric's response on the specific issues was also provided to the respective interveners and commentators. However, a summary of WAPDA Hydroelectric's reply to the queries of interveners and commentators is given hereunder.

- i. The proposed Tariff of Rs.2.601 per kWh is well below the average tariff determined by NEPRA for Hydel IPPs.
- ii. The pace of work on Khan Khwar, Allai Khwar and Duber Khwar, located in the Northern areas, remained slow because of reasons that are beyond the control of the Petitioner. These include financing setbacks; weak law and order situation in Northern areas; Earthquake of 2005; and recent floods.
- iii. Increase in O&M cost is required firstly because of a change in accounting policy (adoption of IAS-19 upon the recommendation of the Auditors) wherein retirement benefits for active/serving employees have been proposed on projected unit credit method; and secondly for additional rehabilitation activities of the outlived hydel power stations that are being carried out to secure their dependable capacity.
- iv. The dividend income from equity investments in other entities should not be deducted from WAPDA's revenue requirement, because it is separate from the hydroelectric business.
- v. The realized portion of WAPDA hydroelectric's capital reserves have already been applied to hydel power development projects. Furthermore, utilization of Capital reserves in place of Debt in order to reduce generation cost is wrong perception, as the cost of debt is currently lower than the 17% return on equity that is allowed to hydro power plants.
- vi. An ad-hoc amount of Rs. 6,000 million per annum is being paid as Net Hydel Profits by WAPDA to Government of KPK as an interim arrangement till such time the CCI determines the rate of bulk supply of each hydel power station.
- vii. The proposed tariff is below the international standards and also much lower than the average tariff allowed to hydel IPPs by NEPRA.
- viii. In response to the issue of pensioner's raised by LESCO, WAPDA Hydroelectric submitted that on unbundling of WAPDA Power Wing, the business of the Schemes/ Accounting Units was transferred to the respective Discos at the net worth (Total Assets minus Liabilities) as Consideration price. WAPDA and PEPCO entered in to Memorandum of Agreement "MoA" on 14-04-1999. The "Service" Schedule at para 1 (e) & (f) provides for actual transfer of the Asset Blocks to the Companies and allocation of liabilities of WAPDA between the Companies on transfer of the relevant Asset Block respectively. Addressing the cash flow issues of Ex-WAPDA entities including LESCO, PEPCO changed the mechanism of settlement of Consideration Price from time to time.

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However, present scheme of pensioners is being dealt under the Mechanism set by WAPDA on 27.5.2010 with due consultation of PEPCO.

6. **ISSUES:**

6.1 In light of the objections/comments of the interveners, commentators, and proceedings of the case, the following issues have been framed for discussion and decision of the Authority.

- Whether the estimated net energy production (NEP) for FY 2011-12 of 30783 GWh and total installed capacity of 6750 GWh based on existing as well as incoming hydropower stations is justified?
- Whether the increase in O&M cost from Rs. 4,114 million previously allowed by the Authority to Rs. 10,629 million requested by the petitioner for FY 2011-12 is justified?
- Whether the petitioner's claim of total Regulatory Revenue Gap of Rs. 24,324 million comprising Rs. 11974 million for FY 2009-10 and Rs. 12350 million for FY 2010-11, is justified?
- Whether the proposed decrease in Other Income from previously determined amount of Rs. 2078 million to Rs. 825 million for FY 2010-11 and FY 2011-12, is justified?
- Whether the proposed increase in the depreciation charge and Ijara rental from audited figure of Rs. 5,398 million for FY 2009-10 to an estimated amount of Rs. 5,840 million and Rs. 6,900 million for FY 2010-11 and FY 2011-12 respectively, is justified?
- Whether the Petitioner's claim for increase in the value of Regulatory Asset Base from Rs. 143,054 previously determined for FY 2009-10 to Rs. 213,593 million budgeted for FY 2011-12 is justified?
- Whether the proposed WACC of 15.076% as against approved WACC of 13.715% is justified?
- Whether the proposed amount of Rs. 6000 million for payment of Net Hydel Profit to government of Khyber Pakhtunkhwa for FY 2011-12 is justified?

6.2 Each of the above issues is discussed in the following paragraphs.

7. **Whether the estimated Net Energy Production (NEP) for FY 2011-12 of 30783 GWh and total installed capacity of 6750 GWh based on existing as well as incoming hydropower stations is justified?**

7.1 The Petitioner has estimated Net Energy Production (NEP) of 30783 GWh for FY 2011-12 on the basis of average for the last four years actual net energy production while taking into account additional capacity of 306 MW from its newly commissioned/incoming hydropower stations. The Authority in its previous determination had approved NEP of 28850 GWh based on total installed capacity of 6444 MW. As per the information provided by the Petitioner, it has assumed that 306 MW of additional capacity will be available from its new hydropower stations which include Khan Khwar (72 MW), Allai Khwar (121 MW), Jinnah (96 MW) and Gomal Zan Dam (17 MW). Accordingly the Petitioner has included 1531 GWh net energy production from these hydropower stations in the estimated NEP for FY 2011-12.

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7.2 In the hearing held on July 04, 2011, the Authority observed that the estimated NEP from its new hydropower stations for FY 2011-12 was on the higher side. The Petitioner therefore, was directed to resubmit its estimated NEP for FY 2011-12 based on the latest schedule of commissioning of its new incoming hydropower stations.

7.3 As per directions of the Authority, the Petitioner has submitted revised estimates of NEP of its all power plants for FY 2011-12 on the basis of average for the last four years actual NEP in respect of existing power plants as well as incoming plants on the basis of the latest commissioning schedule of new power stations whereby it has been transpired that only two new power plants i.e. Khan Khwar (72 MW) which has already been partially commissioned in FY 2010-11 and Jinnah Hydropower plant (96 MW) will be operational during FY 2011-12, while Allai Khwar (121 MW) and Gomal Zam Dam (17 MW) will be operational in November 2012 and February 2013 respectively. Accordingly WAPDA Hydroelectric has revised its NEP from 30783 GWh to 29749 GWh for FY 2011-12 as per table given hereunder.

Generation Plan for FY 2011-12							
Sr. No	Hydel Power Station	Installed Capacity MW	Net Electrical Output (GWh)				
			2007-08 (Actual)	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proj)
1	Tarbela	3,478	14,867	13,946	13,833	15,909	14,639
2	Ghazi Brotha	1,450	6,490	6,410	6,716	7,354	6,743
3	Mangla	1,000	4,568	4,636	4,639	5,969	5,597
4	Warsak	243	1,026	986	1,054	1,036	1,026
5	Chashma	184	980	1,088	1,050	1,001	1,030
6	Rasul	22	33	71	86	96	72
7	Dargai	20	145	107	110	83	111
8	Nandipur	14	28	35	38	43	36
9	Shadiwal	14	43	36	38	32	37
10	Chichoki	13	17	25	28	32	26
11	Kuram Garhi	4	17	13	14	10	14
12	Renala Khurd	1	3	3	3	3	3
13	Chitral	1	5	5	5	3	5
14	Khan Khawar	72	-	-	-	116	298
15	Allai Khawar	-	-	-	-	-	0
16	Jinnah HPP	96	-	-	-	-	115
17	Gomal Zam Dam	-	-	-	-	-	0
	Total	6,612	28,222	27,361	27,614	31,687	29,749

7.4 The Authority considers that the revised estimated NEP submitted by the Petitioner for FY 2011-12 as per above table is quite realistic and therefore approved.

7.5 The Authority in its last determination dated September 17, 2010 had allowed Rs. 720 million on account of Water Use Charge (WUC) for FY 2009-10 to be paid to the Government of



AJ&K on energy produced from Mangla Hydropower station. The actual amount of WUC paid to the Government of AJ&K for FY 2009-10 and FY 2010-11 on the basis of actual NEP of Mangla was Rs. 696 million and Rs.895 million respectively. The Petitioner through its initial submissions had requested for approval of Rs. 836 million for WUC based on NEP of 5573 GWh from Mangla for FY 2011-12. According to the revised NEP for FY 2011-12, the amount of WUC based on NEP of 5597 GWh at Mangla power station works to be Rs. 840 million and, therefore, approved.

8. **Whether the increase in O&M cost from Rs. 4,114 million previously allowed by the Authority to Rs. 10,629 million requested by the petitioner for FY 2011-12 is justified?**

8.1 The O&M cost of WAPDA Hydroelectric comprises of three basic components i.e. Employee costs, repair and maintenance cost of its hydel power stations and the general establishment, administration and office expenses. The Petitioner has submitted that its actual O&M cost based on its audited accounts for FY 2009-10 was Rs. 7,760 million, as against Rs. 4,114 million determined by the Authority in its previous determination. Based on actual figures for FY 2009-10, the Petitioner has estimated Rs. 8,670 million and Rs. 10,629 million as its O&M expense for FY 2010-11 and FY 2011-12 respectively with the following head-wise breakup of O&M cost.

O&M EXPENSES	Determined 2009-10 (Mln Rs.)	Actual 2009-10 (Mln Rs.)	Estimated 2010-11 (Mln Rs.)	Projected 2011-12 (Mln Rs.)
Employee Pay & Allowances		1,751	2,215	2,823
Employee Benefits		139	275	350
Retired Employee Benefits		4,031	4,177	4,327
Total Employee Cost	2,351	5,921	6,667	7,500
Repair & Maintenance Costs	1,111	512	1,231	2,261
General Establishment & Admin Expenses	652	1,327	772	868
TOTAL O&M EXPENSES	4,114	7,760	8,670	10,629

8.2 The Authority observed that the Petitioner has proposed its revenue requirement for FY 2010-11 and FY 2011-12 on the estimation basis while relying on its actual audited accounts for FY 2009-10 and nine months provisional accounts for FY 2010-11. The Authority considered it more appropriate to project revenue requirement of WAPDA Hydroelectric for FY 2011-12 on the basis of its actual audited accounts for FY 2010-11 rather than purely on estimation basis. For this purpose, the Petitioner was asked to provide its actual audited accounts for FY 2011-12. The Petitioner, however, has submitted its actual unaudited accounts for FY 2010-11. According to the Petitioner the audit of its accounts for FY 2010-11 is under process and would take another month or so to complete. The Authority considers that further delay in its determination for want of audited accounts for FY 2010-11 would not be in favor of the Petitioner as well as the consumers as it would entail accumulation of further arrears and its subsequent adjustment in tariff due to non recovery of revenue/cost for the period already passed for the current financial year. The Authority, therefore, has decided to accept actual



unaudited accounts of WAPDA Hydroelectric for FY 2010-11 as the basis for projecting its revenue requirement for FY 2011-12.

Employees cost

8.3 The Petitioner was allowed Rs. 2351 million lumpsum on account of its employees cost comprising pay & allowances, employees benefits and post retirement cost as per last determination of the Authority issued on September 17, 2010. The Petitioner has now claimed Rs. 5921 million for FY 2009-10 on actual basis while it has requested for Rs. 6667 million and Rs. 7500 million for FY 2010-11 and FY 2011-12 respectively on estimated basis on account of employees cost.

8.4 The Petitioner has further submitted that it has estimated its employees cost for FY 2010-11 on the basis of its actual working strength of 7862 employees against its sanctioned strength of 9108 employees. The Petitioner has claimed that it intends to fill up 1250 vacant positions of various categories for smooth functioning of its hydropower operations during FY 2011-12 and therefore, it has included the cost of additional employees in its estimates for FY 2011-12.

8.5 The examination of the actual restated accounts for FY 2009-10 and FY 2010-11 revealed that WAPDA Hydroelectric has reclassified total operating expenses into core and non-core hydel business activities, which is in line with the International Accounting Standards and Authority's instructions issued to the Petitioner in previous determination of the Authority. It has further been observed that the Petitioner has changed its accounting policy for booking retired employees benefits/cost from actual disbursement basis to Unit Credit method in FY 2009-10 and has thus claimed Rs. 4031, Rs 4177 and Rs. 4327 million on account of employees post retirement benefits for FY 2009-10, FY 2010-11 and FY 2011-12. The Petitioner submitted that it has adopted IAS-19 and recorded expenses on the basis of actuarial valuation (Unit credit method) for its 6270 serving regular employees and 7209 pensioners as per IAS-19. Accordingly WAPDA Hydroelectric has requested for approval of Rs. 7500 million on account of its total employees cost for FY 2011-12.

8.6 WAPDA Hydroelectric's claim of Rs. 7500 million on account of its O&M cost for FY 2011-12 is ~~quite~~ on the higher side as also objected by the commentators. Besides, increase in pay and allowances as announced by GoP in the budgets for FY 2010-11 and FY 2011-12, it has made provision of Rs. 4177 million and Rs 4327 million for post retirement cost/expenses of employees. The audited annual accounts for FY 2009-10 and FY 2010-11, revealed that the petitioner has not paid the equivalent cash/fund for the provision of post retirement benefits, rather it has charged the proposed amount for the respective years to its P&L account on accrual basis.

8.7 The actual payment made by the Petitioner in FY 2009-10 and FY 2010-11 on account of post retirement benefits was Rs. 750 million and Rs. 1121 million respectively.

8.8 It is worth mentioning here that the Petitioner in its last tariff petition had not indicated its intentions of changing its policy from actual disbursement basis to actuarial valuation by



adopting IAS-19. The retirement cost to WAPDA Hydroelectric for FY 2009-10 was allowed on actual disbursement basis. LESCO in its comments has raised objections over the issue of payment of post retirement benefits since unbundling of WAPDA Power Wing in 1998 and in pursuance of Business Transfer Agreement (BTA) approved by the then WAPDA authority which has not been completely implemented as yet. This shows that the issue of payment to the EX-WAPDA Pensioner's is not yet settled and therefore exact liability of each formation of Ex-WAPDA distribution companies including WAPDA Hydroelectric is not known with certainty at this stage.

8.9 The Authority has, therefore, decided that till such time the issue of pensioners and its payment obligations of each Ex-WAPDA companies is resolved and full justification along with basis of actuarial valuation study is submitted to the Authority for approval, the Petitioner will be allowed the cost of post retirement to its pensioners on actual payment basis.

8.10 The Authority also took notice of the Petitioner's request for filling up the vacant positions and directed the Petitioner to submit detailed position of its total working strength for the last two financial years. The Petitioner has provided the relevant details whereby it has been revealed that 744 additional recruitments were made in various categories during the last two years. The Authority considers that further recruitment in WAPDA Hydroelectric without full justification is unwarranted. The Authority further considers that WAPDA Hydroelectric as far as possible should utilize its existing surplus/over staffed manpower in the new incoming hydropower plants. The Authority has, therefore, decided that no future adjustment in tariff on account of cost of additional manpower will be allowed unless fully justified by the Petitioner.

8.11 The actual expense on account of Employees cost including payment of retirement cost for FY 2009-10 and FY 2010-11 was Rs. 2260 million and Rs. 3001 million respectively. Accordingly the Employees cost to be allowed to the Petitioner for FY 2011-12, while taking in to account the budgetary increase in pay announced by the Government has been assessed Rs. 3260 million and, therefore, approved for WAPDA Hydroelectric.

Repair & Maintenance Cost

8.12 WAPDA Hydroelectric was allowed Rs. 1111 million on account of repair and maintenance expenses for FY 2009-10 comprising Rs. 611 million for the routine maintenance of its power plants and Rs. 500 million on account of Balancing, Modernization and Replacement (BMR) Program, for carrying out major repair and rehabilitation of its already de-rated hydro power plants. The actual Repair and maintenance expenses for FY 2009-10 and FY 2010-11 as per its accounts amounted to Rs. 720 million and Rs. 1192 million respectively. WAPDA Hydroelectric has claimed Rs. 2261 million for repair and maintenance expenses for FY 2011-12. The Petitioner has submitted that it has already undertaken major replacement and refurbishment activities at Tarbela power station which is likely to continue along with other hydel power plants during FY 2011-12.

8.13 The Authority considers that WAPDA Hydroelectric should be allowed adequate funds for maintenance and rehabilitation of its outlived hydropower plants, so that maximum hydropower can be generated from the available water resources, which being the cheapest



contributes favorably in the generation mix of CPPA for onward supply of power to the distribution companies and end consumers. As per information provided by the Petitioner, foreign material and parts worth Rs. 1296 million against purchase orders issued by it have already arrived at Karachi, out of which materials worth Rs. 1108 million have been cleared by the Customs Department while remaining is likely to be cleared shortly. It has been further submitted that Purchase orders worth Rs. 166 million have been placed against which materials will arrive during FY 2011-12. According to the Petitioner aforementioned foreign materials/parts will be consumed at the hydel power stations during FY 2010-11 and FY 2011-12.

8.14 The accounts of WAPDA Hydroelectric for FY 2010-11 show an increase of Rs. 472 million in its repair & maintenance expense over FY 2009-10 which means that it has already consumed a portion of foreign material/parts purchased by it for rehabilitation of hydel power stations. In view of the aforementioned, the Authority has decided to approve Rs. 1200 million on account of repair and maintenance cost of the Petitioner for FY 2011-12.

Establishment and Admin Expenses

8.15 WAPDA Hydroelectric through its initial submissions claimed Rs.1327 million, Rs. 772 million and Rs. 868 million for FY 2009-10, FY 2010-11 and FY 2011-12 respectively on account of its General Establishment and Admin expenses. The actual expenses on this account based on its audited accounts for FY 2009-10, revealed that it has included Rs. 684 million as bad debts expense on account of advances to suppliers, contractors, consultants and Octori charges amounting to Rs. 457.761 million and Rs. 226.701 million for the expenditure incurred on feasibility studies of defunct projects. The Petitioner has not claimed any amount on account of bad debt expense for FY 2010-11 & FY 2011-12. The Authority has not allowed any provision for bad debt expense in its previous determination. The Authority considers that the aforementioned cost of Rs. 684 million as claimed by the Petitioner on account of bad debt expense for FY 2009-10, is not prudently incurred cost and, therefore, can not be allowed without proper justification and rationale by the Petitioner.

8.16 In view of the above the General Establishment and Admin expenses based on its accounts for FY 2009-10 and FY 2010-11 works out Rs. 821 million and Rs. 1157 million respectively. The Authority has noted that annual expenses on account of Management services/Authority overheads of WAPDA Hydroelectric have increased substantially from Rs. 61 million in FY 2009-10 to Rs. 138 million in FY 2010-11. The Petitioner was asked to provide justification for such huge increase in the management expenses. The Petitioner, vide its letter No. GMFP/CPCC/4525/428-30 dated September 28, 2011 has submitted that it has incurred additional amount of Rs. 55 million for the security arrangement of foreign delegations and consultants in view of prevailing security situation of the country, while other additional amount of Rs. 22 million has been paid on account of increase in salary and benefits of employees and establishment expenses. In view of the explanation provided by the Petitioner the Authority has accepted the Petitioner's claim of Rs. 138 million for FY 2010-11. The Petitioner is, however, directed that no further increase in the management expenses will be allowed unless fully justified based on merits.





8.17 In view of the aforementioned, the Authority has assessed Rs. 1217 million on account of total establishment and admin expenses for FY 2011-12 and therefore allowed to WAPDA Hydroelectric.

9. **Whether the petitioner's claim of total Regulatory Revenue Gap of Rs. 24,324 million comprising Rs. 11974 million for FY 2009-10 and Rs. 12350 million for FY 2010-11, is justified?**

9.1 The Petitioner has claimed Regulatory Revenue Gap of Rs. 11974 million and Rs. 12,350 million for FY 2010 and 2011 respectively (Total Rs. 24,324 million). The Petitioner has submitted that its power sales revenue fell below the Authority's determined figure of Rs. 33,700 million to Rs. 29,092 million in FY 2009-10 and Rs.33232 million in FY 2010-11 , due to variation in actual Net Energy Production (NEP) as well as other factors. The Petitioner has, therefore, requested that its total revenue shortfall of Rs. 24324 million may be adjusted in its revenue requirement for FY 2011-12 as per the previous practice.

9.2 The examination of actual accounts for FY 2009-10 and FY 2010-11 revealed that shortfall in revenue requirement of WAPDA Hydroelectric has resulted due to the two main factors i.e. variation in the actual NEP and also due to non application of tariff determined by the Authority in its last determination dated September 17, 2010. The Authority in its last determination had approved WAPDA Hydroelectric' revenue requirement of Rs. 33700 million for FY 2009-10 with an overall tariff/sale rate of Rs. 1.18/kWh. The determination of the Authority became effective subsequent to its notification by GoP on December 10, 2010. Therefore, WAPDA Hydroelectric could not apply its determined tariff for the period July 2009 to November 2010 , resulting in revenue shortfall in FY 2009-10 and FY 2010-11.

9.3 The Authority in its last determination had determined revenue gap of WAPDA Hydroelectric for adjustment in tariff by comparing the actual sales revenue with the actual costs based on audited accounts for 2008-09. On similar the basis the revenue shortfall of WAPDA Hydroelectric for FY 2009-10 and FY 2010-11 has been worked out as given hereunder.



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REGULATORY REVENUE GAP CALCULATION	Determined FY 2009-10 (Mln Rs.)	Shortfall FY 2009-10 (Mln Rs.)	Shortfall FY 2010-11 (Mln Rs)
Revenue from sale of power as per audited accounts (Mln. Rs)	33700	29092	33470
Shortfall in revenue		(4608)	(230)
Annual Revenue Requirement (costs)			
O&M cost	4114	3800	5351
Net Hydel Profit	6,000	6,000	6000
Water Usage Charges	720	696	895
Depreciation & Ijara Rental	5398	5415	5419
Other income	(2078)	(4239)	(4195)
Return on Regulatory Assets (RAB)	19620	20860	22131
Regulatory Gap	(74)		
Total	33700	32532	35601
Over/under recovery of costs		1168	(1901)
Total Regulatory Gap to be adjusted		(3440)	(2131)

9.4 According to the above table the actual shortfall of revenue requirement of WAPDA Hydroelectric for FY 2009-10 and FY 2010-11 works to be Rs. 3340 million and Rs. 2131 million respectively and is allowed for adjustment in its total revenue requirement for FY 2011-12.

10. **Whether the proposed decrease in Other Income from previously determined amount of Rs. 2078 million to Rs. 825 million for FY 2010-11 and FY 2011-12, is justified?**

10.1 WAPDA through its instant petition has proposed Rs. 825 million as other income for inclusion in its revenue requirement for FY 2009-10, FY 2010-11 and FY 2011-12. It has been submitted by the Petitioner that income generated from hydel activities should only be included in its revenue requirement while income generated from its investing activities such as dividend income from investment in Kapco and other entities should not be deducted from its revenue requirement. The Petitioner has further argued that the long term investments component is neither included in the Regulatory Asset Base (RAB) nor it has any relation to the its O&M cost allowed by the Authority for its operation and development activities and therefore any income generated from its investments outside hydel development activities should not be deducted from its total revenue requirement. The Petitioner has, therefore, requested that its other income should only include items such as, Income from Lease of Misc. Physical Properties, Bank Balance Profits, Non Operating Revenue - Disposal of Assets and Amortization of Grants. Accordingly it has claimed Rs. 825 million for FY 2009-10 and also proposed the same amount expected to be earned by it for FY 2010-11 and FY 2011-12.

10.2 Intervener No.1 (Qazi Ahmad Kamal representing KCCI) as well as CPPA/NTDC in their comments objected on exclusion of dividend income from revenue sources by WAPDA Hydroelectric. They argued that WAPDA Hydroelectric has made equity investments in other entities through profits earned from sale of electricity and, therefore, dividend income earned from these investments must be considered as a part of other income of the Petitioner.



10.3 The Authority in its previous determination assessed total revenue requirement of WAPDA Hydroelectric while including other income of Rs. 2078 million from all the sources and therefore, exclusion of dividend income from Kapco by WAPDA Hydroelectric from its revenue requirement for FY 2011-12 and also from its revenue requirement for its previous years i.e. FY 2009-10 and FY 2010-11 is not justified as rightly pointed out by the aforementioned intervener/commentator.

10.4 The Authority observed that the Petitioner is allowed to recover all its costs whether directly related or not to hydel operation activities along with an adequate return on RAB while approving tariff which is subsequently adjusted/trued up at the time of next tariff determination on the basis of actual costs and revenue requirements. The Authority, therefore considers that exclusion of income earned from activities not directly related to hydel operations as proposed by the Petitioner is neither justified nor in the interest of the consumers. The Authority has, therefore, decided to include other income earned from all the sources for the purpose of assessment of its annual revenue requirement as already done in the previous determination of the Authority.

10.5 Accordingly Rs. 4239 million on the basis of actual audited accounts of FY 2009-10 and Rs. 4195 million on the basis of actual accounts for FY 2010-11 has been included in revenue requirement for FY 2009-10 and FY 2010-11. Based on actual results of FY 2010-11, the Authority has assessed the same amount of other income i.e. Rs. 4195 million for FY 2011-12 which is being included in its total revenue requirement for the current year.

11. **Whether the proposed increase in the depreciation charge and Ijarah rental from audited figure of Rs. 5,398 million for FY 2009-10 to an estimated amount of Rs. 5,840 million and Rs. 6,900 million for FY 2010-11 and FY 2011-12 respectively, is justified?**

11.1 WAPDA Hydroelectric charges depreciation on its Fixed Assets (plant and equipment, property) on straight-line method so as to write off the cost of its assets over their economic useful life at the specified rates. Further WAPDA Hydroelectric has entered in to Ijarah agreements for SUKUK-I and SUKUK-II and charges their expenses in its income statement in accordance with the Ijarah agreements with Special Purpose Vehicle companies (SPV) over the Ijarah term.

11.2 WAPDA Hydroelectric was allowed an estimated amount of Rs. 5398 million on account of depreciation charge (Rs. 3896 million) and Ijarah rental for its SUKUK-II (Rs. 1502 million) for FY 2009-10 on the basis of its audited accounts for FY 2008-09 as per previous determination of the Authority dated September 17, 2010. The actual depreciation charge for FY 2009-10 as per its audited accounts was Rs. 3913 million and Rs. 1502 million as Ijarah rental for its SUKUK-II. The total expense on account of depreciation and Ijarah rental was Rs. 5415 million which is quite close to the assessed amount of Rs. 5398 million.

11.3 WAPDA Hydroelectric has estimated Rs. 5840 million for FY 2010-11 and Rs. 6900 for FY 2011-12 which include Rs. 1502 million and Rs 1506 million on account of Ijarah rental and Rs. 4338 million and Rs. 5394 million as depreciation charge for FY 2010-11 and FY 2011-12 respectively.



11.4 As per the information provided by the Petitioner it has estimated Ijara rental for SUKUK-II on the basis of amortization schedule of Ijara lease rental agreement whereas the depreciation charges for FY 2010-11 and FY 2011-12 have been estimated while taking in to account addition of new hydropower plants such as Khan Khwar, Jinnah, Gomal Zam Dam and Allai Khwar. The Petitioner has submitted that there is a significant increase in the estimated depreciation charge for FY 2011-12 (Rs. 5394 million) from the estimated figure of Rs. 4338 million for FY 2010-11 which is due to projected completion of Allai Khwar and Gomal Zam Dam hydropower projects in FY 2011-12.

11.5 According to the audited annual accounts of WAPDA Hydroelectric for FY 2009-10 and its actual/provisional account for FY 2010-11, the actual depreciation charges have been recorded as Rs. 3913 million and 3917 million respectively, which shows that no major hydropower plant has been commissioned during the last two years. In order to assess a reasonable amount of depreciation charge for FY 2011-12, the Petitioner was asked to supply the latest commissioning schedule of its new hydropower plants. As per the latest schedule of commissioning of its new hydropower plants, the Khan Khwar hydropower project has already been partially commissioned in FY 2010-11 but it will be completely operational in FY 2011-12. Accordingly the petitioner has not charged depreciation for its Khan Khwar hydropower project in its annual accounts for FY 2009-10 and FY 2010-11. The Jinnah hydropower project will be completed by the end of June 2012, while its first unit is expected to be commissioned in December 2011. Its two other projects i.e. Allai Khwar and Gomal Zam Dam are however, expected to be completed in FY 2012-13.

11.6 In view of the above mentioned latest commissioning schedule of its new incoming hydropower plants, the Authority has assessed Rs. 4218 million on account of depreciation charge for FY 2011-12 and therefore approved for WAPDA Hydroelectric.

11.7 The Petitioner has estimated Rs. 1506 million on account of Ijara rental for its SUKUK-II pertaining to Tarbela Hydropower station for FY 2011-12. The Petitioner has submitted that it has worked out the amount of Ijara rental for FY 2011-12 as per the amortization schedule in accordance with the agreement. The cost of Ijara rental as per its actual accounts for FY 2009-10 and FY 2010-11 was Rs. 1502 million per annum. The Authority has, therefore, decided to allow Rs. 1506 million on account of Ijara rental for FY 2011-12.

12. **Whether the Petitioner's claim for increase in the value of Regulatory Asset Base from Rs. 143,054 previously determined for FY 2009-10 to Rs. 213,593 million budgeted for FY 2011-12 is justified?**

12.1 The Petitioner has proposed a Regulatory Asset Base (RAB) of Rs. 213,593 million for FY 2011-12. The proposed RAB has been worked out on the basis of projections for the financial year 2011-12 while taking in to account the expected completion and commissioning of new hydropower projects. The Authority has allowed RAB of Rs. 143,054 million for FY 2009-10 in its last determination for WAPDA Hydroelectric which was worked out on the basis of average of the opening and closing balance of Fixed Assets in Operation including the amount of Work in Progress. The RAB now proposed by the Petitioner shows 49% increase over the previously

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approved amount of Rs. 143,054 million. On the basis of proposed RAB of Rs. 213,593 million and ROR of 15.076% it has claimed an annual return of Rs. 32,201 million and has included this amount in its total net revenue requirement of Rs. 80,065 million for FY 2011-12. The following table shows the regulatory asset base as claimed by the Petitioner:

REGULATORY ASSET BASE	Claimed 2009-10 (Mln Rs.)	Claimed 2010-11 (Mln Rs.)	Claimed 2011-12 (Mln Rs.)
Net Fixed Assets In Operation – Opening	114,546	111,395	132,824
Capital Work In Progress	42,907	52,167	68,406
Additions			
Transferred to Fixed Assets from CWIP	768	25,245	31,857
Capital Expenditures Budget	-	521	599
Capital Work In Progress - Investments	9,259	41,485	29,520
Deletions/Depreciation	(3,919)	(29,583)	(37,251)
RAB Closing	163,561	201,230	225,955
Average Regulatory Asset Base (RAB)	160,508	182,396	213,593

12.2 The higher RAB for FY 2011-12 has been objected by the interveners and other commentators of the Petition, particularly due to the large amount of Work In Progress amount that has been included in the opening and closing balances. The interveners and commentators have stated that increase in tariff sought by the Petitioner merely on account of increase in RAB without commensurate increase in its electrical output is not justified. It has been submitted that WAPDA Hydroelectric should not be allowed any return on its new under construction hydropower projects which have been delayed beyond their scheduled date of commissioning.

12.3 Responding to the aforementioned objections, the Petitioner submitted that most of its projects have been delayed due to reasons beyond its control, therefore resulting in a higher than expected Work In Progress cost. The Petitioner submitted that these projects are being constructed through heavy borrowing from PSDP funds as well as international financial institutions, and the return being allowed by NEPRA on these projects ensures the solvency of WAPDA Hydroelectric.

12.4 On the issue of delay in completion of on-going hydropower projects, the Petitioner submitted that WAPDA Hydroelectric is executing the hydel generation projects in the Public Sector which are thoroughly evaluated through tight scrutiny for any revision in PC-I cost, on account of project delays, by the Planning Division before its approval by CDWP or ECNEC as the case may be. Similarly loans for the projects are approved and provided by GoP at the approved re-lending Policy. The Petitioner further submitted that heavy floods of 2010 and the current security situation of the country are the main factors for the delay in completion of new hydropower projects within the scheduled date of commissioning, which are beyond its control.

12.5 The Regulatory Asset Base (RAB) for WAPDA Hydroelectric is approved on the basis of last year's audited accounts and careful projection of further investments to be made by WAPDA Hydroelectric in the ensuing financial year, so as to ensure a reasonable return on its

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investments. The return allowed to WAPDA Hydroelectric is primarily meant for meeting its obligation for payment of financing cost on loans borrowed from the financial institutions for the existing as well as new hydropower projects and also to allocate sufficient funds from its own sources for the development of new hydropower project, in the form of its equity. The Regulatory Assets Base (RAB) of WAPDA Hydroelectric, therefore, comprises of two basic components i.e. Net Fixed Assets in Operation and the work in progress. Both of these components are financed through debt and equity investment. The net return to be earned by WAPDA Hydroelectric is utilized for development of new hydropower projects. If WAPDA Hydroelectric is not allowed any return on its Work in Progress component as suggested by the Intervener and other commentators, then its ability to meet its obligations on the borrowed capital and also to make its own investment in the new hydropower projects will be severely affected. Further, there is a long gestation period for the development of hydropower projects and, therefore, denying return on its investments for the under construction power projects till their completion, is likely to cause further delay in their completion due to lack of adequate funds by the Petitioner.

12.6 It is also worth mentioning here that the Authority has already allowed return on equity during the project construction period in the case of all IPPs in accordance with the GOP Policy 2002. The Authority, therefore considers that disallowing return on the work in progress component to WAPDA Hydroelectric as suggested by the intervener and other commentators is neither fair nor justified.

12.7 The Authority has, however, noted with concern the delayed completion of Khan Khwar, Jinnah and under construction Allai Khwar and Gomal Zam Dam hydropower projects. The Authority considers that the delayed completion of all its ongoing hydropower projects can not be attributed to the security considerations alone. The Authority, therefore, directs the Petitioner to take all necessary steps for ensuring timely completion and commissioning of its under construction hydropower projects, which is vital in the wake of current electricity crises in the country.

12.8 Review of the actual accounts of WAPDA Hydroelectric for FY 2009-10 and FY 2010-11 reveals that its closing balances of Work in Progress included amounts of Rs. 9127 million and Rs. 17362 million respectively, pertaining to the cost of Mangla Dam raising and interest during construction (IDC), which do not qualify for return from the regulator's point of view. The Petitioner has been unable to substantiate the amount of Rs. 9127 million included in the Work in Progress. According to the information provided, the cost of Mangla Dam is already included in the Fixed Assets on which it is allowed depreciation charge and return as well, while the cost of IDC in the WIP can not be included in RAB for allowing return on this particular component and therefore, does not qualify for the purpose of RAB.

12.9 In view of the above and also the latest commissioning schedule of new hydropower projects of WAPDA Hydroelectric as already discussed in preceding paragraphs, the Authority has approved RAB of Rs.152,096 million, Rs. 161,363 million and Rs. 174,185 million for FY 2009-10, FY 2010-11 and FY 2011-12 respectively.



13. **Whether the proposed WACC of 15.076% (based on 12.70% cost of debt) as against approved WACC of 13.715% (based on 9.70% cost of debt) is justified?**

13.1 The Petitioner was allowed 13.715% rate of return on Regulatory Assets by the Authority as per its last determination issued on September 17, 2010. The rate of return was approved on the basis of weighted average cost of capital (WACC) using average cost of debt as 9.70% and 17% as cost of equity in a proportion of 45:55 for debt and equity respectively. The Petitioner has now proposed a WACC of 15.076% for FY 2011-12 based on 12.70% cost of debt and 17% cost of equity assuming debt/equity ratio of 45:55.

13.2 According to actual audited accounts for FY 2009-10, the average cost of debt works out to be 11.70% against the approved cost of debt of 9.70% as per previous determination of the Authority. The cost of debt of WAPDA Hydroelectric is expected to increase further in FY 2011-12 because of retirement of previous old loans at maturity as well as payment of interest charges at higher rate ranging from 14% to 17% in respect of loans obtained for its new hydropower projects. In view of information provided by the petitioner, the cost of debt of 12.70% for FY 2011-12 is quite reasonable and, therefore, approved as proposed by the Petitioner.

13.3 The petitioner has proposed debt to equity ratio of 45: 55 for FY 2011-12 which is the same as approved for WAPDA Hydroelectric for FY 2009-10 per previous determination of the Authority. Since, the exact proportion of debt and equity can not be ascertained at this stage due to the fact that its audited accounts for FY 2009-10 do not depict the amount of debt and equity actually attributable to operations of WAPDA Hydroelectric pending settlement of Assets and liabilities under the Business Transfer Agreement (BTA).

13.4 The Authority has, therefore, decided to allow debt to equity ratio of 45:55 for FY 2011-12 as proposed by WAPDA Hydroelectric. The Authority, however, directs the Petitioner to resolve all outstanding issues pending transfer of assets including equity to the Ex-WAPDA companies at the earliest so that its financial statements depict true and fair value of its assets, liabilities and equity attributable exclusively to its hydropower activities.

13.5 On the basis of above, WAPDA Hydroelectric is allowed WACC of 15.065% and the return of Rs. 26241 million based on approved RAB for FY 2011-12.

14. **Whether the proposed amount of Rs. 6000 million for payment of Net Hydel Profit to government of Khyber Pakhtunkhwa for FY 2011-12 is justified?**

14.1 The Government of Khyber Pakhtunkhwa (KPK) through the Finance Department in its comments has raised the issue of Net Hydel Profit (NHP) payable to the province under constitutional provision. KPK has submitted that capping of Net Hydel Profits to Rs. 6,000 million per annum is not in conformity with the provisions of Article 161 of the constitution. WAPDA Hydroelectric seeks increase in the tariff in its each petition, keeping inflationary trends as the basis but at the same time the payment of Net Hydel Profits being made to Govt. of KPK

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has been kept constant at Rs. 6000 million per annum. The commentator proposed that NHP payment should be adjusted in accordance with year to year inflationary trends.

14.2 While responding to the aforementioned comments of KPK, the Petitioner submitted that Article 161(2) of the Constitution stipulates that the CCI shall determine the rate for bulk supply of power of each Hydel Power Station, but the CCI has not yet done so. Consequently, WAPDA is paying Rs. 6000 million interim annual payment to KPK upon the directions of GoP.

14.3. The issue of Net Hydel Profit as per provisions of the article 161(2) of the Constitution of the Islamic republic of Pakistan was discussed in detail at paras 43 and 44 of the previous determination of the Authority dated September 17, 2010. The Authority while deciding on the issue of Net Hydel Profit maintained its previous position taken by the Authority in the tariff determination for WAPDA Hydroelectric dated May 24, 2004 and tariff determination of the Authority dated January 6, 2006 whereby it was stated "since no change in its position taken in its determination of May 24, 2004 is warranted and leaves the issue of net hydel profit to be decided by the Council of Common Interests". The Authority in its aforementioned determination had given its observations on the issue of net hydel profit as reproduced hereunder.

"The Authority further observes that CCI while deciding to adopt the methodology proposed by the Kazi Committee approved the principle as well as its future applicability but did not consider the need to specify any organization, committee or any department of the Government to calculate the net hydel profit for the future years. The Federal government or any of its ministries or offices has so far not been able to achieve an agreement on the quantum of net hydel profits and the matter is still being discussed in the meetings of the National Finance Commission. However, maintaining the existing arrangement, as an interim measure, the Authority is including Rs. Six Billion in the Revenue Requirement of WAPDA as payment obligation of WAPDA in respect of payment of net hydel profit to the NWFP province till such time the same is determined by CCI in respect of each hydroelectric power station in operation."

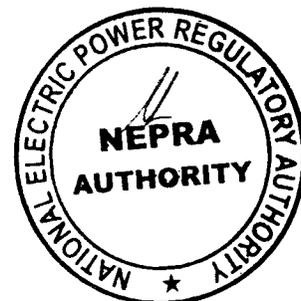
14.4 Since no change in the position taken by the Authority in its last determinations on the issue of net hydel profit has been witnessed, therefore, the Authority has decided to maintain its previous stance on the issue and leaves the matter of NHP to be resolved by the Council of Common Interests.

14.5 Accordingly the Authority allows Rs. 6000 million to WAPDA Hydroelectric on account of payment of net hydel profit for FY 2011-12 on interim basis as per request of the Petitioner.

15. In view of discussion in the preceding paragraphs the total approved revenue requirement of WAPDA Hydroelectric for FY 2011-12 is given hereunder.

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Revenue Requirement	Approved FY 2011-12 (Mln.Rs.)
O&M Cost	5677
Water Use Charge (WUC)	840
Depreciation	4218
Ijara Rental	1506
Regulatory Revenue Gap FY 2009-10	3440
Regulatory Revenue Gap FY 2010-11	2131
Return on Regulatory Asset base (RAB)	26241
Less: Other Income	-4195
Net Hydrel Profit	6000
Total	45856

16. The total approved revenue requirement of WAPDA Hydroelectric for FY 2011-12 comprises of Rs.5571 million pertaining to the prior years' adjustment of revenue shortfall for FY 2009-10 and FY 2010-11, while Rs. 40285 million pertains to its current year's revenue requirement i.e. FY 2011-12. On the basis of aforementioned the following tariff has been approved for WAPDA Hydroelectric for FY 2011-12.

<u>Tariff:</u>	<u>Fixed Charge Rs/kW/Month</u>	<u>Variable Charge Paisa/kWh</u>
Regular Tariff	482.340	6.771
Recovery of revenue gap	<u>66.702</u>	<u>0.936</u>
Total Tariff	<u>549.042</u>	<u>7.707</u>

17. WAPDA Hydroelectric is allowed to charge total tariff as indicated above for a period of one year, after which the tariff pertaining to recovery of revenue gap will automatically cease to be applicable. WAPDA Hydroelectric, however, will continue to charge its regular tariff after one year till next determination of the Authority.

Order:

18. Subject to adjustment on account of determination of net hydel profits by CCI, WAPDA is allowed to charge the Central Power Purchasing Agency (CPPA) within the National Transmission and Despatch Company (NTDC) the following rate, as two part tariff, for sale of bulk power measured at the bus bar of its hydro electric power stations connected directly or indirectly to the transmission system of NTDC.

Fixed Charge = Rs. 549.042 per kW per month of installed capacity
and
Variable charge = Paisa 7.707 per kWh delivered.



- i) The above tariff is applicable for a period of one year from date of notification by GoP, after which the following tariff will be applicable for WAPDA Hydroelectric.

Fixed Charge = Rs. 482.340 per kW per month of installed capacity

and

Variable charge = Paisa 6.771 per kWh delivered.

- ii) Any over/under recovery of cost/revenue requirement due to the variation of actual Net Energy Production (NEP) from the estimated amount of 29749 GWh and other factors beyond control of WAPDA Hydroelectric will be adjusted after due consideration by the Authority, at the time of next tariff determination.
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