National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

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No.NEPRA/TRF-228/WAPDA (Hydro)-2013/13899-13901
December 18, 2013

Subject: **Determination of the Authority in the matter of Tariff Petition filed by Water & Power Development Authority for Approval of Bulk supply Tariff for Financial Year 2013-14** - [Case No. NEPRA/TRF-228/WAPDA(Hydro)-2013]

Dear Sir,

Please find enclosed the subject Determination of the Authority (28 pages) in Case No. NEPRA/TRF-228/WAPDA(HYDRO)-2013

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 paras 75-77 of the Determination needs to be notified in the official gazette.

Enclosure: As above

18/12/13

(Syed Safeer Hussain)

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

CC:
1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

DETERMINATION OF THE AUTHORITY IN THE MATTER OF TARIFF PETITION FILED BY WATER AND POWER DEVELOPMENT AUTHORITY FOR APPROVAL OF BULK SUPPLY TARIFF FOR FINANCIAL YEAR 2013-14

1. Water and Power Development Authority (hereinafter referred to as the "petitioner") filed a tariff petition (hereinafter referred to as the "petition") under rule 3 of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998 (hereinafter referred to as the "Tariff Rules") on April 01, 2013 for determination of bulk supply tariff for the financial year 2013-2014 in respect of its hydropower plants. The Authority noted that the most recent bulk supply tariff of the petitioner has been determined for the financial year 2011-2012 vide determination dated November 10, 2011 (hereinafter referred to as the "previous determination").

2. In accordance with sub-rule 3 of rule 4 of the Tariff Rules, the petition was admitted for hearing by the Authority on April 17, 2013. Consequent to the admission, notice of admission/public hearing was published in the national newspapers on April 23, 2013 inviting thereby all the stakeholders, interested/affected persons or parties to participate in the tariff setting process through filing of comments / intervention requests. In accordance with section 7 (5) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 the Authority also sought recommendations of the Government of the provinces in which generation facilities of the petitioner are located on this petition. Further, in accordance with sub-rule 5 of rule 4 of the Tariff Rules, the Authority also gave directions for service of notices to the respondents and other parties which in the opinion of the Authority were likely to be affected or interested or may be of assistance to the Authority in arriving at a just and informed determination, for filing comments, replies or communications in opposition or in support of the petition. Public hearing in this regard was held on May 14, 2013 at Lahore, which was attended by the petitioner, representatives of National Transmission and Despatch Company (hereinafter referred to as the "NTDC"), Indus River System Authority (hereinafter referred to as the "IRSA"), Provincial Government of Khyber Pakhtunkhwa Finance Department, Punjab Power Development Board (hereinafter referred to as the "PPDB") and various other stakeholders.

3. The petitioner subsequent to the admission of its petition and holding of public hearing, has revised its estimates of annual revenue requirement on more than one

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occasion. A comparison of the claimed annual revenue requirement according to the petition and as per the latest submissions of the petitioner is as follows:

	According to the petition	According to the latest submissions
	Rupees in millions	Rupees in millions
Operations and maintenance costs	14,367	14,367
Depreciation	5,861	5,182
Ijara rental	1,615	1,506
Net hydel profit	6,000	6,000
Water usage charges	742	742
IRSA charges	159	159
Return on investment	43,719	36,970
Regulatory Revenue Gap		
Financial year 2010-11	11,597	13,093
Financial year 2011-12	12,237	12,399
Financial year 2012-13	15,830	12,362
Total	112,125	102,779
Revenue Source		
Power sales revenue	111,426	102,080
Other income	699	699
Total	112,125	102,779
Tariff		
Fixed Charge [Rs./kW/M]	1,278.00	1,170.87
Variable Charge [Ps./kWh]	17.55	16.07
Average Tariff [Rs./kWh]	3.51	3.21

4. The petitioner has submitted its audited accounts for the financial year 2011-12 and provisional unaudited accounts for the financial year 2012-13 in support of its submissions.

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5. The Authority has considered various submissions of the petitioner made from time to time, and has noted that the petitioner has reduced its claim of annual revenue requirement as per its latest submissions from its original claim made in the tariff petition. The Authority has decided to consider the latest submissions of the petitioner for its tariff determination.

Intervention Requests & Comments

6. In response to the notices of admission/public hearing, an intervention request was filed by the Provincial Government of Khyber Pakhtunkhwa, however the same was not filed in the manner prescribed in the Tariff Rules, therefore submissions of the Provincial Government of Khyber Pakhtunkhwa were treated and considered as comments by the Authority. Further, written comments were also received from NTDC and PPDB. Summary of comments offered by the commentators is given hereunder:

Provincial Government of Khyber Pakhtunkhwa

7. The Provincial Government of Khyber Pakhtunkhwa has submitted its reservations on Rs. 6,000 million claimed as net hydel profit by the petitioner for tariff calculations i.e. the same net hydel profit as has been claimed by the petitioner for past many years. It has submitted that the dispute of capping of net hydel profit has been resolved by a high powered committee headed by the Federal Special Secretary Finance and decisions of the committee were duly endorsed by the Federal Finance Division and circulated vide letter dated March 16, 2013. The Provincial Government of Khyber Pakhtunkhwa has submitted that in terms of the aforesaid decision, the petitioner is bound to charge net hydel profit @ Rs. 1.10 per kWh on its total expected net electrical output that is to be indexed @ 5% per annum. The Government of Khyber Pakhtunkhwa has accordingly requested the Authority that while determining the annual revenue requirement of the petitioner, net hydel profit @ Rs. 1.10 per kwh may be accounted for and tariff may be adjusted accordingly.

Petitioner's response

8. The petitioner in response to the aforesaid comments has submitted that they believe that the decision of Finance Division dated March 16, 2013 has not been taken after due deliberation and participation of all the stakeholders. Moreover, the right forum

to decide net hydel profit rate is Council of Common Interest (hereinafter referred to as "CCI") as mentioned in the Constitution of Pakistan and not the Finance Division. If net hydel profit is to be paid on enhanced rate, it will have a massive impact on its power sale rate. The petitioner has submitted that it is making ad-hoc payment of Rs. 6,000 million annually to the Government of Khyber Pakhtunkhwa as per instructions of the Government of Pakistan. Whenever, CCI approves the revised rate of net hydel profit, it will file a new tariff petition accordingly.

PPDB

9. PPDB has submitted that:

a) The petition reveals that by virtue of pending decision of CCI the petitioner is making ad-hoc payment of Rs. 6,000 million annually to the Province of Khyber Pakhtunkhwa on account of net hydel profit. Accordingly, revenue requirement to the same extent has been reckoned in the petition. However, revenue requirement under this head with respect to the province of the Punjab has not been taken into account. Tariff determination may take into account revenue requirement for net hydel profit for hydropower stations with aggregated installed capacity of 1,794 MW located in the province of Punjab. The mechanism for ascertainment of actual net hydel profit payable by the petitioner to the provinces, as agreed by the Government of the Khyber Pakhtunkhwa would be acceptable to the Government of the Punjab as well.

b) Levy of IRSA charges is not in line with the decision of CCI of June 01, 2011.

Petitioner's response

10. The petitioner in response to the aforesaid comments has submitted that they are making ad-hoc payment of Rs. 6,000 million annually to the Provincial Government of Khyber Pakhtunkhwa upon the instructions of Government of Pakistan. However, in order to resolve the issue, a technical committee has been constituted under the chairmanship of Ministry of Water and Power. This technical committee has not yet formulized its recommendations. Whenever, technical committee finalises its recommendations for consideration and approval of CCI and Government of Pakistan notifies the CCI decision regarding rate of net hydel profit, it would then file a revised tariff petition.

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11. In response to levy of IRSA charges, the petitioner has submitted that in pursuance of the CCI decision, GOP has notified on August 25, 2011 levy of IRSA charges payable by it on hydel power generation. In case CCI revises its decision as pointed out by the Government of Punjab, it may adopt the same and will file a revised tariff petition on this account.

NTDC

12. NTDC has submitted that:

a) There is an increase of 2.65 times in fixed charge and 2.59 times in variable charge in the already notified tariff.

b) The petitioner has claimed an increase of 2.53 times in its O & M cost as compared to the Authority determined O & M cost of Rs. 5,677 million for financial year 2011-12. The Authority may allow an optimal increase in O & M cost as a result of inflationary impact duly substantiated by the petitioner.

c) Except for the financial year 2011-12 the actual net electrical output does not support the inclusion of regulatory revenue gaps in arriving at revenue requirement for the financial year 2013-14.

d) The tariff petition has substantially increased regulatory assets base. On the other hand the capacity increase is only from 6,612 MW to 6,902 MW.

e) IRSA charge mentioned in the petition relates to costs that IRSA incurs while serving the interests of provinces. This cost therefore may not be passed on to electricity consumers who do not benefit from the services of IRSA.

f) Regulatory gap for financial year 2010-11 was determined by the Authority in the tariff determination of financial year 2011-12 but has again been claimed. Besides the present claims of regulatory gap are based on, according to the petitioner, insufficient allowances given by the Authority in previous determinations rather than underpinning them on performance i.e. generation output.

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g) Capital structure has been changed from debt equity ratio of 45:55 to 39:61 without any justification. This has increased weighted average cost of capital from 15.065% to 15.632%.

h) Capital work in progress has been included in regulatory assets base which is not appropriate. This may also encourage delay in completion of projects.

i) In case the ijara rental is to be charged to tariff, the underlying assets need to be deducted from regulatory assets base.

Petitioner's response

13. The petitioner has submitted that increase in O & M expenses is due to the following reasons:

    a) Addition of new hydel power stations after completion of projects of 369 MW

    b) About 85% increase in salary and benefits of employees during last two years.

    c) Making replacement and refurbishment of aging generating unit of Tarbela

    d) Accruing of post retirement benefit liability of 7,490 serving/active employees, which was not allowed by the Authority in the previous determination.

    The petitioner has opined that, in view of the above, the proposal made for O & M expenses is quite logical and justified.

14. The petitioner has referred to rule 17 (3)(i) of the Tariff Rules which requires that tariffs should allow licensees the recovery of any and all costs prudently incurred to meet the demonstrated needs of their customers. The petitioner has submitted that its power sales tariff is determined on year to year basis by analyzing the actual/audited figures with reference to estimates adopted at the time of determination of related period. The petitioner has submitted that the regulatory revenue gap has been logically claimed by it.

15. The petitioner has submitted that matching increase in capacity with increase in regulatory assets base is not a logical comparison. The petitioner has suggested that

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the cost of completed project should be seen in the context of the construction cost of new projects globally. The capital cost of its new projects is well comparable to the international standard/ranges.

16. IRSA charges are imposed on generation vide Gazette Notification dated August 25, 2011. According to the petitioner, it is not beneficiary of generation hence for it IRSA charges are pass through item and obviously recoverable through the tariff.

17. The petitioner has submitted that regulatory revenue gap for financial year 2010-11 has arisen because in the last determination regulatory revenue gap was worked out on the basis of provisional figures as audited figures were not available. The revenue gaps now reflect the audited numbers which turned out to be higher than originally allowed.

18. The petitioner stated that change in debt/equity ratio is mainly because of the increased equity contribution in the financing of net operating assets and also because significant early stage projects have been self-financed through equity as resort to external debt financing is not available at an early stage.

19. According to the petitioner, inclusion of capital work in progress in regulatory assets base gives a gradual increase in tariff. If it is excluded from regulatory assets base then there will be a sudden jump in tariff on the commissioning of project. The petitioner furthermore submitted that this practice also facilitates it to complete the on-going project expeditiously which ultimately provides benefits to the electricity consumers by way of reduced average electricity cost.

20. The petitioner has clarified that it has entered into an operating lease by mortgaging assets of Tarbela power house (units 1-4). The title of the assets has been transferred to WAPDA Second SUKUK Company and these assets have been excluded from the books of accounts as well as from its regulatory assets base.

ISSUES:

21. In light of the objections/comments and proceedings of the case following issues have been framed for discussion and consideration by the Authority:

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Whether O&M costs claimed by the petitioner are justified?

22. Year wise break-up of O & M costs claimed by the petitioner, against the costs allowed in the previous determination, is as follows:

O&M Costs	Allowed in the previous determination	Claimed for financial year			
		2010-11	2011-12	2012-13	2013-14
Employees costs	3,260	5,747	6,701	8,604	9,791
Repair and maintenance	1,200	742	1,845	1,672	2,528
Administrative expenses	1,217	1,111	1,196	1,640	2,048
Rupees in million	5,677	7,600	9,742	11,916	14,367

Head wise break-up of O & M costs claimed is discussed below:

<u>Employees costs</u>

23. The petitioner has claimed following year-wise break-up of its employees costs:

Employees costs	Financial year			
	2010-11	2011-12	2012-13	2013-14
Retirement benefits	4,052	4,541	5,614	6,046
Salaries and wages	1,467	1,910	2,608	3,313
Employee benefits	229	250	382	432
Rupees in million	5,747	6,701	8,604	9,791

In the previous determination, the petitioner was allowed Rs. 3,260 million on account of its employees costs.

24. The petitioner has claimed retirement benefits on the basis of actuarial valuation and has submitted that contribution to retirement benefits fund is essential for it to ensure regular payment to its retired employees. The petitioner has submitted that its deferred liability on account of employees benefits has reached Rs. 9,743 million as at June 30, 2012. However, in the previous determination the Authority has allowed revenue only up to the extent of actual contribution to the retirement benefits fund. It has further submitted that it could not contribute due amount of funds to the designated retirement benefits fund as accrued amount has not been allowed by the Authority in the previous determination.

25. The Authority observed that it was decided in the previous determination that till such time the issue of the pensioners and 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 benefits on actual payment basis. The Authority noted that the petitioner has submitted that Secretary, WAPDA vide letter dated August 28, 2012 has approached Ministry of Water and Power for resolution of this matter. However, the petitioner has failed to clarify the ultimate outcome regarding the settlement of aforesaid issue. The Authority has also noted that the number of members as per the Nauman Associates, consulting actuaries report on post retirement free medical scheme as at June 30, 2012 submitted by the petitioner, does not reconcile with the number of employees as per the petitioner's audited accounts for the year ended June 30, 2012. In view of the aforesaid, the Authority is constrained to allow only the staff retirement benefits actually paid i.e. Rs. 1,173 million for financial year 2011-12 and Rs 1,950 million for financial year 2012-13. Further, for financial year 2013-14, actual payment for financial year 2012-13 is considered as a reasonable estimate by the Authority, and the same is therefore allowed.

26. In addition to this, the petitioner has submitted that salaries, wages and benefits for the financial year 2011-12 have been claimed on the basis of actual audited expense and for the financial year 2012-13 have been claimed on the basis of provisional un-audited expense. Further, for financial year 2013-14 these expenses have been claimed taking into consideration increase in pay and allowances and increase in man power due to inclusion of new hydel power stations in the operational system.

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27. The Authority has noted that the petitioner's claim for salaries, wages and benefits is quite on the higher side. The Authority after due consideration has decided to accept the actual audited expense of Rs. 2,160 million claimed by the petitioner for the financial year 2011-12. Thereafter, keeping into consideration the increase in pay and keeping the ratio of number of employees to installed capacity as constant the Authority has assessed Rs. 2,376 million and Rs. 2,666 million for the financial year 2012-13 and financial year 2013-14 respectively.

28. Summing up the total employees costs allowed by the Authority are as follows:

Employees costs	Financial year		
	2011-12	2012-13	2013-14
Staff retirement benefits	1,173	1,950	1,950
Employee pay, allowances and benefits	2,160	2,376	2,666
Rupees in million	3,333	4,326	4,616

<u>Repair and maintenance cost</u>

29. The petitioner has claimed following year-wise break-up of its repair and maintenance cost:

Repair and maintenance cost	Financial year			
	2010-11	2011-12	2012-13	2013-14
Fuel charges	4	6	11	30
Repair and maintenance	692	1,511	1,026	2,245
Insurance	35	35	35	53
Consultancy	11	293	600	200
Rupees in million	742	1,845	1,672	2,528

In the previous determination, the petitioner was allowed Rs. 1,200 million on account of its repair and maintenance cost.

30. The petitioner has submitted that routine repair and maintenance of all its hydro power stations has been planned in line with the recommendations of the manufacturers. Further, replacement and refurbishment activities at hydro power

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station Tarbela have been carried forward from financial year 2011-12, feasibility study for up-gradation and refurbishment of old generating units and allied equipment of Mangla power station has been completed according to which generating capacity of Mangla power station will increase from 1,000 MW to 1,300 MW due to replacement of lower efficiency plant and equipment with those of better efficiency and capacity. Moreover, the enhanced water storage capacity due to rising of head height will improve the plant factor of generating units. Further, consultants have been appointed to carry out feasibility study for rehabilitation, up-gradation and modernisation of generating units of Warsak.

31. The Authority has observed that against the determined amount of Rs. 1,200 million the petitioner has claimed Rs. 1,845 million for the financial year 2011-12. The Authority noted that the petitioner has failed to submit detailed break-up and factors which were beyond its control, while claiming the overrun in its repair and maintenance cost. Accordingly the Authority has decided not to allow any overrun in the repair and maintenance expense already determined for the financial year 2011-12.

32. The Authority has also noted that for the financial year 2012-13 the amount claimed by the petitioner is higher by about 40% from the already determined amount. The Authority after consideration of the time gap between previous determination and petitioner's claim for financial year 2012-13 and other factors has decided to allow the repair and maintenance expense for financial year 2012-13 as claimed by the petitioner. Further, for financial year 2013-14 the Authority has decided to allow consultancy expense as claimed by the petitioner. Other repair and maintenance expenses have been assessed by the Authority on the basis of allowed and claimed repair and maintenance expenses for financial year 2012-13, after consideration of the expected inflation for financial year 2013-14.

33. Summing up the total repair and maintenance cost allowed by the Authority is as follows:

Employee cost	Financial year		
	2011-12	2012-13	2013-14
Rupees in million	1,200	1,672	1,379

Administrative expenses

34. The petitioner has claimed following year-wise break-up of its administrative expenses:

Administrative expenses	Financial year			
	2010-11	2011-12	2012-13	2013-14
Dams inspection	469	301	469	465
Power, gas and water	223	231	261	358
Management/Authority overheads	116	308	443	505
Vehicle running expenses	147	177	203	309
NEPRA fees	53	61	71	98
Other operating expenses	103	120	193	313
Rupees in million	1,111	1,196	1,640	2,048

In the previous determination, the petitioner was allowed Rs. 1,217 million on account of its administrative expenses.

35. The petitioner has claimed administrative expenses for the financial year 2011-12 on the basis of actual audited expenses and for the financial year 2012-13 on the basis of provisional un-audited expenses. The petitioner has sited inflation as the primary reason for increase in these expenses.

36. The Authority after due consideration has decided to allow Rs. 1,196 million claimed by the petitioner for the financial year 2011-12. The Authority further considers claims of the petitioner for the financial year 2012-13 and financial year 2013-14 to be on the higher side. The Authority after considering expenses allowed for the financial year 2011-12 as benchmark, and consideration of the inflation, has assessed Rs. 1,316 million and Rs. 1,447 million for the financial year 2012-13 and financial year 2013-14 respectively.

37. In view of the aforesaid, the operations and maintenance costs allowed by the Authority are as follows:

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Operations and maintenance costs	Financial year		
	2011-12	2012-13	2013-14
Employees costs	3,333	4,326	4,616
Repair and maintenance cost	1,200	1,672	1,379
Administrative expenses	1,196	1,316	1,447
Rupees in million	5,729	7,314	7,442

Whether ijara rentals and depreciation expenses claimed by the petitioner are justified?

38. Year wise ijara rentals and depreciation expenses claimed by the petitioner, against the amounts allowed in the previous determination, are as follows:

	Allowed in the previous determination	Claimed for financial year			
		2010-11	2011-12	2012-13	2013-14
Depreciation	4,218	4,254	4,436	4,121	5,182
Ijara rentals	1,506	1,502	1,615	1,506	1,506

39. The petitioner charges depreciation on its fixed assets on straight line method so as to write off the cost of its fixed assets over their useful lives at the specified rates. Further, the petitioner has entered into an ijara agreement (SUKUK-II) and charges ijara rentals payable under the aforesaid ijara agreement as an expense in its income statement.

40. The petitioner has submitted that its fixed assets have been stated on revalued amount in its financial statements, however, its depreciation claim is based on historical cost of its fixed assets. The petitioner on an inquiry has also clarified that for financial year 2011-12, the claimed ijara rentals include difference for prior years, in actual ijara rental payments against the amount accrued in the financial statements, due to variation in KIBOR. The petitioner has further submitted that ijara rentals for financial year 2012-13 and financial year 2013-14 are based on the estimated KIBOR as per the previous practice.

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41. The petitioner has claimed that costs of Allai Khawar, Jinnah, Gomal Zam dam and rehabilitation cost of Jabban aggregating Rs. 30,154 million will be transferred to fixed assets during the financial year 2012-13. Further, costs of Duber Khawar, Jinnah and rehabilitation cost of Jabban aggregating Rs. 30,267 million will be transferred to fixed assets during the financial year 2013-14.

42. The Authority has gone through the claims of petitioner and considers that both depreciation and ijara rentals claimed by the petitioner for financial year 2011-12 to financial year 2013-14 are justified, therefore, the Authority allows the depreciation and ijara rentals as claimed by the petitioner for the aforementioned years.

Whether the claim of Rs. 6,000 million per annum by the petitioner, on account of net hydel profit is justified?

43. The petitioner has submitted that it is making an ad-hoc payment of Rs. 6,000 million per annum, as an interim arrangement to the Provincial Government of Khyber Pakhtunkhwa on account of net hydel profit. The petitioner has claimed the same amount of Rs. 6,000 million per annum, till a decision on this matter is taken by the CCI.

44. Provincial Government of Khyber Pakhtunkhwa and PPDB have submitted their comments on this issue, which have been responded to by the petitioner. These comments along with petitioner's responses are already detailed in earlier part of this determination, which have been considered by the Authority. The Authority has noted that 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 in the previous determinations of the Authority. The Authority observed that CCI, which is the appropriate forum to decide about the issue of net hydel profit, has not taken any decision on this issue. In view of the aforesaid, the Authority has decided to maintain its previous position on the issue of net hydel profit, and leaves the matter of net hydel profit to be resolved by the CCI. Accordingly the Authority allows Rs. 6,000 million per annum to the petitioner on account of payment of net hydel profit on interim basis as per request of the petitioner.

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Whether the petitioner's claim of water use charges and IRSA charges is justified?

45. Year wise water use charges and IRSA charges claimed by the petitioner, against the amounts allowed in the previous determination, are as follows:

	Allowed in the previous determination	Claimed for financial year			
		2010-11	2011-12	2012-13	2013-14
Water use charges	840	895	700	686	742
IRSA charges	-	-	141	145	159

46. The petitioner has submitted that water use charges are payable to the Government of Azad Jammu and Kashmir on power generation at Mangla hydro power station under MOU/Agreement dated June 27, 2003 at the rate of Rs. 0.15 per kWh of net electric output. The water use charges have been claimed by the petitioner on the basis of actual net electric output at Mangla hydro power station up to the financial year 2012-13. For financial year 2013-14 the claim is based on the estimated net electrical output of 4,945 GWh. The Authority after consideration allows the water use charges for the financial year 2011-12, financial year 2012-13 and financial year 2013-14 as claimed, subject to adjustment due to variation of actual net electrical output at Mangla hydro power station.

47. The petitioner has submitted that the Ministry of Water & Power vide S.R.O. (1)/2011 dated August 25, 2011 has levied IRSA charges at the rate of Rs. 0.005 per kWh for managing water for hydro power generation with effect from July 01, 2011. The Authority after perusal of the relevant S.R.O. and consideration of the issue has decided to allow the water use charges as claimed by the petitioner, subject to adjustment due to variation of actual net electrical output.

Whether regulatory assets base as claimed by the petitioner is justified?

48. The petitioner has submitted following year wise working of its regulatory assets base:

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	2010-11	2011-12	2012-13	2013-14
	Rupees in million			
Regulatory assets base - opening				
Net fixed assets in operation (net of revaluation)	111,395	126,575	132,711	159,135
Capital work in progress	53,341	60,152	64,861	50,146
	164,736	**186,727**	**197,572**	**209,282**
<u>Additions</u>				
Fixed assets transferred from capital work in progress	-	10,350	30,154	30,267
Fixed Assets transferred through water wing	19,141	-	-	-
New constructions/assets purchased	293	222	392	9,287
Capital work in progress (investment)	6,810	15,059	15,439	55,423
	26,244	**25,631**	**45,985**	**94,977**
<u>Deletions</u>				
Depreciation on fixed assets (net of revaluation)	(4,254)	(4,436)	(4,121)	(5,182)
Capital work in progress transferred to fixed assets	-	(10,350)	(30,154)	(30,267)
	(4,254)	(14,786)	(34,274)	(35,448)
Regulatory assets base - closing	186,727	197,572	209,282	268,810
Average regulatory assets base for return	175,732	192,149	203,427	239,046

49. The Authority had allowed regulatory assets base of Rs. 174,185 million for the financial year 2011-12 on the basis of average of the opening and closing balance of fixed assets including balance of capital work in progress in the previous determination.

50. The Authority has considered comments of the stakeholders regarding inclusion of capital work in progress in the regulatory assets base and the petitioner's response thereto. The Authority has noted that the issue of inclusion of capital work in progress in the regulatory assets base has already been settled by the Authority in the

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previous determination. The Authority maintains its earlier decision on this issue and considers that disallowing return on capital work in progress to the petitioner as suggested by a commentator is neither fair nor justified.

51. The Authority has also found that the petitioner was engaged in construction of a part of Diamer Bhasha power project in an area where "Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997" (hereinafter referred to as the "NEPRA Act") did not extend. The Authority sought clarification from the petitioner on this issue during the public hearing and through letter no. NEPRA/R/TF-228/9130 dated July 26, 2013. The petitioner in response submitted that as per ECC decision, Diamer Bhasha power project is to be executed by it. Further, it has entered into a power purchase agreement with NTDC/CPPA for purchase of power from its hydro power projects, until competitive market operating date. According to the petitioner, as per signed power purchase agreement NTDC/CPPA is bound to purchase power generated from Diamer Bhasha power project or any other project located in Gilgit Baltistan and Azad Jammu and Kashmir. The petitioner also clarified that the Diamer Bhasha power project will have two power stations of 2,250 MW each on the right and left bank of the river Indus and one of the power stations will be in Khyber Pakhtunkhwa province. The petitioner on these grounds requested that the cost of Diamer Bhasha power project be included in the regulatory assets base.

52. The Authority has noted that the construction of hydro power projects is pivotal to address the country's medium to long-term electricity needs. However, the Authority could not find any provision in its applicable documents to allow cost of Diamer Bhasha power project incurred in an area outside its jurisdiction. The Authority through letter no. NEPRA/R/TRF-228/WAPDA (Hydro)-2013/12828-29 dated: November 13, 2013 addressed to the Secretary, Ministry of Water & Power and the petitioner, advised them to quote legal provisions in support of the request of the petitioner for allowing cost of power projects being developed outside the jurisdiction of NEPRA Act. The petitioner vide its letter no. C/2013/257 dated: December 02, 2013 submitted its response in which it principally reiterated its earlier submissions. The Authority also noted that the petitioner had not separately claimed the detail of Diamer Bhasha power project costs, if any, incurred in areas within the jurisdiction of NEPRA Act. Moreover, it had not applied to the Authority for inclusion of Diamer Bhasha power project in its generation license. The Authority after detailed deliberations has concluded that the petitioner could be allowed cost of

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Diamer Bhasha power project only after it is included in its generation license. In view of the aforesaid, the Authority finds no other option but to disallow the entire cost of Rs. 38,917 million up to June 30, 2014 claimed by the petitioner on account of Diamer Bhasha power project.

53. The Authority has also noted that the actual capital expenditure incurred on property, plant and equipment for the financial year 2011-12 by the petitioner was Rs. 15,281 million (including Rs. 6,742 million on Diamer Bhasha power project) and for financial year 2012-13 was Rs. 15,831 million (including Rs. 500 million on Diamer Bhasha power project). Further, the Authority noted that in the previous determination interest during construction capitalised by the petitioner and costs of Rs. 9,127 million pertaining to Mangla dam rising were disallowed. The cost of Rs. 9,127 million pertaining to Mangla dam rising was disallowed, as the same could not be substantiated at that time. The Authority noted that the petitioner has now claimed regulatory assets base for financial year 2011-12 on the basis of its audited accounts. The Authority has therefore decided to accept the audited figures of the petitioner for computation of regulatory assets base and in principle has also decided to allow capitalisation of interest during construction, which is in line with the treatment already being allowed to the independent power producers. Accordingly, the actual capital expenditure for financial year 2011-12 and for financial year 2012-13, excluding the cost of Diamer Bhasha power project, is hereby allowed.

54. For financial year 2013-14 the petitioner has claimed that its capital expenditure will increase substantially to Rs. 64,710 million. This claimed amount of Rs. 64,710 million includes Rs. 25,150 million on account of cost of Diamer Bhasha power project, which as discussed above cannot be allowed by the Authority. Against the balance claim, the Authority has decided to allow an amount of Rs 25,000 million for the financial year 2013-14 for capital expenditure. The Authority considers that the amount allowed is sufficient to enable the petitioner to complete its planned projects in a timely manner.

55. In view of the above, the regulatory assets base of the petitioner for the financial year 2011-12 to financial year 2013-14 works out as follows:

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	2011-12	2012-13	2013-14
	Rupees in million		
Regulatory assets base - opening	180,295	184,398	195,608
Add: additions in fixed assets	8,539	15,331	25,000
Less : depreciation on fixed assets	(4,436)	(4,121)	(5,182)
Regulatory assets base - closing	184,398	195,608	215,426
Average regulatory assets base	182,346	190,003	205,517

Whether the weighted average cost of capital claimed by the petitioner is justified?

56. The petitioner has submitted following year wise working of its weighted average cost of capital:

	2010-11	2011-12	2012-13	2013-14
	Rupees in million			
Regulatory assets base	175,732	192,149	203,427	239,046
Financing of regulatory assets base				
Average debt	68,701	67,598	67,492	81,216
Average equity	107,031	124,551	135,935	157,830
	175,732	192,149	203,427	239,046
Cost of debt	12.801%	13.716%	12.236%	12.484%
Return on equity	17%	17%	17%	17%
Debt : Equity ratio	39:61	35:65	33:67	34:66
Weighted average cost of capital	15.359%	15.845%	15.419%	15.466%

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57. The petitioner was allowed weighted average cost of capital of 15.065% in the previous determination, on the basis of debt equity ratio of 45:55, cost of debt of 12.70% and rate of return on equity of 17%.

58. The Authority noted that in the previous determination the petitioner was directed 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. The petitioner has submitted a copy of the letter written more than a year ago to the Secretary, Ministry Of Water And Power on the aforesaid issue. The petitioner has failed to provide any other clarification/explanation on this issue. The Authority has also found that Ernst & Young Ford Rhodes Sidat Hyder, Chartered Accountants, the independent auditors of the petitioner, have not qualified their audit report on financial statements as at June 30, 2012 of the petitioner on this issue. The Authority after due consideration has decided to revise the debt equity ratio of the petitioner on the basis detailed in the succeeding paragraph.

59. The Authority has decided to allow all the long term debts that the petitioner claims that it has availed or will avail in future, irrespective of their actual project wise utilisation. The balance amount of regulatory assets base is considered to be financed from equity. The Authority has based its assessment on the audited accounts of the petitioner for the financial year 2011-12, unaudited provisional accounts for the financial year 2012-13 and on the basis of other submissions made by the petitioner. The Authority has also observed that the petitioner has been unable to provide reconciliation of some of its claimed figures with the accounts submitted by it, therefore the Authority had to base its assessment on the basis of information available with it.

60. In view of the above, the weighted average cost of capital of the petitioner for financial year 2012-13 to financial year 2013-14 works out as follows:

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	2011-12	2012-13	2013-14
	Rupees in million		
Regulatory assets base	182,346	190,003	205,517
Financing of regulatory assets base			
Average debt	63,044	67,492	81,216
Average equity	119,302	122,511	124,301
	182,346	190,003	205,517
Cost of debt	11.000%	12.236%	12.484%
Return on equity	17%	17%	17%
Debt : Equity ratio	34.57:65.43	35.52:64.48	39.52:60.48
Weighted average cost of capital	**14.926%**	**15.308%**	**15.215%**

Whether the return on investment claimed by the petitioner is justified?

61. The petitioner has submitted following year wise working of its return on investment:

	2010-11	2011-12	2012-13	2013-14
	Rupees in million			
Regulatory assets base	175,732	192,149	203,427	239,046
Weighted average cost of capital	15.359%	15.845%	15.419%	15.466%
Return on investment	26,990	30,445	31,367	36,970

62. Based on the regulatory assets base and weighted average cost of capital assessed by the Authority, the return on investment allowed to the petitioner works out as follows:

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	2011-12	2012-13	2013-14
	Rupees in million		
Regulatory assets base	182,346	190,003	205,517
Weighted average cost of capital	14.926%	15.308%	15.215%
Return on investment	**27,217**	**29,086**	**31,269**

Whether other income claimed by the petitioner is justified?

63. The petitioner has claimed following year wise other income:

	2010-11	2011-12	2012-13	2013-14
	Rupees in million			
Other income	678	819	481	699

64. The petitioner has submitted that only income relating to its regulated business activities and earned from other than financial assets should be deducted from its revenue requirement. The Authority noted that it has already been held in the previous determination of the petitioner, that exclusion of income earned from activities not directly related to hydro operations from the petitioner's revenue requirement is neither justified nor in the interest of consumers. The Authority has therefore decided to include other income earned from all sources for the purpose of assessment of annual revenue requirement of the petitioner in accordance with its previous decision.

65. The Authority noted that according to the audited financial statements of the petitioner for financial year 2011-12, in addition to other income claimed by the petitioner, it had also earned other income from financial assets of Rs. 643 million. Further, it had earned other income of Rs. 3,134 million from its other businesses. Accordingly the total actual other income earned by the petitioner for financial year 2011-12 is Rs. 4,596 million which is hereby assessed by the Authority for determining the revenue requirement of the petitioner. The Authority further noted that for the financial year 2012-13, according to the provisional un-audited financial statements submitted by the petitioner, its total other income from regulated

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business is Rs. 981 million. The Authority has decided to add Rs. 3,134 million i.e. actual income of the petitioner from its other businesses for the financial year 2011-12, to its aforementioned income from regulated business to arrive at a fair estimate of the petitioner's total annual other income. Accordingly the Authority has assessed other income of Rs. 4,115 million both for the financial year 2012-13 and financial year 2013-14.

66. Summary of other income assessed by the Authority is as follows:

	2011-12	2012-13	2013-14
	Rupees in million		
Other income	4,596	4,115	4,115

Whether the petitioner's claim of regulatory revenue gaps is justified?

67. The petitioner has claimed regulatory revenue gaps of Rs. 13,093 million, Rs. 12,399 million and Rs. 12,362 million for the financial years 2010-11, 2011-2012 and 2012-13 respectively.

68. The Authority noted that in the previous determination, the Authority had decided that any over/under recovery of cost/revenue requirement due to variation of actual net energy production from the estimated 29,749 GWh. and other factors beyond control of the petitioner, will be adjusted after due consideration by the Authority, in the next tariff determination.

69. The Authority observed that the petitioner has claimed regulatory revenue gap of Rs. 13,093 million for the financial year 2010-11, for which regulatory revenue gap of Rs. 2,131 million has already been allowed by the Authority in the previous determination. The Authority noted that if the petitioner had any grievances in respect of previous determination, the proper legal course available to it was to file a review motion before the Authority, in accordance with the applicable law. The Authority has found that it has already made its assessment of regulatory revenue gap of Rs. 2,131 million for the financial year 2010-11 after due consideration. The Authority furthermore observed that the petitioner continues to claim costs which have already been disallowed by the Authority. In view of the aforementioned grounds, the Authority has decided that the petitioner's claim of regulatory revenue gap of Rs. 13,093 million for the financial year 2010-11 does not merit consideration.

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70. The Authority has already made its decisions regarding various year wise costs claimed by the petitioner in the preceding parts of this determination. Further, sales revenue of the petitioner is being adjusted on actual basis. Accordingly regulatory revenue gap of the petitioner, assessed by the Authority, for the financial year 2011-12 and financial year 2012-13 is as follows:

(Rs. in million)

Regulatory Revenue Gap	2011-12			2012-13		
	Allowed in the previous determination	Assessed	Revenue Gap	Allowed in the previous determination	Assessed	Revenue Gap
Operations and maintenance costs	5,677	5,729	52	5,677	7,314	1,637
Depreciation	4,218	4,436	218	4,218	4,121	(97)
Ijara rental	1,506	1,615	109	1,506	1,506	-
Net hydel profit	6,000	6,000	-	6,000	6,000	-
Water usage charges	840	700	(140)	840	686	(154)
IRSA charges	-	141	141	-	145	145
Return on investment	26,241	27,217	976	26,241	29,086	2,845
Other income	(4,195)	(4,596)	(401)	(4,195)	(4,115)	80
Revenue gap	5,571	5,571	-	-	-	-
Total	45,858	46,813	955	40,287	44,743	4,456
Less: Sales revenue billed	45,858	39,861	5,997	40,287	42,898	(2,611)
Total Revenue Gap	-	-	6,952	-	-	1,845

71. In view of discussions in the preceding paragraphs, the total revenue requirement of the petitioner approved for the financial year 2013-14 is as follows:

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	Approved Financial Year 2013-14 Rupees in millions
Operations and maintenance costs	7,442
Depreciation	5,182
Ijara rental	1,506
Net hydro profit	6,000
Water usage charges	742
IRSA charges	159
Return on investment	31,269
Other income	(4,115)
	48,185
Regulatory revenue gaps	
Financial year 2011-12	6,952
Financial year 2012-13	1,845
	8,797
Total	56,982

72. The total approved revenue requirement of the petitioner for the financial year 2013-14 comprises of Rs. 8,797 million revenue shortfall for the financial years 2011-12 and 2012-13 while Rs. 48,185 million pertains to the current revenue requirement i.e. financial year 2013-14.

73. The petitioner has claimed that 95% of its total revenue requirement be allowed as a fixed charge and 5% of its total revenue requirement be allowed as a variable charge. This claim is consistent with the total revenue requirement apportionment basis allowed to the petitioner in the previous determination, therefore the same basis are

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allowed to be continued. Further, following hydro power station wise installed capacity and annual generation for financial year 2013-14 has been claimed by the petitioner:

Sr. No.	Hydro power station	Installed capacity MW	Annual generation Gwh.
1	Tarbela	3,478	14,981
2	Ghazi Brotha	1,450	7,568
3	Mangla	1,000	4,945
4	Warsak	243	1,021
5	Chashma	184	1,055
6	Jinnah HPP	96	344
7	Khan Khawar	72	269
8	Allai Khawar	121	463
9	Duber Khawar	130	595
10	Gomal Zam	17	91
11	Jabban	22	122
12	Rasul	22	76
13	Dargai	20	96
14	Nandipur	14	40
15	Shadiwal	14	34
16	Chichoki	13	30
17	Kuram Garhi	4	12
18	Renala Khurd	1	3
19	Chitral	1	4
	Total	**6,902**	**31,752**

The claimed installed capacity and annual generation are considered reasonable by the Authority and are therefore allowed.

74. On the basis of aforementioned the following tariff has been approved for the petitioner:

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Tariff	Fixed charge Rs./kW/Month	Variable charge Paisa/kwh.
Regular tariff	552.7223	7.5877
Recovery of revenue gap	100.9089	1.3853
Total tariff	653.6312	8.9730

Order

75. Subject to adjustment on account of determination of net hydro profits by CCI, Water and Power Development Authority (petitioner) is allowed to charge the Central Power Purchasing Agency (CPPA) within the National Transmission and Despatch Company (NTDC) the following 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. 653.6312 per kw per month of installed capacity

And

Variable charge = Ps. 8.9730 per kwh delivered.

76. The above tariff is applicable for a period of one year from date of its notification by the Government of Pakistan, after which the following tariff will be applicable:

Fixed charge : Rs. 552.7223 per kw per month of installed capacity

And

Variable charge = Ps. 7.5877 per kwh delivered.

77. Any over/under recovery of cost/revenue requirement due to factors beyond control of the petitioner will be adjusted, after due consideration by the Authority, at the time of next tariff determination.

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78. The order is to be intimated to the Federal Government for notification in the official gazette under section 31 (4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

AUTHORITY

17/12/2013

(Habibullah Khilji)
Member

17/12/13

(Maj. (R) Haroon Rashid)
Member

16 XII XIV

(Khawaja Muhammad Naeem)
Vice Chairman

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