



# Pakistan Water and Power Development Authority

Telephone: 042-99202610  
PBX: 042-99202211/2530  
Fax: 042-99202154  
Email: dpcandmwater@hotmail.com  
No. GM(C&M)W/DP- 62/323

GM (C&M) Water  
530-Wapda House, Lahore

Date: 08.03.19

Justice Zia Perwez,  
Former Judge of Supreme Court of Pakistan &  
High Court of Sindh  
Trustee – Transparency International Pakistan,  
Karachi

Sub: **COMPLAINT OF EXTRAORDINARY INCREASE IN COST OF MOHMAND DAM HYDROPOWER PROJECT AT RS. 309 BILLION, BASED ON PC II APPROVED COST OF 2008 WHICH WAS ONLY RS. 125 BILLION (US\$ 1 BILLION)**

Ref: Transparency International Pakistan letter dated 14.02.2019.

It is intimated that the Project Cost of US\$ 1.08 Billion mentioned in para 1 of referenced letter is taken from the Draft Feasibility Study submitted by AMZO Corporation LLC USA to Private Power & Infrastructure Board (PPIB) in 2006. The Feasibility Study was not accepted by WAPDA and Irrigation Department, Govt. of Khyber Pakhtunkhwa for excluding two essential features of the Project i.e. Flood Control and Irrigation Component.

It is also pertinent to mention that the cost estimates in Feasibility Study are always based on limited field investigation data and Detailed Engineering Design is prepared with detailed field investigations in respect of Topography, Hydrology and Geology of Project area. Moreover, the Historical destructive flood of 2010 in Swat River severely impacted the hydrological design parameters resulting in increased size of each component of Mohmand Dam.

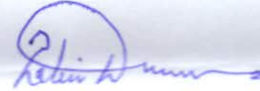
Brief comparison of major components of two studies of the Mohmand Dam Project clearly describing the reasons of increase in the Project cost is as under:

Sr. No.	AMZO Proposed Scheme	WAPDA Scheme
1	<b>Feasibility Study</b> Based on limited data (2006)	<b>Detailed Engineering Design</b> Based on detailed field survey, hydro-meteorological data and geotechnical investigations (2017).
2	<b>River Diversion Scheme</b> Design Flood - 100 year return period = 1,500 m <sup>3</sup> /s Tunnel Diameter = 9.5 m Tunnel length = 1,050 m Upstream Cofferdam height = 389 masl Downstream Cofferdam height = 375 masl	<b>River Diversion Scheme</b> Design Flood - 100 year return period = 5,900 m <sup>3</sup> /s 2 No. Tunnel with diameter = 15 m each Total Length of Tunnels = 3,317 m Upstream Cofferdam height = 409 masl Downstream Cofferdam height = 380 masl

	<b>Main Dam</b> Dam Height = 200 m Dam Crest Level = 548 masl	<b>Main Dam</b> Dam height = 213 m Dam Crest Level = 563 masl
4	<b>Reservoir</b> Full Supply Level = 540 masl Total storage = 1.005 MAF Live Storage = 0.576 MAF No Provision for Flood Storage	<b>Reservoir</b> Full Supply Level = 555 masl Total storage = 1.292 MAF Live Storage = 0.676 MAF Flood Storage = 0.081 MAF
5	<b>Spillway</b> Design Discharge (PMF) = 14,400 m <sup>3</sup> /s 4 Gates @ 16m wide, 21.5 m high	<b>Spillway</b> Design Discharge (PMF) = 27,427 m <sup>3</sup> /s 7 Gates @ 15 m wide, 21 m high
6	<b>Power Waterways</b> Twin intakes diameters = 8.4 m Discharge each Waterway = 231 m <sup>3</sup> /s	<b>Power Waterways</b> Tunnel Diameter = 13.2 m Rated Discharge = 544 m <sup>3</sup> /s
7	<b>Powerhouse</b> 118 m long and 30 m wide Installed capacity = 660 MW	<b>Powerhouse</b> 157.4 m long and 30 m wide Installed capacity = 800 MW
8	<b>Low Level Outlet and Flushing Outlet</b> No Provision	<b>Low Level Outlet and Flushing Outlet</b> Flushing Outlet Dia = 4.5 m Approximate cost = Rs. 1.60 Billion
9	<b>New Irrigation Command Area</b> No Provision	<b>New Irrigation Command Area</b> <u>Left Bank Area = 9,017 Acre</u> Irrigation Tunnel = 4.3 km @ 2.5 m dia Length of Canal = 12.4 km <u>Right Bank Area = 7,720 Acre</u> Irrigation Tunnel = 3 km @ 2.5 m dia Length of Canal = 14.75 km Approximate cost = Rs.10 Billion
10	<b>Permanent Road</b> Right Bank Access Road 5.5 km long	<b>Permanent Road</b> Approximately 18 km along both banks of the river
11	<b>Project Colony</b> No Provision	<b>Project Colony</b> Office, residential and community buildings are proposed at 62 Acre of land with cost of approx. PKR 7 Billion.
12	<b>Land Acquisition</b> Project Area = 5,313 Acres No package for Confidence Building Measures (CBMs)	<b>Land Acquisition</b> Project Area = 8,665 Acres CBM Package of approximately Rs. 4 Billion
13	<b>Project Cost</b> Total Project Cost = US\$ 1.028 Billion (2006) EIRR = 21% B/C Ratio = 1.7	<b>Project Cost</b> Total Project Cost = Rs. 309.558 Billion (2018) EIRR = 21.12% B/C Ratio = 1.87

The financial indicators depicts that the proposed scheme of Mohmand Dam by WAPDA is more attractive than AMZO. In view of various technical flaws and exclusion of flood mitigation and irrigation component in study of AMZO, the Project was handed over to WAPDA for implementation.

Furthermore, comparison of any multipurpose dam project with thermal / coal plant project is inappropriate due to difference in scope, construction cost, operation cost and benefits. Thermal/ Coal projects are installed only for Power Generation, however, Dams are multipurpose projects including water storage, irrigation component and flood control, wherein hydropower is a by-product.



( A.Z.K. Durrani )

General Manager (C&M) Water

Copy to:

- PS to PM, Prime Minister Office, Islamabad
- Chairman PAC, Islamabad.
- Chairman NAB, Islamabad.
- Registrar, Supreme Court of Pakistan, Islamabad.
- MD (PPRA), Lahore.
- Director (Secretariat), WAPDA, Wapda House, Lahore.