

“We Musalmans in general and youngmen in particular do not know the value of money. A paisa saved today is two paisa tomorrow, four paisa after that and so on and so forth. Because of our addiction to living beyond means and borrowing money we lost our sovereignty over this Sub-continent.”

**—Quaid-e-Azam Mohammad Ali Jinnah
(in Ziarat, Balochistan, 1948)**

BUSINESS RECORDER

Friday 24 May 2019, 18 Ramazan 1440

Mohmand ‘multipurpose’ dam

Amongst the Swat basin/Kabul river water storage/hydropower generation projects details of two schemes given in the important work commissioned by the Government of Pakistan and presented in the 1965 “Water and Power Resources of West Pakistan - a study in Sector Planning Pieter Liefinck” are pertinent. The first, Ambahar water storage/power project, first identified by Chas T Main at a site some 21 km upstream from the Munda headworks, was proposed by Liefinck as a 920 feet high dam, gross water storage capacity of 7.9 MAF and ultimate power generation capacity of 1,270MW. The second was the Munda water storage/power project, some 5 km upstream from the Munda headworks with a 660 feet high dam, 2 MAF of water storage and 760MW of ultimate power generation capacity.

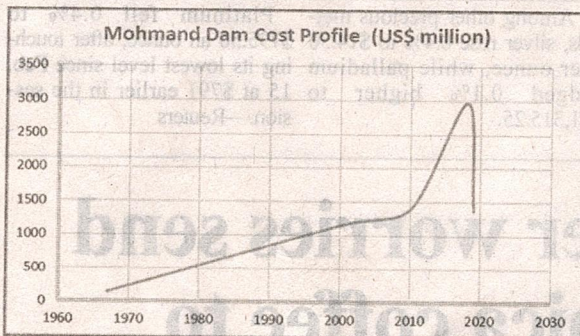
In 1998 the Government of Pakistan requested the Japan International Cooperation Agency (JICA) to carry out the feasibility study for the Munda multipurpose dam, identified by the Liefinck report some 33 years earlier. The initial feasibility study was completed by JICA in 2000 which proposed a 700 feet high concrete faced rock-filled multipurpose dam with power generating facilities of 740MW, at an estimated cost of US\$ 1.15 billion situated some 5km upstream from the Munda headworks and 37km from Peshawar.

Due to paucity of funds, the project was included in the long-term hydel generation expansion plan part of the “Policy for Power Generation Projects 2002” issued by the GOP and offered to the private sector for development and construction. A US firm AMZO showed keen interest

and in 2004 PPIB awarded Letter of Interest (LOI) for updating the feasibility study. The updated feasibility study was submitted to PPIB, but no further progress could be achieved due to legal issues amongst the sponsors; the LOI

Khalid Faizi

gross water storage of 1.3 MAF and power generation installed capacity of 800MW producing 2,862 GWh of electricity annually at a plant factor of 41%. The cost escalation over the years is shown in the following graph:



was rescinded and WAPDA was once again assigned the task to complete the project.

The PC-II for consultancy related to detailed engineering design for Munda dam was approved by the Central Development Working Party in October 2008. In 2010, when the estimated project cost was US\$ 1.4 billion, WAPDA invited expression of interest for detailed engineering design and in 2012 contract for Mohmand dam (the new name) was signed with a consortium of local and International consultants led by SMEC, Australia.

However, the Planning Commission raised objections to computation of Probable Maximum Flood and work on design remained suspended for about two years with authorization order for commencement of work issued in August 2015. After independent experts found that Planning Commissions objections were unfounded.

The PC-I dated 26 April 2018 approved a project cost of Rs 309.558 billion approx. US\$ 3 billion for the 700 feet dam,

The cost curve over a 50-year plus period is smooth and reasonable reflecting a gradual increase in costs over the years, provided the 2018 PC-I bump is excluded, where it is evident that the PC-I cost was grossly overestimated. The current total project cost is reasonable and will result in a leveled tariff of US \$ 6-7 per kWh which is attractive and includes both the water and the power generation elements, which should ideally be cost separately. Pakistan needs cheaper generation which hydropower can provide; the Mohmand dam project achieves this objective and will reduce the basket price of electricity in the Pakistan electricity grid.

It is important to note how public hydropower projects can spin out of control leading to massive cost overruns. This was evidenced by the 969 MW Neelum-Jhelum hydropower project which started off with a cost estimate of Rs 15 billion in 1989 exploding over 3000% to a cost of over Rs 500 billion after commissioning in 2018.

The tariff for the first 20 years is close to Rs 15 per kWh while leveled tariff for 50 years is over Rs 13 per kWh; this cost is at par with the most inefficient thermal generation cost and will not decrease but will increase the average basket cost of electricity in Pakistan. The loss resulting in billions of US dollars, will be ultimately borne by the Country and is one of the many reasons why we are in dire financial straits today!

Steps should be taken so that Mohmand does not follow the fate of Neelum-Jhelum and is completed within time at the budgeted cost. The Neelum-Jhelum HPP approached NEPRA for a commercial operations date (COD) tariff determination after construction and commissioning; but no tariff petition had been filed before construction began. Learning from experience, a tariff petition for the Mohmand HPP should be submitted to the regulator, NEPRA, before construction starts. The regulator would determine the tariff which would set the framework and parameters for project construction management and cost and ensure that the required financial discipline is exercised. Once construction is complete, a final tariff would be determined at COD based on the final project cost, allowed cost true-up and other specified parameters which will determine the sale price of the electricity into the grid. This is a standard practice for private sector generation projects and should be applied to all projects whether in the public or private domain as it would result in a low, known tariff, enable planning of the future basket price of power and avoid future surprises.

(The views expressed in this article are not necessarily those of the newspaper)