

Institute for Policy Reforms

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IPR: Pakistan must increase water storage capacity

The water challenge faced by Pakistan today is bigger than that of the power sector. And it is getting worse every day. Pakistan must urgently increase its water storage capacity. This is stated in a Fact Sheet issued today by the Institute for Policy Reforms. The Institute recommends that government must start building the Diamer Bhasha dam forthwith. The scale and complexity of the project requires top level government leadership. This will speed up execution in Pakistan and highlight its priority to international donors. Pakistan must request Chinese assistance for the project.

Pakistan's agriculture production fell in fiscal 2015-16. A number of issues constrain agriculture in the country. These include cost of inputs and price volatility of output. Farmers do not get quality and virus resistant seeds. Water availability and its use are equally key issues.

Pakistan is among the most water stressed countries in the world. With silting of dams and a growing population, this will only become worse. Available water was 138.6 MAF in 2014-15. It fell to 133 MAF in 2015-16. Actual flows to canals is 114 MAF. It is reducing each year. Area irrigated by canals has been in long-term decline since the 1990s. Total gross storage capacity of under 19 MAF is just 14% of available water resource and has not changed from 1980. Per capita dam capacity was 320 cubic meters in 1980. It is 150 now. We have not built a single large dam since Tarbela. Kalabagh has been in terminal debate. Diamer Bhasha has been a permanent work in progress. During this time, net water storage has come down by 30%.

The Fact Sheet recommends urgent execution of Diamer Bhasha. It is a critical project that will increase water and power supply in the country.

Bhasha will add 6.4 MAF to our gross storage. This is 35% to 40% of the total existing capacity. The project will add 4,500 MW of hydro power generation capacity. Bhasha's IRR makes it a feasible project though its real benefit lies in enhanced national security. The reservoir, additionally, will increase power generation capacity of Dasu by about 25% and of Tarbela by an estimated 10 to 15%. It will also reduce silting of Tarbela. Our experience from Tarbela and Mangla dams show that actual benefits far exceed original estimates. World experience shows also that such projects especially benefit the poor.

At Rs. 834.2 Billion or USD 11 Billion equivalent (at 2009 rate for USD), the project cost is high and perhaps a deterrent to immediate execution. Land acquisition is another Rs. 101.3 Billion. And then GoP has a separate project for transmission of power. Substantial project completion period is eight years though the total period is eleven years. ECNEC approved the project in 2009. It could have been nearing completion by now.

WAPDA, the project execution agency has met almost all technical requirements to begin the work. The project is on hold for want of funds. The size and financial magnitudes are unprecedented for Pakistan. However, breaking up project costs between the water and the power sectors and phasing its implementation makes it less daunting.

The Fact Sheet advises GoP to implement power generation as an IPP. That leaves water civil works for the public sector. Total amount needed for the dam is USD 2,934 Million or Rs. 310 Billion. Add 50% of this cost for interest during construction and other items and the total grows to USD 4.6 Billion or Rs. 486 Billion. This amount is needed over eleven years.

Phasing financial needs by physical activity suggests that it does not exceed Rs. 56 Billion in any one year. However, because of its scale and large foreign component, Bhasha needs external assistance.

GoP must urgently sponsor the project for funding by the Peoples' Republic of China. Physically, the project lies on the KKH along the China Pakistan Economic Corridor. It also falls within the sectors selected for bilateral cooperation.

IPR states that, so far, GoP has not addressed the water challenge in earnest. It must launch Diamer Bhasha immediately. Government must hold top level meeting with the Government of the Peoples' Republic of China to obtain their assistance. They may also hold top level discussion with neighbouring countries to assuage their concerns. GoP must commit and provide enough PSDP funds for project implementation.