Malakand Hydropower Project: Malakand-III Hydropower Project was identified after the construction of Auxiliary Tunnel under Swabi SCARP on the Upper Swat Canal System. Swat River is a very valuable asset of Khyber Pukhtunkhawa.It is a snow-fed stream with a catchment area of 13,491 square kilometers.The Upper Swat Canal System emanates from the Swat River at Amandara Head Works and irrigates 121,400 hectares of land of the Peshawarvalley was completed in 1918. At this location, the Swat River has an annual flow volume of 5.44 billion cubic meters.The minimum mean discharge is 36.5 cumecs in January and the summer flow peak up to 443 cumecs.A 6 km long canal carries water from Amandara to the foot of Malakand hills. There, the 3.5 km long Benton Tunnel pierces the Malakand hills and passes water into the Dargai Nullah. The 6.75 km long pitched channel,commencing 2300 m downstream of the Benton tunnel, was constructed parallel to the nullah to lead the water to a trifurcator at Dargai,the water is trifurcated into two irrigation branches, (Abazai Branch running in a westerly direction and Machai Branch in easterly direction) or to a wasteway. Two power plants Jabban and Dargai each of 20 MW capacity were set up in 1937 and 1953 respectively each between the outlet of Benton tunnel and the trifurcator.Due to increase in irrigation water demand the Amandara Head Works was upgraded under the Swabi SCARP and another auxiliary tunnel,parallel to the existing Benton tunnel was constructed to carry the increased design discharge of 51 cumecs.In order to avail this additional discharge for hydropower, before it is fed into Machai branch, the Malakand-III Hydropower Project having a capacity of 81 MW was conceived. This project is proposed to be operated in conjunction with the two existing power stations of Jabban and Dargai keeping in view the variation in water availability in Swat River. It is important to add that subsequent to the feasibility, it has been identified that 20,000 acres of land can be irrigated under the project, over and above the Hydel benefits. In this regard an outlet for future construction of a project for the gravity irrigation of about 20,000 acres of land has been provided.

SALIENT FEATURES OF THE PROJECT:

Location	Dargai (Malakand Agency)	Tunnel (5 No)	3.32 km
Northing	1142337 to 1149952 m	Aqueducts	5 Nos.
Easting	3102475 to 3104009 m	Super passages	11 Nos
Capacity	81 MW	Bridges	6 Nos
Design Discharge	56.6 Cumecs	Sediment Excluder	140 m long X 45 m wide 11.25 m deep
Net Head	183.5 m	Fore bay	60 meters long, 14 meters wide and 14.2 meters deep
Energy	553 GWh per annum	Spillway	Total length 886 m (Spillway Cascade 726 m long and Spillway Tunnel 160 m long)
Estimated Cost	Rs. 6379.00 million	Penstock	Total Length 731 m with 4 m Diameter and running 162 m through tunnel.
Headrace channel	2.62 km	Power house	42 m long x 20 m wide
Turbines	3 vertical shaft Francis turbines	Tailrace	1 km long concrete lined channel
		Waste way	2.385 km long stone pitched channel discharging into Wartair

Appointment of Operation and Maintenance (O&M) Contractor:

A joint venture of Hydro Pak (Pvt) Ltd and BAJU (Chine) has been appointed as O&M contractors for five years term. The total cost of the contract is Rs.525.00 Millions.