SECONDARY CLARIFICATIONS DOCUMENT

Attabad Lake Hydropower Project — Package III (E&M, with Remote Ends)

Project	Attabad Lake Hydropower Project (HPP)
Package	Package III — Electro-Mechanical Equipment (with Remote Ends)
Main Contractor / Lead Partner (Party A)	CDigital Pakistan
International Technical & Delivery Partner (Party B)	QYEC

Clarification Questions

No.	Reference Document	Page / Section	Clause / Content	Clarification Question (verbatim)
1	VOLUME-II: EMPLOYER'S REQUIREMENTS, Part-I: Specific Provisions	Section 1.2.1.6	132/66 kV Aliabad Regional Grid Station — AIS bay expansion and SCADA integration.	Regarding Section 1.2.1.6 of VOLUME-II: EMPLOYER'S REQUIREMENTS, Part-I: Specific Provisions, is it required to expand two 132 kV AIS bays within the 132/66 kV Aliabad Regional Grid Station, including all associated electrical equipment, busbars, protection systems, control systems, grounding, and expansion and integration of the SCADA system? (If required, please provide the 132 kV side single-line diagram, site layout plan, and related documentation for the 132/66 kV Aliabad Regional Grid Station.)
2	VOLUME-II: EMPLOYER'S REQUIREMENTS, Part-I: Specific Provisions	Section 1.2.1.1-k	Connection from generator outlet bus to the low-voltage side of the main transformer — isolated phase bus (IPB).	Clarify the spatial relationship between the 132 kV SWITCHYARD and the main plant. As specified in Section 1.2.1.1-k of VOLUME-II: EMPLOYER'S REQUIREMENTS, Part-I: Specific Provisions, the connection from the generator outlet bus to the low-voltage side of the main transformer employs isolated phase bus (IPB). Please define the routing layout of this IPB and specify the required

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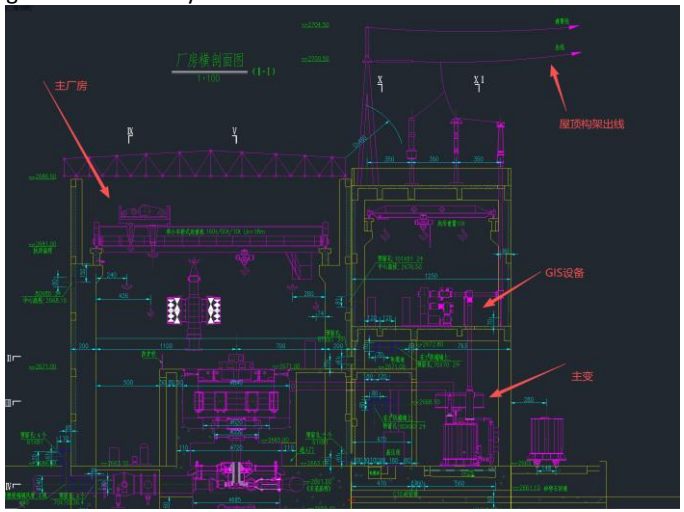
				length (per phase in meters) for each of the three generating units.
3	VOLUME-II: EMPLOYER'S REQUIREMENTS, Part-I: Specific Provisions	Layout optimisation proposal	Proposed co-location of main transformer with main plant; adoption of GIS for 132 kV equipment.	Is it feasible to optimize the layout by co-locating the main transformer with the main plant and adopting GIS for the 132 kV equipment? This configuration can significantly reduce land footprint and civil construction costs, shorten the length of the generator outlet isolated phase bus connections, and enhance operational reliability. GIS's fully enclosed design is immune to contamination, moisture, and small animals, resulting in markedly lower failure rates and reduced environmental risks. Maintenance is limited to periodic monitoring of gas density and partial discharge, eliminating the need for frequent cleaning, corrosion protection, and insulator washing required by AIS—thereby substantially reducing maintenance workload and unplanned outages, while improving the reliability of the 132 kV grid. Reference layout is shown below: 
4	2026-03-11 PKG III Technical Provisions (With Remote Ends)	Clauses 2.1.17.3 and 2.2.8	Clause 2.1.17.3 Metallic Coating (Hot Dip Galvanizing) does not clearly specify which equipment or	Clarification on Corrosion Protection, Coating Thickness & Painting Requirements for Hydraulic Steel Structures and Equipment.

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			components shall be applied with hot dip galvanizing or zinc metal spraying. Clause 2.2.8 Surface Preparation & Painting does not specify the required coating thicknesses (dry film thickness) for any components.	1. Clarification on Metallic Coating (Section 2.1.17.3) Clause 2.1.17.3 Metallic Coating (Hot Dip Galvanizing) does not clearly specify which equipment or components shall be applied with hot dip galvanizing or zinc metal spraying. Clause 2.2.8 Surface Preparation & Painting does not specify the required coating thicknesses (dry film thickness) for any components. We therefore request the following clarifications:
5	2026-03-11 PKG III Technical Provisions (With Remote Ends)	Gate leaves / trash rack leaves	Corrosion protection scheme for gate leaves (including trash rack leaves).	2. Corrosion Protection for Gate Leaves and Trash Rack Leaves。 Please confirm the corrosion protection scheme for gate leaves (including trash rack leaves): （1） Shall zinc metal spraying be adopted for corrosion protection? （2） Shall the thickness of zinc spray be not less than 0.060 mm? （3） Shall paint systems be applied over the zinc-sprayed surface? （4） If yes, how many paint coats are required, and what is the specified dry film thickness (DFT) for each coat?
6	2026-03-11 PKG III Technical Provisions (With Remote Ends)	Paint coating — various items	Total dry film thickness and layer-by-layer DFT for paint coatings.	3. Paint Coating Thickness Requirements Please clarify the required total dry film thickness and layer-by-layer DFT for paint coatings on the following items:

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				（1） Gate recesses (trash rack recesses) （2） Mobile gantry crane and trash rack cleaning crane （3） Hydraulic hoist cylinders
7	2026-03-11 PKG III Technical Provisions (With Remote Ends)	Page 1-2	Table 1-2: Parameters Rated Turbine Speed (n) 375rpm	Can the bidder recommend the rated speed of the hydro-generator set, for example, if the speed is increased, choose 428.6rpm? Please clarify.
8	2026-03-11 PKG III Technical Provisions (With Remote Ends)	Page 1-32 1-33	1.3.11 The valve disk….. equipped with bolted-on trunnions (with locked screws) 1.3.12 Trunnions and Bearings The trunnions shall be made of forged steel, horizontally arranged, and designed for bolted connection to the valve disk.	When the butterfly plate is connected to the valve shaft via bolt connection, the valve shaft must be reinforced, leading to increased driving torque, more complex structure, and higher maintenance costs in future. Can the butterfly plate and valve shaft be connected via pin connection? This method features a simpler structure and mature technology.
9	2026-03-11 PKG III Technical Provisions (With Remote Ends)	Page 1-31 1-33	1.3.6 The bypass valve ……alternatively the bypass valve can be actuated by the governor hydraulic system. 1.3.13 .1 The pressure oil system design and equipment shall be similar to those for the hydraulic governor pressure oil system given in Section 4 of this Volume including redundancy, alarms and safety devices. 1.3.14 Each valve shall have its dedicated oil pressure system / equipment.	discrepancies in the bid document It is recommended that the inlet valve be equipped with an independent hydraulic system. If the bypass needle valve is hydraulically actuated, the oil pressure shall also be supplied from the hydraulic system of the inlet valve.