الإجابة عن أسئلة العارضين المتعلقة بمشروع تجهيز وتوريد وتركيب نظام تبريد مركزي للقصر الجمهوري

1. **Mechanical:**

Question 1: Please provide us with a schematic for the chilled water system.

Answer 1: The schematic drawings are provided and attached, as the scope of work covers the **replacement of existing chillers and cooling towers in accordance with site conditions**.
The **MEP contractor shall prepare the detailed shop drawings and system schematics** based on actual site measurements and the requirements of the **Book of Specifications**, for review and approval by the Engineer, **without any additional cost to the Owner**.

Question 2: Please indicate the number and location of required control valves (ON/OFF, Modulating, PICV, …) and sensors.

Answer 2: All existing valves, sensors, and accessories shall be **inspected and replaced as necessary** in case of damage, leakage, or malfunction, **in full coordination with site conditions and the supervising Engineer's instructions**.
Any replacement components shall be **new, of equal or higher specification**, and **fully compatible with the existing control system**, with no additional cost to the Owner.

Question 3: Please verify and confirm in specification "Section 010010; General Conditions, item AC" the outside design conditions for this project.

Answer 3: **The outside design conditions shall be considered as Dry Bulb (DB) = 35°C and Wet Bulb (WB) = 26°C, in accordance with Section 010010 – General Conditions, Item AC, and consistent with the local climatic design data for Baabda.**

Question 4: For Cooling Towers, the cooling water temperatures required are 39°C In and 33°C Out; can we lower these temperatures while preserving same ΔT?

Answer 4: It is acceptable to lower both inlet and outlet condenser water temperatures while maintaining the same temperature difference (ΔT), **provided that the cooling tower's performance and capacity are verified under the revised conditions**.
Any proposed adjustment shall be **validated by the manufacturer and approved by the**

Engineer, ensuring compliance with system efficiency and **without any additional cost to the Owner**.

Question 5: Is the existing running chiller supposed to be removed from the chilled water room?

Answer 5: The existing running Carrier chiller will remain in place and will serve as a standby unit after completing the required maintenance at a later stage.

Question 6: We have noticed some discrepancies between the following pages:

- **Page 443:** The chiller is specified as *water-cooled, single compressor chiller.*
- **Page 445:** It is stated that the chiller shall be shipped *fully charged with refrigerant and oil (fully assembled chiller).*
- **Page 447:** The description indicates a *factory-assembled and (run) tested chiller with two compressors.*
- **Page 447:** It is also mentioned to *disassemble the chiller into major assemblies as required by the installation after factory testing and before packaging for shipment.*

Kindly confirm whether the required chiller should be **single compressor** or **two compressors**, and clarify whether it should be **shipped fully assembled** or **disassembled after factory testing**?

Answer 6: The required chiller shall be **water-cooled screw type with two (2) compressors** per unit, as per the project specifications (Section 236426) and the Bill of Quantities, which describe *"water-cooled screw chillers inverter type"*

Each chiller shall be **factory-assembled, tested, and charged with refrigerant and oil prior to shipment**, to ensure full compliance with manufacturer requirements and minimize on-site assembly. However, for logistical reasons, **disassembly into major assemblies after testing** is allowed, provided that reassembly and commissioning are performed under the manufacturer's supervision and **at no additional cost to the Owner**.
All accessories, connections, controls, and vibration isolators shall be included in the contractor's offer, ensuring a **fully operational system** meeting the specified capacities and site conditions.

2. Electrical

Question 7: Please provide us with Electrical wiring diagram for MCC's

Answer 7: The **Electrical wiring diagram for the MCCs** shall be prepared and submitted by the awarded contractor as part of the **shop drawings** and **as-built documentation**, in full coordination with the mechanical installation drawings.
The diagram must reflect all feeders, interlocks, control circuits, and protection devices according to **Section 262419 – Motor Control Centers** of the Electrical Specifications and the **Electrical BOQ** requirements.

No additional cost shall be borne by the contracting authority for the preparation or approval of these diagrams.

Question 8: Is MCC-1B supposed to also feed the existing running chiller?

Answer 8: Yes. **MCC-1B** is intended to feed all newly installed chillers, pumps, and auxiliary equipment in the chilled water room. It may temporarily supply the existing chiller if retained, ensuring operational continuity during the transition period. The final connection shall comply with load-balancing and protection coordination requirements in **Section 262416 (Panelboards)** and **262419 (MCCs).**

Question 9: Can we use the existing bus trunk to feed the new MCC-1B?

Answer 9: The existing **bus trunk** may be used **only if verified** by the contractor through on-site inspection and electrical testing (the megger test…) to ensure full compatibility with the new MCC-1B's voltage, current, and fault-level ratings.
If the trunk system or terminations are found non-compliant, the contractor must provide a **new, compatible feeder system** as per **Sections 260010 and 260523** (Power Conductors and Cables), without imposing any additional cost on the Owner.

Question 10: If yes, the existing bus trunk is fed from a 110V/190V 3Ph transformer: if we connect the new MCC-1B to this trunk, is there a 220V/380V source available on the electrical room side to power all chillers and pumps inside this room? Can you provide details of that location?

Answer 10: The load of the Chiller plant including the pumps, boilers… is estimated to be around 800kVA. Knowing that the current power plant cannot handle this load and that the AC load for the coming few years is not going to reach the design load. At this stage only, one chiller will run at a time (to be selected from the MCC: Chiller 1 – Chiller 2 – Auto).

A temporary ATS, to be located in the Main Electrical Room in coordination with the Presidential Palace technical team, shall be provided with the following:

1- IP31, Rating 630A, composed of 630AC3 contactors protected by MCCB breakers as needed with all needed controls and accessories;

2- Shall have automatic operation with manual switching;

3- Shall have the necessary power instrumentation to visualize the power characteristics on each source;

4- Shall have adequate Surge Arrestors as needed;

5- Shall be connected to the existing bus trunk after testing the latter one;

The Chiller shall have the option for limiting its rated capacity, so this can be set to an adequate level during this transitional stage.

Question 11: Does the existing 110V/190V MCC feed the existing boilers and related pumps which are outside our scope? If yes, what do we do for the heating circuit's power that is 110V/190V when the existing MCC is replaced with the new MCC-1B running on 220V/380V?

Answer 11:

The existing 110/190 V MCC currently feeding the **35 HP boiler primary pumps** is to be **retired** for these loads.

The new design standardizes on **230/400 V (network 220/380 V)** with all pump loads terminated on **new MCC-1B (220/380 V)**.

Accordingly, the **35 HP primary pumps** shall be **replaced or suitably modified** to operate at **230/400 V**, including matching starters/VFDs and auxiliaries.

All **circulating pumps** already operate at **230/400 V** and shall be migrated to **MCC-1B** with appropriately rated protection and control.

The Contractor shall verify and coordinate **motor nameplate data, starting method, protection settings, short-circuit rating, and cable sizing** to the new voltage system, and provide **shop drawings and catalogues** for approval.

No procurement or delivery of motors/starters shall occur **prior to the Engineer's formal written approval**.

Question 12: Is there a possibility to have an extension for this bid, 1 week from the date of your answer? The final decision will be made by the Presidential team.

Answer 12: Yes, an extension for this bid has been granted. The **new submission deadline is Thursday, October 30, 2025**.
Bidders are requested to **verify the exact submission time and any additional instructions published on the Public Procurement Authority (PPA) electronic platform**, as the official timing and details announced there shall prevail.
No further extensions will be granted.

General Q & A:

Question 13: Are we allowed to propose equipment of Chinese origin or lesser-known brands, given that the Tender Documents do not specify country of origin or particular brand names?

Answer 12: **The Tender Documents require that all equipment and materials be brand-new, of the latest model, clearly identified by the manufacturer, and fully compliant with the specified international standards and performance requirements.** Acceptance is based solely on demonstrated conformance and supporting evidence, **not** on country of origin or brand names.

Any references to manufacturers in the specifications are **solely to define the required standard of quality**; products described as **"or approved equal"** are acceptable **subject to the Engineer's (Purchaser or Contracting Authority) formal approval**.

Accordingly, bidders shall submit complete technical documentation, including (as applicable):

- Manufacturer's catalogues and technical data demonstrating full compliance with the cited international standards (e.g., IEC, EN, ASHRAE).
- Third-party **type-test/design-verification** certificates for assemblies where required (e.g., IEC/EN 61439 for panelboards/MCCs).
- Proof of **OEM authorization** and relevant qualifications/experience for panel builders/assemblers and installers.

No procurement or delivery shall occur under any circumstance prior to the Engineer's formal written approval of all action submittals (shop drawings, samples, catalogues) in accordance with the submittals/approval workflow stated in the Tender Documents.

In summary: Equipment **may be accepted** provided if it is proven to meet the specified standard of quality through full compliance with the applicable standards and submission requirements, and **is approved by the Engineer prior to any procurement or delivery**. The Employer will strictly enforce standards, certification, and the approval process to ensure top-tier quality.

General Compliance Requirements:

• All works shall strictly comply with the **General and Technical Specifications**, the **Bill of Quantities preambles**, and the **contractual documents**, ensuring a complete turnkey installation in accordance with site conditions.
• All replacement, wiring, mounting, civil modifications, and testing activities are deemed to be **fully included within the contractor's lump-sum offer**.
• Any additional components or accessories required to ensure proper system functionality—such as control sensors, protection relays, communication modules, or equivalent devices—**shall be provided and installed by the contractor at no additional cost to the Owner**.