

**TERMS OF REFERENCE**  
**SUPPLY, DELIVERY AND INSTALLATION OF TWO (2) UNITS PRECISION**  
**AIR-CONDITIONING UNITS**

**1.0 PROJECT SCOPE**

The project scope shall include supply, delivery and installation two (2) units Precision Air-conditioning Units (PACU) of the Department of Justice Main Office.

The project scope shall include the following:

**2.0 CONTRACTOR QUALIFICATIONS**

- Has extensive experience to supply and installation of PACU.
- Has the capacity and capabilities to supply, implement and support product and services;
- Is fully committed to undertake this engagement in accordance with the scope of work defined and any instructions issued by DOJ, where necessary;
- Will maintain professional independence throughout the duration of the project;
- The contractor shall have a certificate from the manufacturer that the company is a certified installer of the proposed brand.
- Must have at least 3 engineers certified of the said product for ensured local technical support

**3.0 TIMELINE, OUTCOME AND PERFORMANCE STANDARDS**

The terms of engagement will be 45 days. The vendor is expected to produce a complete project checklist, with milestone markers and delivery dates upon starting the project. The vendor should schedule weekly progress meetings for the duration of the project.

**4.0 TECHNICAL SPECIFICATION**

- PACU solution must adapt on the limited space of the data center but can still deliver and provide the required precise cooling, humidity and controls
- Proposed PACU must be inRow type with 18kW minimum Gross Sensible Capacity
- Must have Digital Scroll (or equivalent) Compressor with variable modulation capacity from 30-100% of full capacity to save on electricity consumption
- Must be compatible to R410A refrigerant
- Shall have an SHR of 1.0
- With variable speed EC Fans and shall have 25% extra fan capacity for emergency

- With Electronic Expansion Valve (EEV)
- Internal Return Air Temp/Hum & Supply Air Temp sensor
- Condensate Pump
- G4 (AS1324.2) metal frame air filters w/clogged filter alarm
- With humidifier, 1-stage reheat and air baffle
- Can be remotely monitored and can communicate with the other PACU unit for timed operation
- System/Network Setup: Menu shall allow Unit-to-Unit (U2U) communication and setup for teamwork modes of operation
- Bidder must conduct site survey to include Electro-mechanical works
- Units are designed to interact to communicate with SNMP - TCP/IP protocols

## **5.0 SITE WORKS**

- Bidder must dismantle the existing 2-3TR ACU (mechanical piping and electrical piping) and turn over the units to DOJ
- Bidder must submit a methodology on the dismantling of existing 2 - 3TR units, there must be one unit (either ACU or PACU) running at all times
- Bidder must supply and install all necessary materials for the electrical and mechanical works
- Location of condenser units must be at the ledge at the back of DOJ Data Center
- Bidder must check the existing electrical system (feeder line and the existing ECB) of the existing 2 - 3TR ACU if compatible with the proposed 1 - 3TR PACU units, if not compatible the bidder must provide new electrical system with diagram intended for the proposed 1 - 3TR units
- Bidder must provide water supply to the PACU unit, tapping must be on the nearest water line. Water pipe line should not pass on the Data Center and must be connected directly to the units
- Bidder must provide stand for each indoor unit

## **6.0 WARRANTY**

- Three (3) years on parts and service
- Hardware replacement: 8x5 NBD
- 24-hour access to Technical Assistance Center (TAC)
- Access to online knowledge base, communities and tools
- Preventive Maintenance twice a year (once every six months)