



**MILITARY LANDS & CANTONMENTS DEPARTMENT
WALTON CANTONMENT BOARD LAHORE**

UAN: 111-925-866, Fax: 042-99220161
Ahmed Bukhsh Road, R.A Bazar Lahore Cantt

REQUEST FOR PROPOSAL (RFP)

WALTON CANTONMENT BOARD (WCB) COMPREHENSIVE ENERGY AUDIT, TECHNICAL ASSESSMENT & DESIGN OF INTELLIGENT ENERGY ECOSYSTEM.

Walton Cantonment Board (WCB), Lahore invites sealed proposals through E-PADS from International and Local Consortia to transition our infrastructure into a futuristic **Intelligent Energy Ecosystem**.

THE VISION:

WCB intends to move beyond traditional energy audits. We seek a Technology Partner to conduct a holistic assessment and design a "Future State" information system that integrates **Artificial Intelligence, IoT, and New Supply Mechanisms**.

SCOPE OF WORK:

1.0 Comprehensive Energy Audit & Baseline Establishment:

- 1.1 **Detailed Assessment:** Conduct rigorous physical testing, data logging, and non-intrusive inspections of all electrical, mechanical, and civil infrastructure, including tube wells, disposal/pumping stations, public parks, buildings, street lighting, and major energy-consuming equipment.
- 1.2 **Energy Baseline:** Establish a verifiable, time-series energy consumption baseline (e.g., last 3-5 years) correlated with relevant drivers (e.g., temperature, occupancy, production) to accurately quantify existing energy performance and potential savings.
- 1.3 **Measurement & Verification (M&V):** Define a clear M&V plan compliant with international standards (e.g., IPMVP) for post-implementation performance tracking.

2.0 Technical & Operational Assessment:

- 2.1 **Current Workflow Evaluation:** Conduct a deep-dive evaluation of existing energy procurement, distribution, and consumption management processes, identifying all current operational bottlenecks and points of inefficiency.
- 2.2 **Grid Reliability & Power Quality Analysis:** Perform a technical analysis of the existing grid infrastructure, including load flow studies, power quality monitoring (harmonics, voltage stability), and assessment of current system readiness for integration of distributed energy resources (DERs).
- 2.3 **System Readiness for Automation:** The existing metering infrastructure shall be evaluated for compatibility with SCADA and IT/OT systems to determine its readiness for real-time data integration, remote control, and AI-based automation, and to identify any required upgrades.

3.0 Design of Intelligent Digital Ecosystem (Digital Twin & AI Platform):

- 3.1 **Centralized Information System Design:** Design a cloud-native, scalable Information System that acts as the core operating platform for the WCB's energy infrastructure.
- 3.2 **Digital Twin Creation:** Develop specifications for a **Digital Twin** model of the WCB's electrical and mechanical assets, capable of simulating "what-if" scenarios, predicting asset failure, and optimizing maintenance schedules.
- 3.3 **AI-Driven Load Management:** Design the framework for an **Artificial Intelligence engine** that provides real-time, predictive load forecasting, dynamic peak-shaving, automated **Demand-Side Management (DSM)**, and optimal dispatch of internal and procured power.
- 3.4 **Real-time Monitoring & Visualization:** Specify the required sensor architecture, data ingestion pipelines, and a user-friendly dashboard interface (**HMI**) for real-time visualization of energy flow, cost, and system health.

4.0 Strategic Suctioning & Commercial Framework Development:

- 4.1 **Legal & Technical Frameworks for Cheaper Power:** Develop detailed legal, regulatory, and technical frameworks necessary for WCB to actively procure cheaper power, specifically through mechanisms like

- Wheeling and B2B trading.** This includes drafting model contracts, identifying necessary regulatory approvals, and defining technical interconnection requirements.
- 4.2 **Consumer Interface & Engagement Design:** Design a robust, multi-channel consumer interface (e.g., web portal, mobile app) for billing transparency, consumption monitoring, energy-saving nudges, and two-way communication regarding system-wide load management events.
- 4.3 **Financial & Economic Analysis:** Provide a detailed financial model, including **Total Cost of Ownership (TCO)**, projected **Internal Rate of Return (IRR)**, and a clear payback period for the proposed "Future State" Intelligent Energy Ecosystem.

PREFERRED BIDDER STRUCTURE:

To ensure both global technological expertise and local operational capability, WCB strongly encourages **Joint Ventures (JVs)** or **Consortia** between:

- **International Tech/Consulting Firms** (Lead on Innovation, Strategy, & Digital Systems).
- **Local Engineering Firms** (Lead on Ground Logistics, Surveys, & Regulatory Compliance).

ELIGIBILITY:

- **International Firms:** Valid registration in country of origin.
- **Local Firms:** Valid registration with relevant local bodies (**SECP, PEC, FBR/PRA**).
- **Consortiums:** Must provide a Joint Venture Agreement or Letter of Intent.
- Have at least 2 years of relevant experience
- Submit affidavit of non-blacklisting
- Proof of completing at least 02 similar projects

PROCUREMENT METHOD:

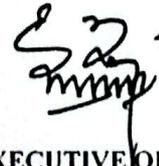
- **Single Stage – Two Envelope Procedure** (Rule 36(b) of PPRA Rules). Technical and Financial proposals must be sealed separately.
- The selection shall be carried out in accordance with Quality & Cost Based Selection (QCBS) under PPRA Rules, 2004.

RFP DOCUMENT:

The detailed RFP containing Instructions to Bidders, Terms of Reference (ToRs), Scope of Work, Evaluation Criteria, Draft Contract Agreement, and Annexures may be obtained from the office of WCB during working hours or can be downloaded from PPRA/E-PADS

TERMS & CONDITIONS:

- RFP must be prepared in accordance with bidding instructions.
- The bidders are required to furnish refundable security deposit equal to Rs. 100,000/- in the shape of CDR in the name of Cantonment Executive Officer, Walton Cantt Board Lahore.
- Technical & Financial Proposals (in separate) must upload on E-PADS on or before 23-02-2026 up to 1500 hrs.
- Technical Proposals will be opened on the same day at 1530 hrs in the presence of bidders or their representative (who may like to attend) in the office of the Walton Cantonment Board, Ahmed Bukhsh Road, R.A Bazar, Lahore.
- The RFP document is available for Rs. 1,500/- from the Engineering Branch of WCB, Lahore Cantt.
- The advertisement / RFP is also available on:
 - www.ppra.org.pk / E-PADS
 - www.wcb.gov.pk
- All taxes shall be deducted as per Government policy in vogue.
- WCB reserves the right to reject any or all proposals under Rule 33 of PPRA Rules, 2004.



**CANTONMENT EXECUTIVE OFFICER
WALTON CANTONMENT BOARD**