



AFRICAN DEVELOPMENT BANK GROUP



ECOWAS Regional Electricity Regulatory Authority (ERERA)

SPECIFIC PROCUREMENT NOTICE REQUEST FOR EXPRESSIONS OF INTEREST

(CONSULTANCY SERVICES- FIRM)

RECRUITMENT OF A CONSULTING FIRM FOR THE DEVELOPMENT AND DEPLOYMENT OF AN ENERGY INFORMATION AND DATABASE MANAGEMENT SYSTEM (EIDBMS)

COUNTRY : Ghana

NAME OF PROJECT: Regional harmonization of regulatory frameworks and tools for Improved Electricity Regulation in ECOWAS

PROJECT ID : P-GH-A00-012

GRANT No. : 2100155041676

CONTRACT NAME : Engaging a Firm for the Development, Deployment of the Energy Information and Database Management System (EIDBMS)

IFB NO. : ERA/AFDB/RHRFTIER/LCS/06A/26

1.1 The ECOWAS Regional Electricity Regulatory Authority (ERERA) has received funding from the African Development Fund in the form of a “Grant” toward the cost of undertaking studies and developing appropriate tools and instruments to facilitate the harmonization of regional regulatory frameworks in the ECOWAS region.

1.2 The ECOWAS Regional Electricity Regulatory Authority (ERERA) has received financing from the African Development Bank toward the cost of “**Engaging a Firm for the Development, Deployment of the Energy Information and Database Management System (EIDBMS)**” (“The project”) and intends to apply part of the proceeds to recruit consulting services.

2.0 Background:

ERERA was created in January 2008 by the Conference of Heads of States and Governments to ensure the regulation of cross-border electricity exchanges and therefore to provide support to national regulators of the electricity sector of ECOWAS Member States. The main mission assigned to ERERA is to establish a transparent, predictable, and harmonized regulation in the region to foster an environment that enables the necessary investments for the development of an electricity market in the region and to ensure the maximum benefit to electricity consumers.

The ECOWAS region is currently experiencing a growth in electricity trade due to the realization of regional energy infrastructure projects undertaken within the framework of West African Power Pool (WAPP). Hence data collected from the other components of this project (i.e., KPIs and tariff study) will

serve as important sources of data for the database and consolidate relevant sector information that will be used by the other components. In this regard, the Ecowas Regional Electricity Regulatory Authority (ERERA) is requesting the services of a consulting firm with deep understanding and experience in the area of database, web, and mobile application development to express their interest in supervising the design, development and deployment of a Database Management Systems for the regulatory authority.

3.0 Objective of the Project:

A centralized information and database management system will be hosted at ERERA Secretariat with authenticated access to its Member Regulators to directly feed into and retrieve information according to pre-defined templates and privileges.

The objective is to engage a competent software development firm to develop, integrate, deploy, test and commission the EIDBMS application on the infrastructure, and to deliver a comprehensive capacity-building and training program, together with bilingual (English/French) documentation, so that ERERA and its Member Regulators can independently operate, administer and use the system.

The system shall enable ERERA and Member Regulators to submit, manage, update and retrieve regulatory and energy-sector data under authenticated access and pre-defined templates and privileges, with dashboards, analytics, geospatial visualization and seamless integration with relevant third-party systems (including WAPP/ICC and national regulator systems) through agreed APIs.

4.0 Scope of Work:

The firm shall deliver the following:

4.1 Requirements and Design

- Review and finalize the Software Requirements Specification (SRS) and detailed design and produce a solution architecture consistent with the adopted middleware / microservice, API-driven, multilingual and security-first principles.
- Undertake business-process review, dataflow and process-flow mapping, and requirements validation with ERERA and Member Regulator focal points.

4.2 Application Development:

- Develop the web portal and API, with role-based access control, country-scoped privileges, dashboards, reporting and embedded analytics.
- Develop multilingual (English and French) user interfaces, reports and documentation.
- Develop the GIS / geospatial functionality within the application (using PostGIS, GeoServer and an open web mapping front end) for regional energy-network mapping and spatial reporting.
- Develop the mobile field-data-capture application, with offline capture and deferred synchronization.

4.3 Dashboards, Analytics and Reporting:

- Develop centralized dashboards and reporting for cross-border trade flows, generation and transmission capacity, tariffs, market prices, service quality and regulatory compliance.
- Provide analytics and business-intelligence-style visualization embedded in the application, with automated report generation for ERERA and Member Regulators.

4.4 Integration and Security:

- Develop the API gateway and system-integration middleware, and integrate with WAPP/ICC, national regulator systems and other agreed third-party APIs.
- Implement single sign-on and multi-factor authentication (Keycloak), comprehensive audit logging, and an easily manageable information taxonomy with defined access, permissions and audiences.
- Implement the application in conformity with the cybersecurity controls procured under TOR, including operation within the Data Loss Prevention policy and the secrets-vault regime.

4.5 Deployment and Testing:

- Deploy the application on the on-premises stack (containerized with Docker and Portainer on the Proxmox cluster, with PostgreSQL 16 and PostGIS) and configure staging and production environments.
- Configure database and application replication to the disaster-recovery site to meet the recovery objectives (RTO under 4 hours; RPO under 30 minutes).
- Conduct unit, integration, performance and security testing; support User Acceptance Testing (UAT) across all user categories; and remediate defects.
- Ensure the system runs on different devices and platforms and supports simultaneous user connections.

4.6 Capacity building and Training:

- Develop and deliver a role-based training and capacity-building programme for ERERA operational staff and technical staff, Member Regulator focal points and end users.
- Deliver administrator training to the ERERA ICT team (operating-system and hypervisor administration, database operations, backup and recovery, and security monitoring), enabling ERERA to operate and administer the system independently.
- Deliver a train-the-trainer programme and blended (virtual and targeted on-site) workshops.
- Develop bilingual (English/French) training materials, user and technical manuals, and e-learning modules hosted on an open-source learning platform (Moodle) on the on-premises stack and provide training evaluation/assessment reports in video and document format.

4.7 Documentation, handover and support:

- Provide database design, information structure and metadata, test protocols and deployment scripts.
- Provide a manual packaging of the key database architecture, scripts, configurations and credentials, and configure user access rights to support business continuity.
- Provide post-launch stabilization and support for an agreed period following go live.

The ECOWAS Regional Electricity Regulatory Authority (ERERA) now invites eligible firms to indicate their interest in providing these services for the “**Engaging a Firm for the Development, Deployment of the Energy Information and Database Management System (EIDBMS)**”.

Interested Firms must provide information indicating that they are qualified to perform the required services outlining proposed methodologies references related to the execution of similar assignments, experience in similar areas, or evidence of knowledge and a proposed timeline. Brochures, CVs of key personnel, and other supplementary materials.

Eligibility criteria, the establishment of the short-list and the selection procedure shall be in accordance with the African Development Bank's "Rules and Procedures for the Use of Consultants" October 2015, which is available on the Bank's website at www.afdb.org.

Interested firms may obtain further information at the address below during office hours from 9.00 am to 5.00 pm Monday through Friday (excluding public holidays) at the address below from **11th September 2026**.

Expressions of interest (soft or hard copy) must be delivered to the address below by **25th September 2026** at 17:00 hours and marked: **Regional harmonization of regulatory frameworks and tools for improved electricity regulation in ECOWAS - "Engaging a Firm for the Development, Deployment of the Energy Information and Database Management System (EIDBMS)". ERA/AFDB/RHRFTIER/LCS/06A/26.**

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