



**INDIVIDUAL CONSULTANT PROCUREMENT NOTICE
IRQ10/IC-014/17**

SCADA EXPERT

INTERNATIONAL CONSULTANT

Date: 3 February, 2016

Description of the assignment: Procurement of SCADA (Supervisory Control and Data Acquisition) Expert
Duty Station: Homebased
Period of assignment/services: 10 WDS over 1 months
Estimated Starting Date: 15 February 2017
Proposals should be submitted: Not later than 13 February 2017, 14:00 pm- Bagdad time.

Important Notices:

- Application documents are published on the following link: <http://procurement-notices.undp.org/>
- Applicants should complete and sign the required documents and send the scanned copies to the email IC1.undp.iq@undp.org by the deadline (It is a MUST to indicate the Procurement Notice Number "IRQ10/IC-014/17" in the e-mail subject box).
- Any email received after deadline due to any technical problem in sending or receiving servers may be rejected
- Applications with any missing documents or non-UNDP format may NOT be considered for evaluation;
- Applicants need to use Adobe reader, MS Word, zipping software (WinRAR) to be able to use and view the documents for this procurement notice;
- Only applications submitted to the email address IC1.undp.iq@undp.org will be considered
- Any request for clarification must be sent to the following e-mail address: sherali.toshmurodov@undp.org
The Procurement Unit will respond to all queries (if any) without identifying the source of inquiry. Answers will be published on the link mentioned above
- Each email should be less than 5 MB; emails over this size will not be received to the above mentioned account.

UNDP is committed to achieving workforce diversity in terms of gender, nationality and culture. Individuals from minority groups, indigenous groups and persons with disabilities are equally encouraged to apply. All applications will be treated with the strictest confidence.

Terms of Reference International SCADA Expert

1. Background:

The Government of Republic of Iraq received an ODA loan from Japan International Cooperation Agency (JICA) in the amount of 14,747 million Japanese Yen towards the cost of Electricity Sector Reconstruction Project in Kurdistan Region on June 11, 2008. Kurdistan region consists of 3 Governorates; Erbil, Sulaimaniyah and Dohuk. The Regional Ministry of Electricity in Kurdistan Region (RMEK) is the implementing agency for this project. The project consists of seven subprojects as described in the below table;

Sub Project	Description of the subproject
1	Procurement, delivery and commissioning of Testing Equipment for Substations for the 3 Governorates
2	Procurement, delivery, installation and commissioning of (132/33kV, 132/11kV and 33/11kV) Mobile Substations for the 3 Governorates
3	Procurement, delivery, installation and commissioning of equipment for Distribution network rehabilitation for the 3 Governorates
4	Construction of a 132/33 kV Substation in Sulaimaniyah Governorate
5	Construction of a 132 kV Transmission Line from Sulaimaniyah to Chwarta new Substation
6	Establishment of Central training Centre in Erbil and Electricity Centres for Equipment Testing in Erbil, Sulaimaniyah and Dohuk, and training programmes
7	Construction of a 33kV Double Circuit Transmission Line and Associated 11kV Distribution Lines in Halabja
8	Establishment of mini SCADA (Supervisory Control and Data Acquisition) and VoIP (Voice over Internet Protocol) communication system

Under an agreement with RMEK, UNDP-Iraq is providing technical assistance to RMEK for the procurement process, monitoring of delivery, acceptance of equipment at RMEK warehouses and monitoring of installation of equipment. RMEK has successfully completed subprojects 1-7 except the subproject 6 (establishment of training facilities). UNDP-Iraq has provided assistance to RMEK in construction supervision, test, commissioning and acceptance of the above works as the owner's engineer. RMEK has recently obtained approval from JICA for implementation of subproject 8.

UNDP-Iraq has established a Project Management Team (PMT) to provide overall technical and administrative services for the implementation and management of each subproject in order to meet the expected outputs within the project completion dates. PMT consists of Procurement Specialist and several international and national engineers/experts.

UNDP-Iraq also provides assistance to RMEK in developing and enhancing the capacity of the Planning Directorate (Power transmission system studies) and other related planning work of system operation functions. RMEK maintains 132kV, 400kV system for power transmission and 11kV and 33kV systems for power distribution. New 400kV system is being implemented and only few lines are currently under operation. As a result of rapid load growth during the past decade, RMEK is forced to impose routine daily load shedding. Current system peak load is approximately 4500 MW.

RMEK has initiated a project to provide full scale SCADA and communication facilities to manage its power system, covering all key stations of the KRG power system by investment programme. However, its implementation has been suspended due to limited funding.

Therefore, RMEK decided to implement this Subproject 8 with reduced scope is aimed at establishing basic, minimum and immediate requirements for data and voice communications at limited number of stations, which is essential for effective management of the KRG power system until the full pledged SCADA project implemented.

The proposed Subproject scope covers real time data transmission from 23 stations to KRCC. 23 stations include IPP power plants and major receiving stations. Mini SCADA system with medium level reliability is proposed to be established. This covers primary data transmission from these stations for monitoring and supervisory purpose, excluding control functionality.

The proposed voice communication system covers 30 stations which include DCCs and main receiving substations. The proposed communication system covers wider geographic locations via fibre optic links (OPGW) , with IP telephone system facilities at the substations.

The scope of implementation primarily includes installation, testing and commissioning of mini SCADA and communications equipment and fiber optic links already installed under various projects for substations and transmission lines. It also includes supply and commissioning of additional equipment /software systems as required to establish overall system.

UNDP intends to obtain services of SCADA and Communications Expert to assist UNDP and RMEK team in preparation of the technical part of the bid document to select a contractor for implementation of the subproject 8. RMEK has already prepared the draft technical document utilizing the available information from the full scale SCADA document.

2. Overall Scope of Works

Under this assignment of the Consultants following tasks need to be performed;

- 1) Review scope of the project which addresses mini SCADA system covering data transmission from 23 stations and establishing voice communication covering 30 stations and make any changes required
- 2) Review the bill of quantities of the main items of the project to ensure that proposed list/type/Qty match with the project requirements and amend the list if required
- 3) Review the existing technical specifications of the equipment and amend/add if required to ensure that they meet the required functionality/performance of the system
- 4) Review the cost estimate prepared by RMEK for implementation of the project by an international contractor and amend the same using the current market prices. UNDP/RMEK will provide all necessary documents/information (Technical specifications including, single line diagrams, maps, BoQ, cost estimate, etc.) to consultant by e-mail, so that the consultant could carry out the assignment from its home office.

The Consultant promotes a collaborative, client-focused, quality and results-oriented approach in the project. The consulting company is requested to provide services of International consultants who have adequate technical expertise and experience in planning, design and preparation of technical specifications of SCADA & Communications systems.

3. Objective, Tasks, Outputs and Deliverables

3.1 Objective

The main objective of the assignment is to review the existing technical specifications, BoQ and cost estimate prepared by RMEK and enhance/amend the documents suitable for international bidding at homebased input.

3.2 Tasks

Under the authority of the UNDP-Iraq and the PMT, the Consultant will be required to ensure satisfactory performance of the assignment focusing on achievement of the following results on behalf of RMEK:

- To work in close coordination with UNDP

- To review technical specifications prepared by RMEK
- To enhance/amend the technical specifications following international best practices and submit the draft for RMEK/UNDP review and comments
- To review the comments provided by RMEK/UNDP and incorporate them as appropriate
- To finalize and submit the technical specifications suitable for the bidding purpose.

3.3 Outputs and Deliverables

The main deliverable of the International SCADA Expert will be:

SN	Deliverables	Expected Target Date	Weight of deliverables
1	Final technical specifications of SCADA & Communications systems after incorporating comments from RMEK/UNDP	23 February 2017	100%

3.4 Estimated Volume of Works

The estimated volume of works is 10 days at homebased.

#	Country / City	Total No. of Trips	Total No. of Working Days
1.	Home-Based		10
2.	Iraq, Erbil	N/A	
	Total	0	10

4. Payment

Payment shall be lump-sum and effected based on deliverable which to be satisfied and certified by UNDP Project Manager, in accordance with the terms and conditions of the contract.

5. Key Performance Indicators during implementation of Services

Overall, the consultant's performance will be evaluated based on the following key criteria:

- Provision of comprehensive reports and strong reporting skills.
- Timely and successful coordination with relevant parties.
- Weekly progress report to the Technical Manager
- Monthly progress report to PMT

6. Reporting

The Consultant shall report directly to Project Manager.

7. Competencies

Corporate competencies:

- Demonstrates integrity;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favoritism.

Functional competencies:

- Excellent interpersonal skills;
- Focuses on impact and results and responds positively to feedback;
- Consistently approaches work with energy and a positive, constructive attitude;
- Builds strong relationships with clients and external actors, at the senior levels;
- Remains calm, in control and good humored even under pressure;

- Demonstrates openness to change and ability to manage complexities;
- Oral and written communication skills.
- Ability to work under pressure and to meet deadlines;
- Ability to develop innovative solutions – encourage and contribute creative solutions to address challenging situations;

8. Personnel Requirement for the International SCADA Expert

- a. Academic and professional background
 - University degree in electrical/electronic engineering with professional qualifications from a recognized engineering institution as a professional engineer.
- b. Relevant Work Experience
 - **Technical Experience in required field:**
 - Minimum 15 years of experience in power sector projects with a minimum of 5 years of relevant work experience.
 - Last 5 years of work experience should be in developing/preparation of design, specification of SCADA.
 - experience in planning, design and developing technical specification of telecommunication systems
 - Project management experience
 - **Knowledge of**
 - Operation of power system similar to Kurdistan Region (400kV, 132kV, 33kV) and its control functions/requirements
 - SCADA system planning, design and developing technical specifications
 - Latest Equipment/Hardware used in establishing SCADA systems
 - Application of international standards, such as IEC, IEEE and other relevant standards in specifying Equipment/Hardware and software
 - Communicates effectively with and relates to people of different cultures, demonstrating an ability to see issues from other perspectives.
 - **General**
 - Work experience in projects funded by international or bilateral financial institutions would be an added advantage
 - Experience in the region (Iraq, Middle East and post conflict areas) is an asset

Language Qualifications: fluent in the English language with excellent writing abilities

Documents to be included when submitting the Proposal:

9. Technical Proposal: (which will include the following):

Technical Proposal:

(This will include the following):

- Signed Template Confirmation of Interest and Submission of Financial Proposal. (Please use Annex 1);
- A letter explaining why he/she considers himself/herself the most suitable candidate for the work;
- Personal CV including past experience in similar projects and at least 3 references. Please Use the attached (P11 Form Only) CV Form – Annex 2 attached. (UNDP-Iraq reserves the right to disqualify any of CVs who are not compliant with the requested form);
- Sample reports of previous work in English, if available;

- A language assessment will be conducted [if needed] for the purpose of verifying fluency in Arabic and English;

10. Financial proposal:

The financial proposal will specify a total lump sum amount and payment terms around specific and measurable (qualitative and quantitative) deliverables. Payments are based upon delivery of the services specified in the TOR. A breakdown of this lump sum amount (including travel, per diems) is to be provided by the IC candidate.

Please use Annex 1.

11. Travel:

No travel expected under this contract. In the case of unforeseeable travel, payment of travel costs including tickets, lodging and terminal expenses should be agreed upon, between the respective business unit and Individual Consultant, prior to travel and will be reimbursed.

Selection Criteria

The award of contract will be made to one individual consultant whose offer has been evaluated and determined as being:

- a) responsive/compliant/acceptable, and
- b) Achieving the highest combined score (technical and financial).

Minimum requirements: This will be part of the technical proposal

- a) University degree in electrical/electronic engineering with professional qualifications from a recognized engineering institution as a professional engineer.
- b) Minimum 15 years of experience in power sector projects.
- c) 5 years of work experience should be in developing/preparation of design, specification of SCADA.
- d) Experience in planning, design and developing technical specification of telecommunication systems
- e) Experience in operation of power system similar to Kurdistan Region (400kV, 132kV, 33kV) and its control functions/requirements
- f) SCADA system planning, design and developing technical specifications
- g) Latest Equipment/Hardware used in establishing SCADA systems
- h) Application of international standards, such as IEC, IEEE and other relevant standards in specifying Equipment/Hardware and software
- i) Communicates effectively with and relates to people of different cultures, demonstrating an ability to see issues from other perspectives.
- j) Experience in the region (Iraq, Middle East and post conflict areas) is an asset
- k) Willingness to obtain the required security courses as applicable through the website.
- l) Subject to security requirement, the IC must pass the Security Awareness Induction Training (SAIT) in case if any travel is required to Iraq.
- m) Willingness to undergo a medical exam. This applies only for consultant of 62 years of age and above where a full medical exam will be required from a UN certified doctor if selected for award of contract.

- n) Ability and desire to work inside Iraq.
- o) Acceptance of IC General Terms and Conditions.

The Individual consultant will be evaluated based on the following methodology:

Only candidates obtaining a minimum of 70 points will be considered for the Financial Evaluation

<i>Main Criteria</i>		Max. Point 100	Weight
Technical	<p>Relevance and responsiveness of candidate's past experience and qualification based on submitted documents:</p> <ul style="list-style-type: none"> The IDE must 15 years of experience in power sector projects with a minimum of 5 years of relevant work experience – 10 Points. 5 years of work experience should be in developing/preparation of design, specification of SCADA – 20 Points. SCADA system planning, design and developing technical specifications – 15 points Experience in planning, design and developing technical specification of telecommunication systems– 10 points. Experience in operation of power system similar to Kurdistan Region (400kV, 132kV, 33kV) and its control functions/requirements – 10 points. Knowledge of Latest Equipment/Hardware used in establishing SCADA systems – 10 points University degree in electrical/electronic engineering with professional qualifications from a recognized engineering institution as a professional engineer. - 10 Points. Excellent knowledge of international standards, such as IEC, IEEE and other relevant standards in specifying Equipment/Hardware and software- 10 Points. Fluency in English – 5 Points. 	100 Points	70%
Financial	<u>Lowest Offer / Offer*100</u>		30%
Total Score = (Technical Score * 0.7 + Financial Score * 0.3)			

Weight Per Technical Competence	
5 (outstanding): 96% - 100%	The individual consultant/contractor has demonstrated an OUTSTANDING capacity for the analyzed competence.
4 (Very good): 86% - 95%	The individual consultant/contractor has demonstrated a VERY GOOD capacity for the analyzed competence.
3 (Good): 76% - 85%	The individual consultant/contractor has demonstrated a GOOD capacity for the analyzed competence.
2 (Satisfactory): 70% - 75%	The individual consultant/contractor has demonstrated a SATISFACTORY capacity for the analyzed competence.
1 (Weak): Below 70%	The individual consultant/contractor has demonstrated a WEAK capacity for the analyzed competence.

Annex 1: Submission Form Confirmation of Interest and Submission of Financial Proposal
Annex 2 – CV Form (P11 for SCs and ICs)
Annex 3 – Individual Consultant General Terms and Conditions