

**IT consultancy services for the implementation of the Agency's  
REMIT Information System (ARIS) for the Agency for the  
Cooperation of Energy Regulators**

**Multiple Framework Contract**

**TECHNICAL SPECIFICATIONS**

**OPEN CALL FOR TENDERS  
ACER/OP/MMD/09/2013**

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## **1. INTRODUCTION**

This document contains detailed technical specifications for the invitation to tender no. ACER/OP/MMD/09/2013 for the provision of IT consultancy services for the implementation of the Agency's REMIT Information System (ARIS) for the Agency for the Cooperation of Energy Regulators.

## **2. BACKGROUND INFORMATION**

In order to fulfil the Agency's commitments towards Regulation (EU) No 1227/2011<sup>1</sup> of the European Parliament and the Council on wholesale energy market integrity and transparency ('REMIT'), the Agency has started developing a tailor made ICT system to support its responsibilities in this matter. Such responsibilities involve the definition and provision of IT systems and interfaces with a considerable number of external stakeholders.

This new IT systems under design and development is referred to as ARIS (the Agency's REMIT Information System). ARIS is a multi-tier, multi-layered IT system that involves the use of a considerable number of open standards, and that is expected to comply with a myriad of data exchange standards (some of them with details being still under discussion). Given the current state of play, while some elements of the system are yet to be detailed, the design principles and logical architecture of the system have been determined already:

### **2.1 Design principles**

- Confidentiality of Data: data transmitted (Input & Output) over the Internet will be encrypted.
- Data Integrity: data to be sent or received will be protected against any manipulation on transit.
- Data Availability: systems will be designed with high availability in mind. Disaster recovery sites and fast disaster recovery are built into plans.
- Non-repudiation of Origin: data sent will be digitally signed to ensure authenticity of source.
- Non-repudiation of Reception: data properly received will produce confirmation of reception codes.
- Authentication, Authorisation & Accounting: role based access control. Single sign on. Centralised logging of activities.
- Open Standards where possible: Unless absolutely justifiable, open standards for web and data warehouse technologies shall be used.
- Flexibility: Modular system, scalable and based on software components.
- Reusability: cross platform where possible. Based on software components.
- Performance: Amount of data is a significant variable to consider. Load test with expected quantities of data. Software and ICT architecture shall be highly scalable.

### **2.2 High level architecture**

- Shall extend the classic three-tier architecture (Presentation/Logic/Data), to accommodate more flexible ways of exchanging data.
- While some modules will count on a web application it shall also allow integration with external stakeholder systems for automatic interaction of interoperable services.

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<sup>1</sup> Regulation (EU) No 1227/2011 of the European Parliament and the Council on wholesale energy market integrity and transparency, OJ L 326, 08.12.2011, p.1

- As architectural key driver, shall follow SOA (Service-Oriented Architecture) as paradigm and basis of the platform.
- Multilanguage and Multi-device features shall be taken into account in the design phase.

### **2.3 ICT standards in place**

The Agency relies on some methodologies, tools, architectures and products which are already in place. A brief description of such elements can be found in Annex I.B to the tender specifications. This document should be taken as a non-exhaustive and dynamic list of standards to be observed by the contractor(s) seeking a better understanding of the environment and the skills required to provide services to the Agency. The list is updated at least once a year and is aligned with the evolution and trends of the IT market.

The ARIS system is the Agency's most complex IT system to date and specific references to the underlying technologies that are being used and are going to be used are given in the Annex I.B to these tender specifications.

## **3. SUBJECT OF THE TENDER**

### **3.1 Description of the services**

The purpose of this tender is the provision of appropriately skilled experts to supply IT consultancy services related to software development in all the main areas of IT related to ARIS. The main tasks will fall in the consultancy field and development of studies related to the affected technologies. However, if the Agency so requires, the contractor(s) should be in a position to provide adequate personnel not only to design, but also to implement, support, test and evaluate solutions, or overlook the activities of other Agency's contractor(s). The services may be requested on a full-time or *ad hoc* basis (i.e. the requirement may be for work to be carried out on the basis of a limited number of days to be supplied non-consecutively).

In order to facilitate the assessment of the appropriateness of the skills relating to experts, descriptions of the expected seniority of the profiles are included in section 4 below. These descriptions are known as profile descriptions and are used as the basis for requesting services once the Framework Contract(s) will be in place.

### **3.2 Areas of activity**

The following list of activities detail the areas in which IT consultancy services are expected to be requested within the Framework Contract(s). The list is provided as a reference and shall not be considered as exhaustive. New products may require expertise in other areas where possible.

#### IT Security

- Security requirements analysis according to REMIT requirements for data collection and operational reliability (according to Article 12 of REMIT, the Agency shall take all necessary measures to prevent any misuse of, and unauthorised access to, the information maintained in its systems);
- Risk analysis of operational environment and assessments;
- Support with the aim to obtain an ISO 27001 certification (design and implementation of

- ISMS, auditing, supervising external contractors);
- Provision of specific technical and organizational solutions to reduce risks and assure compliance with best practices and relevant standards, legislation, policies etc.;
- Evaluation and revision of technical and functional specifications with respect to required levels of confidentiality, integrity and availability of data;
- Planning and execution of penetration tests, vulnerability scans and security checks;
- Preparation and testing of Disaster Recovery and Business Continuity plans.

#### IT Software Development Life Cycle (SLDC)

- Functional and technical requirement analysis;
- Resource planning;
- Provision of functional and technical specifications;
- Detailed analysis and design of information systems, starting from high-level analysis provided by the Agency;
- Project management support (attending meetings, preparing presentations and other documents, providing expert opinions when required by the Agency, supervising external contractor(s));
- Detailed analysis and re-design of business processes (existing and new, internal and external);
- Data flow analysis and standardisation of communication protocols, formats and codes;
- Support for end users (Agency staff, external stakeholders) after deployment of IT solutions (call centre, service desk, change management, documentation updates);
- Maintenance of deployed IT solutions (system administration, system monitoring, performance and capacity monitoring).

**NOTE:** Software development is not a part of the services described in this invitation to tender.

#### Enterprise IT architecture

- Development and enhancement of new and existing IT architectures;
- Costs/benefits analysis for different solutions of IT architecture;
- Capacity Planning in the field of IT;
- Assistance with the implementation of the architecture;
- Architecture maturity assessment;
- Technical studies and evaluations;
- Design and management of complex operational IT systems;
- Design, implementation and management of business continuity plans.

#### IT Quality

- IT quality plans and assessment (testing plans, analysis of test results);
- Execution of functional and non-functional tests of IT solutions;
- Benchmarking and measurement of IT solutions' quality and performance;
- IT development cycle quality control and evaluation;
- Assistance in project management to assure sufficient quality in all stages of development of new IT systems.

#### Database and Data warehouse systems

- Functional and logical database and data warehouse modelling, design, prototyping and implementation;
- Database and data warehouse optimisation and tuning at physical and logical level;
- Database and data warehouse integration with integration platforms and/or other

- integration technologies;
- Backup/Restore and Disaster Recovery plans for large databases and data warehouses;
- High availability for database and data warehouse platforms and applications;
- Distributed data bases and data warehouse platforms and applications.

#### Transactional and transparency platforms

- Providing expertise in the field of existing energy and/or financial trading systems and IT related platforms;
- Providing expertise in the developing and maintaining IT risk management systems and legal compliance IT systems in the energy and financial markets;
- Providing expertise in the field of IT platforms for portfolio management in the energy and/or financial markets;
- Providing expertise in trading transformations and standards;
- Providing expertise in the energy transparency platforms.

## **4. PROFESSIONAL PROFILES**

For all profiles, excellent command of the English language is required.

### **4.1 A-level profiles**

A-level profile experts must have senior experience in IT consultancy and should be able to manage and/or intensively interact with stakeholders.

These experts may be requested to provide the following services (this list is purely indicative and not exhaustive):

- Provision of advice and assistance in any area associated with the procurement, provision, delivery, maintenance, deployment, hosting, effective use of information systems and their environments.
- Assistance with the development of quality plans, service level agreements and quality tests and support in performing quality control and evaluation, quality assessments or other quality matters associated with information systems projects.
- Assistance in the implementation of project management methodology.
- Advice and support in performing security studies, security assessments or other security matters associated with information system projects
- Assistance with the development of functional requirements and support in performing business case analysis.
- Assistance in performing risk analysis.

In a specific request for service special expertise may be required (ISO 27001 lead auditor, ISO 9001 lead auditor, CISA, CISM, CRISC, Oracle Certified Master, etc.)

<b>IT senior consultant</b>	
Minimum education	Completed university studies of at least three years' duration attested by a diploma relevant to the scope of the services.
Knowledge and skills	<ul style="list-style-type: none"> <li>– Ability to participate in high-level meetings, excellent communicator.</li> <li>– Capability of working in an international environment.</li> <li>– In depth knowledge of information systems matters.</li> <li>– Excellent writing and presentation skills (presenting studies).</li> </ul>
Experience	<ul style="list-style-type: none"> <li>– Minimum 10 years' experience in IT consultancy, covering a similar position for at least 6 years.</li> </ul>

	<ul style="list-style-type: none"> <li>– Extensive experience in the domain of studies (i.e. IT security and/or IT SDLC, and/or IT Architecture, and/or IT Quality, and/or Database/Data warehouse systems and/or Transactional systems).</li> <li>– Successfully carried out projects as project manager in at least 1 international project in one of the domain of studies.</li> </ul>
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## 4.2 B-level profiles

B-level profiles experts shall have excellent experience of at least 5 years in IT consultancy and should be able to intensively interact with stakeholders, internal and external, and coordinate the activities of a small team of people.

These experts may be request to provide the following services (this list is purely indicative and not exhaustive):

- Assistance and support in project management.
- Assistance in the implementation of security studies, security assessments or other security matters associated with information system projects.
- Assistance with the development of technical requirements and support in performing use case analysis.
- Assistance and support with risk management.
- Drafting technical studies, providing technical expertise and providing assistance in carrying out technical evaluations in relation with information systems.
- Providing hands-on expertise in managing, configuring and deployment of complex IT platforms and applications.

In a specific request for service special expertise may be required (ISO 27001 lead auditor, ISO 9001 lead auditor, CISA, CISM, CRISC, Oracle Certified Master, etc.).

<b>IT consultant</b>	
Minimum Education	Completed university studies of at least three years' duration attested by a diploma relevant to the scope of the services
Knowledge and skills	<ul style="list-style-type: none"> <li>– Ability to participate in high-level meetings.</li> <li>– Capability of working in an international environment.</li> <li>– Proven knowledge in information systems matters.</li> <li>– Good writing and presentation skills (presenting studies).</li> </ul>
Experience	<ul style="list-style-type: none"> <li>– Minimum 5 years' experience in IT consultancy covering a similar position for at least 3 years;</li> <li>– Good experience in the domain of studies (i.e. IT security and/or IT SDLC, and/or IT Architecture, and/or IT Quality, and/or Database or Data warehouse systems and/or Transactional systems).</li> <li>– Successfully participated in projects as project team member in at least 1 international project in one of the domain of studies.</li> </ul>

## 4.3 C-level profiles

C-level profiles experts shall have experience of at least 3 years in IT consultancy or other areas of IT.

These experts may be request to provide the following services (this list is purely indicative and not exhaustive):

- Performing support for tasks described for A-level and B-level profiles
- Service desk support
- Drafting technical studies, providing technical expertise and providing assistance in

- carrying out technical evaluations in relation with information systems.
- Providing hands-on expertise in managing, configuring and deployment of complex IT platforms and applications.

<b>IT consultant</b>	
Minimum education	Completed university studies of at least three years' duration attested by a diploma relevant to the scope of the services OR a post-secondary education attested by a diploma relevant to the scope of the services requested OR a level of secondary education attested by a diploma giving access to higher education, followed by at least three years' professional experience relevant to the scope of the services requested <sup>2</sup>
Knowledge and skills	<ul style="list-style-type: none"> <li>– Ability to participate in technical-level meetings.</li> <li>– Capability of working in an international environment.</li> <li>– Proven knowledge in information systems matters.</li> <li>– Good writing and presentation skills (presenting studies).</li> </ul>
Experience	<ul style="list-style-type: none"> <li>– Minimum 3 years' experience in IT consultancy or other areas of IT;</li> <li>– Good experience in the domain of studies (i.e. IT security and/or IT SDLC, and/or IT Architecture, and/or IT Quality, and/or Database and Data warehouse systems and/or Transactional systems).</li> </ul>

## **5. SERVICE LEVEL AGREEMENT (SLA) FRAMEWORK**

Each specific contract will include a Service Level Agreement which will be defined when the request for services will be issued.

### **5.1 Benchmarks for SLA**

With the aim to define a modular service level agreement framework, the Agency will set a list of benchmarks which will be used during the implementation of each specific contract to continuously monitor the Contractor's performance in respect of commonly agreed quality standards. The service level requirements described below could eventually have the form of benchmarks.

The selected Contractor may propose additional benchmarks prior to the signature of a specific contract. The proposed benchmarks shall be approved in writing by the Agency and should follow the following basic rules:

- cannot override or modify any part of the requirements and benchmarks defined by the Agency
- cannot be expressed in a way that makes the benchmarks defined by the Agency unusable for the purpose of the contract implementation,
- must be supported by relevant literature and with a descriptive paper describing the use of the proposed benchmark.

<sup>2</sup> The minimum of three years' professional experience required counts as an integral part of the qualification and cannot be counted towards the professional experience required.



An example of a benchmark card may be issued in a specific contract:

<b>Benchmark IMP1.1 - Timely delivery in consultancy projects</b>	
Service quality indicators	For timely delivery
Unit of measure	Dates
Source of measurement data	Report on the outcome of the offer evaluated by the Agency
Observation period	Once, at the end of the specific contract
Frequency of Measure	See " <i>Observation period</i> "
Data to measure	<ul style="list-style-type: none"> <li>– Estimated date of the Agency's acceptance must be mentioned in the detailed plan accepted by the Agency.</li> <li>– End of the specific contract is defined as the final acceptance of deliverables at the end of the specific contract and is signed by the Contractor and the Agency.</li> </ul>
Rules for measuring	This is a single measure at the end of any specific contract.
Formula (if any)	<i>Date of the Agency's acceptance</i> $\leq$ <i>Estimated date of the Agency's acceptance</i>
Thresholds	This measure should not be false
Contractual actions	In case the value is above the threshold, the Contractor will have a penalty of 3% on the total amount of development on the complete value of the specific contract.
Exceptions	No exception

<b>Benchmark IMP1.2 - Non conformities in a consultancy project</b>	
Service quality indicators	Non conformities in the handover phase
Unit of measure	Written report
Source of measurement data	Written report
Observation period	Consultancy project period
Frequency of Measure	Once per specific consultancy contract
Data to measure	No data to measure
Rules for measuring	Will be considered every written report from the Project Manager and sent to the Contractor regarding the hand-over phase.
Formula (if any)	$NCHO = \text{Total number of written reports}$
Thresholds	<i>Threshold 1</i> $NCHO \leq 3$ <i>Threshold 2</i> $3 < NCHO \leq 5$
Contractual actions	In case the value exceeds the threshold 1: a penalty of 5% of the total amount of activities related to the handover; In case the value exceeds the threshold 2: the Agency could invoke the right to terminate the contract.
Exceptions	None

## 6. QUALITY AUDITS

The Agency will audit the Contractor's processes related to the delivery of the service. Three types of audits are foreseen.

<b>1. Short-notice point audit:</b>
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Notice period: 24 hours Content: Request to provide documented evidence that a specific step in the processes related to the delivery of the service has been provided. Maximum frequency: One per month
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<b>2. Shallow system audit announced in advance:</b>
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Notice period: 5 working days Content: On-site (Contractor's premises) audit of all auditable processes and systems (cf. Infra) Maximum duration: 0.5 days Maximum frequency: One per quarter
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<b>3. In-depth system audit announced in advance:</b>
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Notice period: 10 working days Content: On-site audit (Contractor's premises) of all auditable processes and systems Maximum duration: 2 days Maximum frequency: One per year
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The auditable processes will be a part of the service level agreement for each specific contract.