

ANNEX I.A2

IT System Integration services and IT consultancy services for the Agency for the Cooperation of Energy Regulators

Multiple Framework Contracts in cascade

TECHNICAL SPECIFICATIONS

LOT 2 - IT consultancy services

OPEN CALL FOR TENDERS

ACER/OP/MIT/10/2017

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Glossary

The Agency	Agency for the Cooperation of Energy Regulators
ARIS	Agency's REMIT Information System(s), including applications used for its management and handling of information stored within, e.g. CMT
CEREMP	Centralised European Register of Energy Market Participants
CMT	Case Management Tool
ISF	Information Security Framework
ISMS	Information Security Management System
ITSM	IT Service Management
NDA	Non-Disclosure Agreement
NP	Notification Platform
NRA	National Regulatory Authority
QMF	Quality Management Framework
REMIT	Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency
REMIT Information	Information and data in scope of the Agency's REMIT Information Security Policy
SDLC	Software Development Lifecycle

1. Introduction

The following technical specifications for the requested “IT System Integration services and IT Consultancy services for the Agency for the Cooperation of Energy Regulators” for **Lot 2 - IT consultancy services** include:

- a description of the requested services;
- a description of experts’ profiles required for the delivery of the services;
- the Service Level Requirements.

The purpose is to specify in a clear manner what are the expected deliverables and services and their quality, which may be part of each specific contract.

2. Subject of the contract

The purpose of the Framework Contract (hereinafter the ‘FWC’) for Lot 2 is the provision of the IT consultancy services, as follows:

- A.** Providing consultancy services on the implementation and operation of the Agency’s REMIT Information Security Framework.
- B.** Providing consultancy services on the implementation and operation of the ARIS Quality Management Framework.
- C.** Providing expert advice and support in project and service governance and management and in resolving specific issues and problems related to the development, implementation and operation of ARIS.

2.1 General requirements

All tenderers shall comply with the general Service Level Requirements defined in Section 3 of these Technical Specifications.

Where applicable, all provided equipment/software/services shall be at least VMware vSphere (ESX 5 or higher), Windows 2008 r2 (or higher), Redhat Enterprise Linux 6 (or higher) and Oracle 12c (or higher) certified or equivalent.

At the end of each specific contract and/or at the end of the FWC the Agency shall retain the right to remove its own equipment, software, applications, data, etc. The selected Contractor(s) (hereinafter referred to as ‘the Contractor’) are required to ensure cooperation with potential new contractor(s) for the possible handover of the services listed below, upon prior conclusion of a specific contract for a Transition-out of services.

The Agency’s staff and/or consultants, if authorised by the Agency, shall have physical access to the equipment on which REMIT Information is stored without any additional cost.

If the use of specific tools and SW solutions is part of the service provided by the Contractor then the Agency may require that such tools and SW solutions are installed and used within the ARIS physical infrastructure without any additional cost.

All the services listed below will require a Transition-in phase to enable the Contractor to fully take in and start providing the services. Transition-in activities shall be included in the scope

of services listed below. Unless agreed otherwise in each specific contract the Transition-in phase for any service shall not be longer than three (3) months from the date of the signature of the specific contract.

All the services listed below may require a Transition-out phase to ensure the Contractor will fully hand over the services to the Agency or to another service provider.

All the services listed below may be used also to support the Agency in the activities related to internal IT needs supporting REMIT and thus supporting internal end-users, i.e. the Agency staff.

2.2 Description of the requested services

The services listed below shall include all related basic infrastructure (such as provisioning of specific tools, licenses, HW and SW support, etc.) which is needed by the Contractor to be able to perform the requested services.

The Contractor shall be able to provide at least the following:

A. Consulting on the implementation and operation of the Agency's REMIT Information Security Framework

- Maintaining and further developing a comprehensive Information Security Framework ('ISF') for REMIT that will be aligned with ISO/IEC 27000 family of standards;
- As a part of the ISF, maintaining and further developing a common Information Security Policy and the accompanying documents as required by ISO/IEC 27001 standard, taking into account the existing decisions, policies and legislation (e.g. REMIT) already in place. This includes also a comprehensive risk and threat assessment, specific implementing guidelines and instructions, various artefacts and templates as well as training and awareness raising material.
- Performing security assessment of planned changes and supporting the Agency in internal implementation of information security measures.
- Be closely involved in the management of REMIT Information Security and conduct interviews (this includes preparing questionnaires and analysing results) with the Agency staff, the Agency contractors, NRAs and potentially reporting entities as well as participate in the meetings the Agency may organise with NRAs or reporting entities on information security. In this context, information security audits shall be performed to gain information about compliance of the audited entities (the Agency, the Agency contractors, NRAs, reporting entities, ARIS) with the approved ISF.
- Support the Agency's activities related to obtaining an ISO/IEC 27001 certification (e.g. design and implementation of information security management system (ISMS), auditing, supervising external contractors);
- Preparation and testing of Disaster Recovery and Business Continuity plans;
- Evaluation and revision of technical and functional specifications with respect to required levels of confidentiality, integrity and availability of data;
- Plan and execute up to two (2) penetration tests, vulnerability scans and security checks annually of all ARIS components and modules.

B. Providing consultancy services on the implementation and operation of the ARIS Quality Management Framework

- Performing User Acceptance Testing for the Agency
- Maintaining and further developing the ARIS quality management framework (“QMF”) to ensure the proper quality of ARIS components and modules. In this context, the Contractor shall provide appropriate methods, procedures and other documentation for efficient testing and validation of all system components and modules.
- Analyse testing results and testing reports and propose improvements/changes. The Contractor shall also perform up to two (2) quality measurements and benchmarking annually relevant to ARIS.
- Communicate with other external contractors to obtain necessary information about how to plan and execute the tests using the appropriate test data. In addition to that the Contractor shall coordinate activities related to quality assurance involving multiple external contractors and shall implement the applicable testing methodology and testing strategy.
- Actively supporting Agency's activities related to data processing, including performing various checks and statistical analysis of the data.

C. Providing expert advice and support in project and service governance and management and in resolving specific issues and problems related to the development, implementation and operation of ARIS

This may include (non-exhaustively) the following:

- Provision of specific technical and organisational solutions to reduce risks and assure compliance with best practices and relevant standards, legislation, policies etc.;
- Functional and technical requirement analysis;
- Provision of functional and technical specifications;
- Detailed analysis and re-design of business processes (existing and new, internal and external) and enterprise architecture;
- Data flow analysis and standardisation of communication protocols, formats and codes;
- Development and enhancement of new and existing IT architectures;
- Cost-benefit analysis for different solutions of IT architecture;
- Assistance with the implementation of the architecture;
- Architecture maturity assessment;
- Technical studies and evaluations;
- Assistance in project management to assure sufficient quality in all stages of development of new IT 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;
- Provision of expertise in the field of existing energy and/or financial trading systems and IT related platforms;
- Provision of expertise in energy market data reporting standards and formats (e.g. reviewing XML schemas currently in use).

3. Service Level Requirements

The minimum service level requirements (hereinafter the 'SLR') defined below are mandatory for the Contractor and are applicable to all services provided. Any additional service level requirements shall be set in the specific contract(s).

The minimum service levels requirements which shall apply and shall be binding for each specific contract (indicative, but non exhaustive) are:

- **Availability of service:** The Contractor shall respond to any query, question or other communication related to the provisioning of services within one (1) working day from the day this has been requested by the Agency.
- **Allocation of experts:** The Contractor shall ensure the availability of properly qualified experts for the provision of any service in scope (either on-site or off-site) for a minimum of three (3) working days per week and fifteen (15) working days per month unless agreed otherwise in each specific contract.

3.1 Benchmark cards

With the aim to define a modular and customer-oriented SLA framework, the Agency will set a list of benchmarks which will be used during the implementation of a specific contract to continuously monitor that the Contractor, when performing the specific services, is performing at commonly-agreed quality standards.

The 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 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 with a descriptive paper describing the use of the proposed benchmark.

Benchmark O1 - Compliance with timeline for sending the response to the request for services	
Service quality indicators	Compliance with timeline for sending the response to offer request
Unit of measure	Working days
Source of measurement data	E-mail exchanges between the Agency and the Contractor
Observation period	6 months
Frequency of measure	Every time a new request for services is sent to the Contractor and a reply is received
Data to measure	<ul style="list-style-type: none"> – E-mail with the response and a formal offer from the Contractor – Date and time of arrival of the reply to declare willingness to provide an offer
Formula (if any)	$O2 = \text{Date_Received_Offer_Email} - \text{Date_Deadline_Submission}$
Thresholds	$O2 \leq 0$ in working days
Contractual actions	The Agency will send the request for services to the next Contractor on the list for a period of 12 months following the observation period, excluding the Contractor in question.
Exceptions	No exception

Benchmark O2 - Success or failure to provide the offer for the requested services	
Service quality indicators	Success or failure to provide the requested service
Unit of measure	Percentage
Source of measurement data	Report on the outcome of the offer evaluated by the Agency
Observation period	12 months
Frequency of measure	When every new request for services is sent to the Contractor
Data to measure	Report on the outcome of the offer evaluated by the Agency from a qualitative and quantitative perspective, in line with the Agency request.
Rules for measuring	After 12 months from the start of FWC and every 12 months period following the start of the FWC, per each Contractor who submitted an offer. The Agency shall take into account the evaluation reports and shall count the number of occurrences in which the Contractor has submitted the offer for the services requested and the number of occurrences in which the Contractor failed to submit the offer.
Formula (if any)	$O2 = [positive_outcomes / (positive_outcomes + negative_outcomes)] * 100\%$
Thresholds	$O3 > \text{Yes in } 75\% \text{ of the total requests}$
Contractual actions	The Agency will send the request to the next Contractor on the list for a time period of 12 months following the observation period, excluding the Contractor in question.
Exceptions	No exception

Benchmark E.1 - Transition-in of the services provided	
Service quality indicators	Successful completion of transition-in activities
Unit of measure	Working days
Source of measurement data	<ul style="list-style-type: none"> – Transition-in plan; – Completion date for transition-in;
Observation period	Transition-in phase
Frequency of measure	Once per specific contract
Data to measure	<ul style="list-style-type: none"> – Date of start of the Transition-in activities (<i>Start_Transition-in</i>) – Date of end of Takeover activities (<i>End_Transition-in</i>)
Formula (if any)	$TOTO = End_Transition-in - Start_Transition-in$
Thresholds	$TOTO \leq 3 \text{ months}$
Contractual actions	<ul style="list-style-type: none"> – the Agency could invoke the right to terminate the specific contract and consider the Contractor unavailable – the Agency shall apply a penalty as specified in the FWC for delayed delivery.
Exceptions	None

Benchmark E.2 - For timely delivery	
Service quality indicators	For timely delivery of the services under the specific contract
Unit of measure	True or False
Source of measurement data	Specific contract
Observation period	Duration of the specific contract
Frequency of measure	Once, at the end of the specific contract
Data to measure	<ul style="list-style-type: none"> – Estimated date of the Agency's acceptance must be mentioned in the detailed plan accepted by the Agency. – Date of Agency's acceptance.
Formula (if any)	$Date \text{ of Agency acceptance} \leq Planned \text{ date of Agency acceptance}$
Thresholds	This measure should not be false

Contractual actions	<ul style="list-style-type: none"> - In case the value is above the threshold, the Agency shall apply a penalty as specified in the FWC for delayed delivery. - In case this measure is false for two (2) consecutive specific contracts the Agency may terminate the specific contract and consider the Contractor unavailable
Exceptions	No exception

Benchmark E.6 - Non conformities in a consultancy project	
Service quality indicators	Non conformities in the consultancy deliverables
Unit of measure	Written report
Source of measurement data	Written report
Observation period	Consultancy project period
Frequency of Measure	Once per specific contract regarding consultancy services
Data to measure	No data to measure
Rules for measuring	Number on non-conformities not corrected within fifteen (15) working days since the non-conformity was communicated to the Contractor
Formula (if any)	$NCHO = \text{Total number of non-conformities}$
Thresholds	<i>Threshold 1</i> $NCHO \leq 3$ <i>Threshold 2</i> $3 < NCHO \leq 5$
Contractual actions	<ul style="list-style-type: none"> - In case the value exceeds the threshold 1 the Agency shall apply a penalty as specified in the FWC for delayed delivery - In case the value exceeds the threshold 2 the Agency could invoke the right to terminate the specific contract and consider the Contractor unavailable.
Exceptions	None

4. Types of projects

Under the FWC three (3) different types of orders could be placed, depending on a type of a project, namely:

- Fixed price projects
- Time-and-means projects
- Quoted Time-and-means projects

The type of the order shall be clearly indicated in the request for services the Agency sends to the Contractor. Detailed descriptions of the types of orders are defined below.

4.1 Fixed price projects

Services shall be provided at a fixed price as stipulated in a specific contract. The overall value of a project shall be based on the prices for man-days as listed in the FWC and on any additional cost clearly indicated and explained. The payments shall be made on the basis of the Agency's written acceptance of the work.

The work shall be carried out by the Contractor in accordance with the specifications set out in the specific contract and its annexes. This shall include a description of the work, the timetable, reports, standards, reference manuals and details of the results and deliverables required.

4.2 Time-and-Means projects

Services shall be provided on a time-and-means basis as stipulated in a specific contract. The overall value of a project shall be based on a specified daily sum to be paid for a given number of man-days to perform the services. The typical example of such a project is on-site full time service provision by dedicated staff. The specific contract shall state the purpose of the provision of the services, i.e. an obligation for the Contractor to achieve a specific result.

The Contractor shall, at the request of the Agency, supply all the necessary personal information regarding its staff providing the services.

The days worked (either on-site or off-site) shall be recorded by the Contractor and/or his staff in the manner defined by the Agency. At the end of each month, the Contractor and/or his staff shall complete and sign the attendance sheet which shall be verified by the Agency.

4.3 Quoted Time-and-Means projects

The request for services shall indicate the maximum number of days needed for the full provision of the requested services and shall be divided into various sub-tasks.

The typical example of such a project is off-site provision of service (e.g. development) with clearly defined deliverables and timelines.

In the request for services, the Agency shall provide the Contractor with a detailed description of each sub-task. The Contractor shall in its response to such a request for service submit an offer which shall include an estimate of the number of days needed to carry out the sub-task and the expected delivery date(s).

The payment, approved by the Agency, will be carried out on the basis of each sub-task fully delivered, supported by "quoted time-and-means" certificate of conformity, and accepted by the Agency in writing.

5. Professional Profiles

The Contractor shall be able to provide a qualified team of experts covering the profiles listed below for the delivery of services under each specific contract for the entire duration of the FWC. The Contractor, as part of the offer for each specific contract, shall provide full details on the experts, including the CVs for each proposed expert. Each CV¹ shall show clearly the qualifications, professional experience and knowledge and skills as specified below for the relevant profile and shall indicate clearly the type of level profile assigned to the respective expert.

Each expert may be associated to one (1) level profile only.

5.1 A-level profiles

- Project Manager (PM)
- IT senior consultant (SC)
- IT senior consultant – Auditor (SCA)
- Senior Energy Market Expert (SEME)

¹ Preferably, in accordance with the European CV format:
<http://europass.cedefop.europa.eu/en/documents/curriculum-vitae/templates-instructions>

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

Project Manager (PM)	
Minimum education	University degree in the field of Computer Science, Computer Engineering, or similar
Minimum experience	<ul style="list-style-type: none"> – At least seven (7) years' professional experience in IT covering a similar position of Project Manager for at least five (5) years; the professional experiences had to be gained after obtaining the required qualification; – Must have successfully completed the project management for at least two (2) international IT Consultancy projects;
Minimum knowledge and skills	<ul style="list-style-type: none"> – In-depth knowledge of project management frameworks (i.e. PRINCE2 and/or PMBOK or equivalent certifications). – Knowledge of project management tools (e.g. MS Project, Microsoft Excel); – Excellent command of English language (level C2 according to the Common European Framework of Reference for Languages (CEFR)²).
Tasks	<ul style="list-style-type: none"> – Manage project development; – Define project scope, goals and deliverables that support business goals in collaboration with senior management and stakeholders; – Communicate the project scopes, goals and deliverable to the implementation team; – Develop full-scale project plans and associated communications documents; – Effectively communicate project expectations to team members and stakeholders in a timely and clear fashion; – Liaise with project stakeholders on an on-going basis; – Estimate the resources and participants needed to achieve project goals; – Draft and submit budget proposals, and recommend subsequent budget changes where necessary; – Determine and assess the need for additional staff and/or consultants and make the appropriate recruitments if necessary during project cycle. – Set and continually manage project expectations with team members and other stakeholders; – Identify and manage project dependencies and critical paths; – Track project milestones and deliverables; – Develop and deliver progress reports, proposals, requirements documentation and presentations; – Proactively manage changes in project scope, identify potential issues, and devise contingency plans; – Coach, mentor, motivate and supervise project team members and contractors, and influence them to take positive action and accountability for their assigned work; – Build, develop and grow any business relationships vital to the success of the project; – Identify and communicate project risks in due time; – Check project implementation and assure delivery in time; – Act as interface between the Agency and the consultancy team; – Draft executive and medium level project documents; – Lead and coordinate any relationship and needed cooperation with other Agency's contractors.

IT senior consultant (SC)	
Minimum education	University degree in the field of Computer Science, Computer Engineering, Electrical Engineering, or similar
Minimum experience	<ul style="list-style-type: none"> – At least ten (10) years' professional experience in IT consultancy, covering a similar position of IT senior consultant for at least five (5) years; the professional experiences had to be gained after obtaining the required qualification; – At least 5 years' experience in the domain of studies in scope of this tender (e.g. Information Security, Quality Assurance, Energy Trading, etc.).

²<http://europass.cedefop.europa.eu/resources/european-language-levels-cef>

	<ul style="list-style-type: none"> – Successfully carried out projects as a project manager or senior consultant in at least two (2) international projects in one of the domain of studies.
Minimum knowledge and skills	<ul style="list-style-type: none"> – Ability to participate in high-level meetings, excellent communicator. – Capability of working in an international environment. – In depth knowledge of information systems matters. – Excellent writing and presentation skills (presenting studies). – Excellent command of English language (level C2 according to CEFRL).
Tasks	<ul style="list-style-type: none"> – 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 requirements 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

IT senior consultant – Auditor (SCA)	
Minimum education	University degree in the field of Computer Science, Computer Engineering, Electrical Engineering, or similar
Minimum experience	<ul style="list-style-type: none"> – At least ten (10) years' professional experience in IT consultancy, covering a similar position of IT senior consultant – Auditor for at least five (5) years; the professional experiences had to be gained after obtaining the required qualification; – At least five (5) years' professional experience in the domain of studies in scope of this tender (e.g. Information Security, Quality Assurance, Energy Trading, etc.). – Successfully carried out projects as a project manager or senior consultant in at least two (2) international project in one of the domain of studies.
Minimum knowledge and skills	<ul style="list-style-type: none"> – Ability to participate in high-level meetings, excellent communicator. – Capability of working in an international environment. – In depth knowledge of information systems matters. – Valid ISO 27001 lead auditor certification – Excellent writing and presentation skills (presenting studies). – Excellent command of English language (level C2 according to CEFRL).
Tasks	<ul style="list-style-type: none"> – 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 requirements 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 – Performing ISO27001 information security audits

Senior Energy Market Expert (SEME)	
Minimum education	University degree in the field of Computer Science, Computer Engineering, Electrical Engineering, or similar
Minimum experience	<ul style="list-style-type: none"> – At least ten (10) years' professional experience in IT consultancy, covering a similar position of Senior Energy Market Expert for at least five (5) years; the professional experiences had to be gained after obtaining the required qualification;

	<ul style="list-style-type: none"> – At least five (5) years' professional experience in the domain of studies in scope of this tender (e.g. Energy Trading, etc.). – Successfully carried out projects as a project manager or senior consultant in at least two (2) international project in one of the domain of studies.
Minimum knowledge and skills	<ul style="list-style-type: none"> – Ability to participate in high-level meetings, excellent communicator. – Capability of working in an international environment. – In depth knowledge of information systems matters. – Knowledge of energy markets and energy trading. – Excellent writing and presentation skills (presenting studies). – Excellent command of English language (level C2 according to CEFRL).
Tasks	<ul style="list-style-type: none"> – 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 requirements 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 – Performing consultancy related to specific business needs requiring specific knowledge of energy markets.

5.2 B-level profile

- IT consultant (CO)

IT consultant (CO)	
Minimum Education	Completed university studies of at least three years' duration attested by a diploma relevant to the scope of the services
Minimum experience	<ul style="list-style-type: none"> – At least five (5) years' professional experience in IT consultancy covering a similar position of IT consultant for at least three (3) years; the professional experiences had to be gained after obtaining the required qualification; – At least three (3) years' experience in the domain of studies in scope of this tender (e.g. Information Security, Quality Assurance, Energy Trading, etc.). – Successfully participated in projects as project team member.
Minimum knowledge and skills	<ul style="list-style-type: none"> – Ability to participate in high-level meetings. – Capability of working in an international environment. – Knowledge in information systems matters. – Good writing and presentation skills (presenting studies). – Excellent command of English language (level C1 according to CEFRL).
Tasks	<ul style="list-style-type: none"> – 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.