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### **STATEMENT OF SERVICE REQUIREMENT FOR THE PROVISION OF A NUCLEAR SAFEGUARDS INFORMATION MANAGEMENT AND REPORTING SYSTEM (SIMRS) TO SUPPORT A UK STATE SYSTEM OF ACCOUNTANCY FOR AND CONTROL OF NUCLEAR MATERIAL (SSAC)**

#### **1 EXECUTIVE SUMMARY**

- 1.1 The ONR SSAC project is seeking a team of professionals to design, develop and deliver a Safeguards Information Management and Reporting System (SIMRS). The SIMRS will store and manage information relating to the support of UK and international nuclear material accountancy and safeguards obligations. The SIMRS will be required to receive reports from locations around the UK and then perform validation and verification activities on these reports to ensure their correctness and completeness. The information held in the reports will then be stored to allow the quantities of different categories of nuclear material held within UK accountancy areas to be determined at any time.
- 1.2 The SIMRS will also be required to translate reports received from within the UK into a different defined format for submission to the International Atomic Energy Agency (IAEA) in order for the UK to meet its international nuclear material accountancy and safeguards commitments. While the accountancy and reporting aspects of the SIMRS are mandatory, it is desirable for the SIMRS to also be able to support Safeguards inspectors in undertaking inspections/verifications and as an asset registry. This ITT relates to the design and delivery of a SIMRS achieving all mandatory requirements, as well as an initial 2 year maintenance and support period, during which time ongoing development can take place in order to achieve any remaining desirable requirements.

#### **2 INTRODUCTION**

- 2.1 The Office for Nuclear Regulation (ONR) is the regulator of the civil nuclear industry in the United Kingdom (UK). This includes existing, decommissioned and new build nuclear reactors and nuclear manufacturing, reprocessing and storage facilities. The ONR regulates 36 nuclear licensed sites within the UK. It employs over 500 professional staff, with over 350 of those in specialist regulatory roles (e.g. nuclear safety/security/safeguards). ONR has offices in Bootle (head office), London and Cheltenham.
- 2.2 One aspect of ONR's work is regarding nuclear safeguards. Nuclear safeguards are measures to verify that countries comply with their domestic and international obligations not to use nuclear materials from their civil nuclear programmes to manufacture nuclear weapons. ONR currently monitors safeguards performance in the UK, ensuring that the UK is compliant in its nuclear safeguards obligations. It does so whilst supporting and intervening as necessary with UK duty holders and/or the European Atomic Energy Community (Euratom) and the International Atomic Energy Agency (IAEA) to ensure that nuclear safeguards obligations in the UK are met.

#### **3 BACKGROUND TO THE PROJECT**

- 3.1 Global recognition of the need for nuclear safeguards, and subsequent nuclear safeguards verification, is reflected in the Treaty on the Non-Proliferation of Nuclear Weapons (the NPT). Under the NPT, nuclear weapons states, including the UK, undertake not to transfer nuclear weapons or any other nuclear explosive devices, and

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not to support development, manufacture or acquisition of such weapons by any non-nuclear weapon states.

- 3.2 The 189 states that are now party to the NPT, do so in agreement that they will apply nuclear safeguards in line with IAEA requirements and permit IAEA auditing and inspections. IAEA nuclear safeguards activities therefore include: the development of a safeguards approach for a state, evaluation of safeguards activities in the member states, reporting findings to United Nations (UN) General Assembly and Security Council. Hence, the IAEA provides credible assurances to the international community that states are applying appropriate nuclear safeguards effectively.
- 3.3 The UK currently undertakes nuclear safeguards with the European Commission (EC), through Euratom. Further details can be found in the Commission Regulation (Euratom) No. 302/2005<sup>1</sup> and associated guidelines<sup>2</sup>. It is noted that information reported to the IAEA is in a different format and the SIMRS, as detailed in the requirements, must be able to translate between these. Bidders are strongly recommended to review the Euratom format in order to gain perspective on how Nuclear Materials Accountancy (NMA) is performed and the associated reporting requirements. During the discovery phase of the project the layout and format for code 10 compliant reporting will be established.
- 3.4 The UK Government has clarified, with its Brexit White Paper<sup>3</sup>, that when invoking Article 50 it will be leaving Euratom as well as the EU. However, the UK government has committed to a domestic nuclear safeguards regime which will be robust and as comprehensive as to existing Euratom standards.
- 3.5 The ONR have been instructed (via the Nuclear Safeguards Bill<sup>4</sup>) to develop and deliver this capability, by means of a UK State System of Accountancy for and Control of Nuclear Material (SSAC) by 29<sup>th</sup> March 2019. One key aspect of the UK SSAC will be a Safeguards Information Management and Reporting System (SIMRS) to which this ITT relates.

#### **4 CURRENT ARRANGEMENTS**

- 4.1 Presently, the UK civil nuclear estate is divided into 181 individual accountancy units, known as Material Balance Areas (MBAs). Some of these MBAs are individual sites and some sites are comprised of multiple MBAs.
- 4.2 All duty holders are required to produce NMA data reports for these MBAs in accordance with Commission Regulation (Euratom) No. 302/2005 which includes monthly inventory change reports for each MBA and an annual statement of the physical inventory and material balance for each MBA. There is a duty placed upon duty holders to hold this information for up to 20 years.
- 4.3 While the accounting methods employed by each duty holder can differ; all accountancy information subsequently passed to the ONR is standardised as prescribed in Regulation (Euratom) No. 302/2005. The total size of the data received from all UK duty holders per annum is estimated to be ~ 1 Gigabyte.
- 4.4 The intention from UK government is for there to be minimal impact on UK duty holders following Euratom withdrawal, therefore, the decision has been made to retain

<sup>1</sup> <http://eur-lex.europa.eu/eli/reg/2005/302/oj>

<sup>2</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32006H0040>

<sup>3</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/589191/The\\_United\\_Kingdoms\\_exit\\_from\\_and\\_partnership\\_with\\_the\\_EU\\_Web.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf)

<sup>4</sup> <https://publications.parliament.uk/pa/bills/cbill/2017-2019/0109/18109.pdf>

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the extant Regulation (Euratom) No. 302/2005 reporting criteria for the UK SSAC. This means all submitted reports are in a known format which will be retained.

- 4.5 What is not standardised currently is the file type or format in which that information is received. Primarily it is received via .XML; however, there is also some spreadsheet and .PDF information provided.

## **5 SCOPE OF THE SERVICES REQUIRED**

- 5.1 Detailed information of the project requirements, explanation of typical inputs/outputs, security considerations and guidelines for forming a tender response are contained in the following Annexes:

- Annex A – Requirements
- Annex B – Inputs and outputs
- Annex C – Security considerations
- Annex D – Tender Response Template
- Annex E – Evaluation Criteria

## **6 OBJECTIVES**

- 6.1 The objective of this project is to design and deliver a solution to provide the ONR with an electronic SIMRS that will underpin the UK's SSAC. The ONR requires a supplier that can develop and implement a fully functional SIMRS that meets all mandatory requirements by the prescribed deadlines, provide associated user training and provide support, maintenance and further development post implementation.
- 6.2 ONR would be interested in working with partners who have the ability to build a custom SIMRS, or be able to modify an existing solution to meet ONR requirements.

## **7 TENDER KEY POINTS**

- 7.1 Should you consider there to be any ambiguity, inconsistency or omissions in this ITT, or any associated documents supplied by the ONR, you should promptly contact us using the details provided.
- 7.2 The ONR reserves the right to amend this ITT. Such amendments shall be issued to all shortlisted suppliers and, if appropriate, reasonable adjustments to the submission date will be considered.
- 7.3 All information supplied to you by the ONR, either in writing or orally, must be treated in confidence. You shall not disclose, copy, reproduce or distribute any of the information supplied by the ONR other than for the purposes of preparing and submitting a tender response.
- 7.4 The ONR reserves the right to disclose all documents relating to this tender process, inclusive of any documents submitted as part of a tender response, to ONR employees or third parties. By submitting a tender response, you agree to this disclosure.
- 7.5 You are responsible for all costs associated in generating your tender response.
- 7.6 You are entitled, at any point in the procurement process prior to a bidder being selected, to withdraw your tender response. Please do so by submitting this request in writing to the Tender Response Contact.
- 7.7 The authority is required by Regulation 4(3) of the Public Contracts Regulations 2006 to ensure that all potential providers are treated equally and in a non-discriminatory

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way during the procurement process. Any evidence of anti-competitive behaviour in relation to this procurement could result in being disqualified.

**8 TENDER RESPONSE SUBMISSIONS**

- 8.1 Tender responses or queries should be sent to the Tender Response Contact as follows:

**tenders@hse.gov.uk**

- 8.2 Tender Responses should be completed using the Tender Response Template provided in Annex D. Additional information should be attached and referenced where applicable.

- 8.3 For tender responses to be considered, they must be received by the Tender Response, noted to be 6<sup>th</sup> April 2018.

- 8.4** Tender responses must include:

- 8.4.1 Sufficient detail regarding the proposed solution, including methodology and approach to enable appropriate evaluation.
- 8.4.2 An Executive Summary of the proposed solution, covering: solution design, development and delivery timescales, build and delivery costs, ongoing maintenance and support, costs for ongoing maintenance and support.
- 8.4.3 Details of governance (a relationship liaison plan) for interface with ONR throughout the project.
- 8.4.4 Details of your planned delivery, including detailed Timescales and schedule clearing showing the critical path, along with highlighted milestones in the development and implementation of the SIMRS.
- 8.4.5 A statement covering the Mandatory and Desirable requirements including reference as to how and when each will be achieved/not achieved.
- 8.4.6 An additional statement addressing how ONR security requirements will be met, as detailed in the Requirements and Security Annexes.
- 8.4.7 Estimates of resource requirements and costing for all phases of delivery.
- 8.4.8 A Data Migration Plan detailing how ONR/Euratom data will be transferred to the new system.
- 8.4.9 A draft system specification to clarify what the supplier sees as ONRs user requirements interpreted into technical requirements.
- 8.4.10 Technical Design details of any software, including Asset List, that is comprehensive as possible, ideally covering the following:
  - The high level design, including underlying technologies and why they are fit for purpose for the solution.
  - Low level design details.
  - An entity relationship diagram explaining the data relationships.
  - A logical database schema.

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- A physical database schema.
  - A process flow to represent the roles of both the supplier and ONR staff from end to end.
  - An ownership diagram that runs in parallel with the process flow to give clarity to ONR where dependencies reside.
- 8.4.11 Provider Requirements, eg. Requirements for example data, access to ONR information, liaison with stakeholders.
- 8.4.12 Detail regarding the proposed 2 year support, maintenance and further development period, including how the system would be supported, what resource and job roles would be required.
- 8.4.13 An outline of the handover process of the system and intellectual property rights including Escrow requirements and including future development, support/defect management and training plans.
- 8.4.14 An outline of the Future Operating System Requirements.
- 8.4.15 A report detailing any final convictions or settlements with regard to anti-competitive behaviour.
- 8.5 Other Tender Response Considerations should be:
- 8.5.1 Any actions or undertakings identified in the delivery plan should be costed in detail. These costs should be broken down to a suitable level. In particular, there should be clear delineation between the costs of:
- Development/implementation of the SIMRS.
  - Training of staff to use the SIMRS.
  - Any on-going support and maintenance.
  - Any on-going further development to achieve remaining desirable requirements.
- 8.5.2 Tender responses should highlight any previous experience, such as through case studies, of working on similar projects, such as other nuclear material accountancy systems, as well as providing evidence to support this. A demonstration of relevant solutions may be requested.
- 8.5.3 Modifications to any of your tender response, post-submission but prior to the Tender Response Deadline, will be accepted providing they are communicated clearly to the Tender Response Contact a reasonable time before the Tender Response Deadline proportional to the modifications requested.
- 8.5.4 Any information submitted with your tender response that you wish to be treated confidentially should be identified as such, providing clear detail of reasoning and confirmation of whether you consider the information to be exempt under Freedom of Information requests.
- 8.5.5 Any markings on tender response documentation provided, such as “confidential” or “commercially sensitive”, should not be taken to mean that the ONR accepts any duty of confidentiality.
- 8.5.6 It is preferred that suppliers do not bid as a consortium. If the potential provider is bidding as a consortium please provide: full details of the consortium, information

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requested in this ITT for each consortia member, the percentage shareholding of the constituent members within the consortium, whether the consortia plans to form a corporate legal entity.

#### 8.5.7 Tender responses may be rejected if:

- They contain omissions, errors, or do not conform to the constraints detailed in this ITT.
- They are not submitted in the manner outlined in this ITT.
- They are received after the Tender Response Deadline.
- The response, or the bidder, attempts to inappropriately influence this procurement process.

## 9 CONSTRAINTS

- Key Security aspects as described in Annex C and in the Requirements in Annex A, in particular regarding suppliers providing staff with SC clearance.
- The Tender Response Deadline for submission is 6<sup>th</sup> April 2018.
- Bidders should be prepared to deploy any personnel working on this project to any of the 3 ONR office locations. Offsite working, where appropriate, will be discussed with the successful bidder.
- The SIMRS must be sufficiently ready for testing by the end of October 2018.
- The SIMRS minimum viable product must be fully implemented and operational by the end of December 2018. This deadline is absolute and non-negotiable. It will be referred to as the SIMRS Operational Date.
- Beginning January 2019 a 3 month parallel running period will begin, during which maintenance and support will be crucial.
- Suppliers are requested to have the majority of skill and resource in-house. Sub-contracting services will not be acceptable to adhere to ONR security and risk policy. As part of the tender the ONR may however commission the services of one or two partners to work in collaboration to enable the outcomes we require.

## 10 CONTRACT MANAGEMENT

- 10.1 ONR will require to be kept updated about progress and delivery of the required work via monthly meetings, to include a contract start-up meeting at ONR's offices at Bootle. Subsequent progress meeting should be arranged with the ONR Project Office and can be held at ONR's office in Bootle, or the contractor's premises.

## 11 SELECTION PROCESS AND PROJECT INITIATION

- 11.1 Once tender responses have been collected on the Tender Response Deadline, an assessment panel of ONR (and other relevant government bodies) personnel will review and evaluate the responses using the response evaluation detailed here. Clarification on any issues will be sought and a successful bidder chosen by the selection deadline.

- 11.2 The tender response evaluation will be undertaken as follows:

**Stage 1:** Tender responses will be checked for completeness and compliance to the conditions detailed in this ITT. Any tender responses failing this stage will not be carried on to stage 2.

**Stage 2a:** Tender responses will be assessed against the evaluation criteria as described in Annex E.

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**Stage 2b:** The assessments undertaken in 2a will be used to inform point scores on a scale of 0-3, as is detailed in the DOS framework and in Annex E.

**Stage 3:** The assessment panel will review and moderate the scores given to all tender responses. The highest scoring tender will then be identified as the winner. Should the highest scoring tender still fall short in critical areas, or should there still exist concerns regarding that tender, then the ONR reserves the right to reject that tender and not appoint a winner. Unsuccessful bidders will be informed and the successful bidder contacted.

- 11.3 Bidders will be informed by the Selection Deadline as to whether their tender was successful.
- 11.4 The successful bidder will then be approached to begin the initiation phase of the project, including contract negotiation.
- 11.5 As the project is undertaken, regular progress meetings will be organised and milestones for delivery set.
- 11.6 The award of this contract will be subject to necessary approvals for funding.

## 12 TIMETABLE

12.1 The following are the timelines relating to this ITT:

Invitation to Tender (ITT) issue Date	<b>16<sup>th</sup> March 2018</b>
Tender Response Deadline	<b>6<sup>th</sup> April 2018</b>
Selection Deadline	<b>20<sup>th</sup> April 2018</b>
SIMRS Testing	<b>End of October 2018</b>
SIMRS Operational Date	<b>End of December 2018</b>
SIMRS parallel running against existing Euratom system	<b>January – March 2019</b>

## 13 GLOSSARY OF TERMS

EC – European Commission

Euratom – European Atomic Energy Community

IAEA – International Atomic Energy Agency

ITT – Invitation to Tender

MBA – Materials Balance Area

NMA – Nuclear Materials Accountancy

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NPT – Treaty on Non-Proliferation of Nuclear Weapons

ONR – Office for Nuclear Regulation

SIMRS – Safeguards Information Management and Reporting System

SSAC – State System of Accountancy for and Control of Nuclear Material

UN – United Nations

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