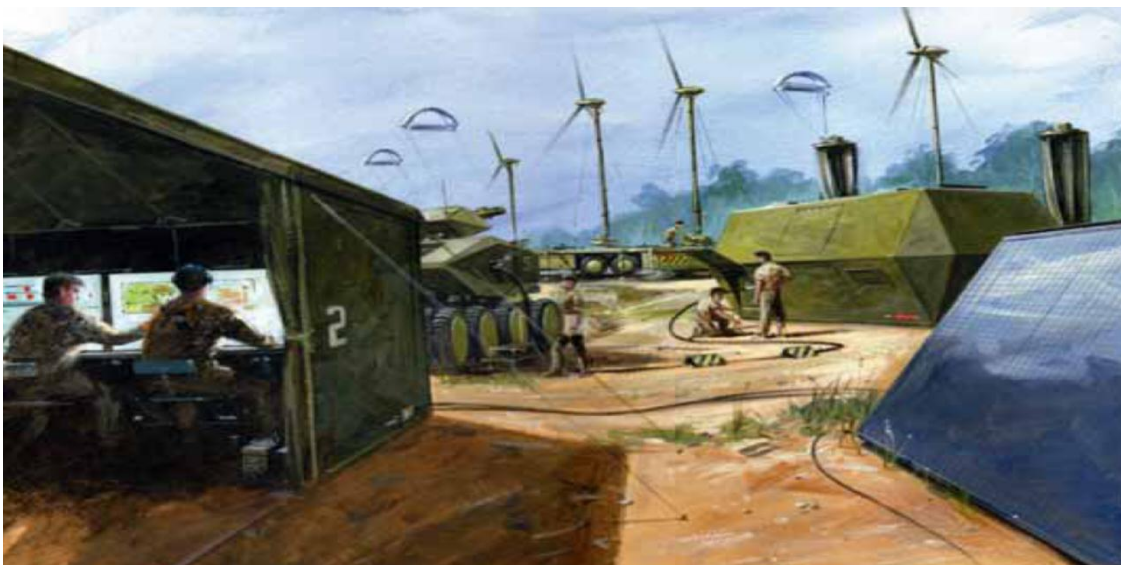


Specifications attached to the Invitation to Tender

14.ESI.OP.101

“Smart Energy Camp”



CONTENTS

| | |
|--|-----------|
| INTRODUCTION TO EDA..... | 4 |
| 1 OVERVIEW OF THIS TENDER | 5 |
| 1.1 DESCRIPTION OF THE CONTRACT | 5 |
| 1.2 TIMETABLE..... | 5 |
| 1.3 PARTICIPATION IN THE TENDER PROCEDURE | 5 |
| 1.4 PARTICIPATION OF CONSORTIA..... | 6 |
| 1.5 SUB-CONTRACTING | 6 |
| 1.6 PRESENTATION OF THE TENDERS..... | 6 |
| 1.7 PERIOD DURING WHICH THE TENDERS ARE BINDING | 8 |
| 1.8 CONTACTS BETWEEN THE EDA AND TENDERERS..... | 8 |
| 1.9 VISITS TO EDA PREMISES..... | 8 |
| 1.10 DIVISION INTO LOTS..... | 9 |
| 1.11 VARIANTS..... | 9 |
| 1.12 NEW SERVICES | 9 |
| 1.13 SECURITY STANDARDS..... | 9 |
| 1.14 CONTRACT PROVISIONS | 9 |
| 2 TERMS OF REFERENCE | 10 |
| 2.1 INFORMATION | 10 |
| 2.1.1 <i>Background-Scope-Use of the Output</i> | 10 |
| 2.1.2 <i>Overview Specification</i> | 12 |
| 2.1.3 <i>Definitions</i> | 13 |
| 2.1.4 <i>Applicable Standards</i> | 14 |
| 2.1.5 <i>List of Acronyms</i> | 15 |
| 2.2 DELIVERABLES AND TIME FRAME | 17 |
| 2.2.1 <i>Deliverables</i> | 17 |
| 2.2.2 <i>To Be Submitted in Tender</i> | 19 |
| 2.3 OPERATIONAL- FUNCTIONAL REQUIREMENTS..... | 22 |
| 2.3.1 <i>Generic requirements for a deployed land camp</i> | 22 |
| 2.3.2 <i>High level functional requirements of an energy supply network in a deployed camp</i> | 22 |
| 2.4 SYSTEM/TECHNICAL REQUIREMENTS..... | 24 |
| 2.4.1 <i>System Use in an Operational Environment</i> | 24 |
| 2.4.2 <i>System Function</i> | 26 |
| 2.4.3 <i>Housing</i> | 28 |
| 2.4.4 <i>Transportation</i> | 28 |
| 2.4.5 <i>System Installation - Set-up – Handling- Decommissioning</i> | 29 |
| 2.4.6 <i>Environment</i> | 30 |
| 2.4.7 <i>Measurement of the benefits</i> | 30 |
| 2.5 MARKING AND LABELLING | 31 |
| 2.6 TRAINING | 32 |
| 2.7 OPERATIONAL RELIABILITY AND MAINTENANCE | 32 |
| 2.7.1 <i>Definitions</i> | 32 |
| 2.7.2 <i>General</i> | 34 |
| 2.7.3 <i>Reliability</i> | 34 |
| 2.7.4 <i>Corrective Maintenance</i> | 35 |
| 2.7.5 <i>Preventive Maintenance</i> | 36 |
| 2.7.6 <i>Storage</i> | 36 |
| 2.7.7 <i>Spare Parts – Consumables</i> | 37 |
| 2.7.8 <i>Warranties</i> | 38 |
| THIS SECTION PROVIDE REQUIREMENTS REGARDING WARRANTIES AND INSURANCES OF THE SESMN EEC (D)..... | 38 |
| 2.8 SYSTEM SAFETY MANAGEMENT | 38 |
| 2.9 INSPECTION, TEST AND VERIFICATION | 38 |

| | | |
|----------|--|-----------|
| 2.10 | QUALITY..... | 40 |
| 2.10.1 | <i>General</i> | 40 |
| 2.10.2 | <i>Quality Management System</i> | 40 |
| 2.10.3 | <i>Quality Management Plan</i> | 40 |
| 2.11 | SYSTEM DOCUMENTATION..... | 42 |
| 2.11.1 | <i>General</i> | 42 |
| 2.11.2 | <i>Documents</i> | 42 |
| 2.11.3 | <i>Delivery Format</i> | 43 |
| 2.12 | PROJECT MANAGEMENT..... | 44 |
| 2.12.1 | <i>Organisation</i> | 44 |
| 2.12.2 | <i>Contractor-Purchaser Interaction</i> | 44 |
| 2.12.3 | <i>Configuration Management</i> | 46 |
| 2.12.4 | <i>Project Documentation</i> | 46 |
| 2.13 | CONDITIONS FOR DELIVERY AND ACCEPTANCE/REJECTION..... | 47 |
| 2.14 | MAXIMUM BUDGET..... | 48 |
| 3 | EXCLUSION AND SELECTION CRITERIA..... | 49 |
| 3.1 | EXCLUSION CRITERIA..... | 49 |
| 3.2 | SELECTION CRITERIA..... | 50 |
| 3.2.1 | <i>Legal capacity</i> | 50 |
| 3.2.2 | <i>Economic & Financial capacity</i> | 50 |
| 3.2.3 | <i>Technical and professional capacity</i> | 51 |
| 4 | AWARD OF THE CONTRACT..... | 51 |
| 4.1 | TECHNICAL EVALUATION..... | 52 |
| 4.2 | TECHNICAL PROPOSAL..... | 53 |
| 4.3 | TECHNICAL QUALITY THRESHOLD..... | 53 |
| 4.4 | FINANCIAL EVALUATION..... | 53 |
| 4.5 | FINANCIAL PROPOSAL..... | 53 |
| 4.6 | CHOICE OF THE SELECTED TENDER..... | 54 |
| | ANNEX I - DRAFT CONTRACT..... | 55 |
| | ANNEX II - MODEL FINANCIAL OFFER..... | 56 |
| | ANNEX III - CURRICULUM VITAE..... | 57 |
| | ANNEX IV - DECLARATION ON EXCLUSION CRITERIA..... | 58 |
| | ANNEX V - LEGAL ENTITY FORM..... | 59 |
| | ANNEX VI - FINANCIAL IDENTIFICATION FORM..... | 60 |
| | ANNEX VII - TENDER SUBMISSION FORM..... | 61 |
| | ANNEX VIII – ECONOMIC AND FINANCIAL CAPACITY..... | 64 |

Introduction to EDA

Pursuant to Council Decision 2011/411/CFSP of 12 July 2011 defining the statute, seat and operational rules of the European Defence Agency and repealing Joint Action 2004/551/CFSP, the mission of the European Defence Agency (hereinafter “EDA” or “the Agency”) is "to support the Council and the Member States in their effort to improve the EU's defence capabilities in the field of crisis management and to sustain the CSDP as it stands now and develops in the future."

Functions and tasks

The European Defence Agency, within the overall mission set out in the Agency's constituent act, is ascribed four functions, covering:

- promoting armaments co-operation;
- developing defence capabilities
- Research and Technology (R&T);
- creating a competitive European Defence Equipment Market and strengthening the European Defence, Technological and Industrial Base.

All these functions relate to improving Europe's defence performance, by promoting coherence. A more integrated approach to capability development will contribute to better-defined future requirements on which collaborations - in armaments or R&T or the operational domain - can be built. More collaboration will, in turn, provide opportunities for industrial restructuring and progress towards the continental-scale demand and market, which industry needs.

Further information can be found on the Agency's web site at <http://www.eda.europa.eu>

1 Overview of this tender

1.1 Description of the contract

The services required by EDA are described in the terms of reference in part 2 of the present tender specifications.

1.2 Timetable

| Summary timetable | Date | Comments |
|---|----------------|--|
| Launch date | 06/08/2014 | |
| Deadline for request of clarifications from EDA | 09/10/2014 | |
| Site visit or clarification meeting (if any) | N/A | |
| Last date on which clarifications are issued by EDA | 16/10/2014 | |
| Deadline for submission of tenders | 30/10/2014 | Tenders delivered by hand shall be submitted not later than 17:00h Local Time |
| Opening session | 31/10/2014 | 14:00h Local Time |
| Interviews | N/A | |
| Completion date for evaluation of tenders | Novemberr 2014 | Estimate |
| Signature of contract(s) | December 2014 | Estimate |

1.3 Participation in the tender procedure

This procurement procedure is open to any natural or legal person wishing to bid for the assignment and established in any of the European Union Member States, countries under the Stabilization and Association Agreements (SAA) or countries under the EEA Agreement.

Tenderers must not be in any of the exclusion criteria indicated in section 3.1 of these tender specifications and must have the legal capacity to allow them to participate in this tender procedure (see section 3.2.1).

Please note that any attempt by a tenderer to obtain confidential information, enter into unlawful agreements with competitors or influence the evaluation committee or the EDA during the process of examining, clarifying, evaluating and comparing tenders will lead to the rejection of his tender and may result in administrative penalties.

1.4 Participation of consortia

Consortia, may submit a tender on condition that it complies with the rules of competition.

A consortium may be a permanent, legally-established grouping or a grouping which has been constituted informally for a specific tender procedure.

Such grouping (or consortia) must specify the company or person heading the project (the leader) and must also submit a copy of the document authorising this company or person to submit a tender. All members of a consortium (i.e., the leader and all other members) are jointly and severally liable to the Contracting Authority.

In addition, each member of the consortium must provide the required evidence for the exclusion and selection criteria (see **Section 3** of these tender specifications). Concerning the selection criteria “economic and financial capacity” as well as “technical and professional capacity”, the evidence provided by each member of the consortium will be checked to ensure that the consortium as a whole fulfils the criteria.

The participation of an ineligible person will result in the automatic exclusion of that person.

1.5 Sub-contracting

The tenderer must indicate clearly, which parts of the work will be sub-contracted and to what extent (proportion in %).

Sub-contractors must satisfy the eligibility criteria applicable to the award of the contract. If the identity of the intended sub-contractor(s) is already known at the time of submitting the tender, all sub-contractors must provide the required evidence for the exclusion and selection criteria as detailed in **Section 3** of these tender specifications.

If the identity of the sub-contractor is not known at the time of submitting the tender, the tenderer who is awarded the contract will have to seek the EDA’s prior written authorisation before entering into a sub-contract.

Where no sub-contractor is given, the work will be assumed to be carried out directly by the bidder.

1.6 Presentation of the tenders

1.6.1 The tenders must comply with the following conditions:

Tenders must be submitted in accordance with the **double envelope system**:

The outer envelope or parcel should be sealed with adhesive tape and signed across the seal and carry the following information:

- the reference number of the invitation to tender **14.ESI.OP.101**
- the project title “**Smart Energy Camp**”
- the name of the Tenderer
- the indication “**Tender - Not to be opened by the internal mail service**”
- the address for submission of tenders (*as indicated in the letter of invitation to tender*)
- the date of posting (*if applicable*) should be legible on the outer envelope.

The outer envelope must contain **three inner envelopes**, namely, **Envelope A, B and C**.

The content of each of these three envelopes must be as follows:

Envelope A – Administrative documents

- the **Tender Submission Form** found in **Annex VII**.
- the duly filled in, signed and dated **Exclusion Criteria Declaration(s)** as requested in section 3.1 and using the standard template in **Annex IV**.
- the duly filled in, signed and dated **Legal Entity Form(s)** as requested in section 3.2 and using the standard template in **Annex V**.
- the duly filled in, signed and dated **Financial Identification Form**¹ using the template in **Annex VI**.
- The **Economic & Financial Capacity** criteria documents as requested in section 3.2.
- The Technical & Professional Capacity criteria documents as requested in section 3.2 - **One signed original and 3 (three) copies**.
- **Duly authorised signature**, i.e. an official document (e.g. statutes, power of attorney, notary statement, etc.) proving that the person who signs on behalf of the tenderer is duly authorised to do so.
- In case of **consortia**, the consortium agreement or a duly signed and dated consortium statement by each of the consortium members specifying the company or person heading the project and authorised to submit a tender on behalf of the consortium.

Envelope B – Technical proposal

One signed original and 3 (three) copies of the technical proposal providing all information requested in point 4.2. In addition an electronic version (one CD) of the technical proposal should be included in envelope B.

Envelope C – Financial proposal

One signed original of the financial proposal based on the format found in **Annex II**.

- 1.6.2** The original tender must be signed, dated and marked “**ORIGINAL**”, and the copies marked “**COPY**”.

¹in case of consortia, only **one** Financial Identification Form for the whole consortium shall be submitted, nominating the bank account into which payments are to be made under the contract in the event that the respective tender is successful

- 1.6.3** Tenders should be drafted in one of the official languages of the European Union, **preferably** English. Requested documents not available in English should be accompanied by an English courtesy translation. The contract shall be entered into in English.

It is extremely important that tenders be presented in the correct format and include all documents necessary to enable the evaluation committee to assess them. Failure to respect these requirements will constitute a formal error and may result in the rejection of the tender.

1.7 Period during which the tenders are binding

Period of validity of the tenders, during which tenderers may not modify the terms of their tenders in any respect is 120 days after the deadline for the submission of tenders. In exceptional cases, before the period of validity expires, the EDA may ask tenderers to extend the period for a specific number of days, which may not exceed 40.

The selected tenderer must maintain its tender for a further 60 days from the date of notification that his tender has been recommended for the award of the contract. The further period of 60 days is added to the validity period irrespective of the date of notification.

1.8 Contacts between the EDA and tenderers

Contacts between the EDA and tenderers are prohibited throughout the procedure save in exceptional circumstances and under the following conditions only:

A. Before the final date for submission of tenders:

- At the request of the tenderer, the EDA may provide additional information solely for the purpose of clarifying the nature of the contract. Any request for additional information must be made in writing by **e-mail** at procurement@eda.europa.eu or at the **Fax no.:** **+32 (0)2 504 29 75** and should indicate the reference number and the title of the tender.
- Requests for additional information received after the deadline for request of clarifications from the EDA as specified in point 1.2 – *Timetable* will not be processed.
- The EDA may, on its own initiative, inform interested parties of any error, inaccuracy, omission or any other clerical error in the text of the call for tender.
- Any additional information including that referred to above will be published on the EDA's website. Please ensure that you visit regularly the site for updates.

B. After the opening of tenders:

- If, after the tenders have been opened, some clarification is required in connection with a tender, or if obvious clerical errors in the submitted tender must be corrected, the EDA may contact the tenderer, although such contact may not lead to any alternation of the terms of the submitted tender.

1.9 Visits to EDA premises

No site visit/information meeting at EDA's premises is deemed necessary for this procedure.

1.10 Division into lots

This tender is not divided into lots. The tenderer must be in a position to be able to provide all the services requested.

1.11 Variants

In the absence of any such indication in the terms of reference your tender should not deviate from the services requested.

1.12 New services

In accordance with Article 31 of the Council decision 2007/643/CFSP of 18 September 2007 on the financial rules of the European defence Agency and on the procurement rules and rules on financial contributions from the operational budget of the European defence Agency, the EDA may have recourse to the negotiated procedure without prior publication of a contract notice for additional contracts involving services similar to those assigned to the party that was awarded this contract.

1.13 Security standards

In the general implementation of its activities and for the processing of tendering procedures in particular, the EDA observes the Council Decision 2013/488/EU of 23 September 2013 on the security rules for protecting EU classified information.

1.14 Contract provisions

In drawing up your tender, you should bear in mind the provisions of the draft contract (see **Annex I** to the present tender specifications). In particular, the draft contract indicates the method and the conditions for payments to the contractor.

2 Terms of Reference

2.1 Information

2.1.1 Background-Scope-Use of the Output

Background-Wider Context

Energy supply is a critical vulnerability in military operations and its protection can cause increased casualty numbers and compromise operational effectiveness. At the same time, energy, in all its forms, accounts for a significant amount of expenditure and is a major driver in the cost of operations. The logistics to provide fuel in the most remote regions where Armed Forces are active is very expensive and the security of the fuel convoys can be a heavy burden on force protection. Traditionally, electrical energy on remote deployed operations has been generated by diesel generators, but accurate baseline measurement of usage has been elusive. A live demonstration project, to include measurement of energy consumption in one Forward Operational Base would provide accurate metrics and credible results of energy consumption and, through comparison in a parametric model, would highlight the objective benefits of using energy efficient solutions such as renewables in operations.

The December 2013 EU Council Conclusions² called for “*civilian and defence research to reinforce each other, including in key enabling technologies and on energy efficiency technology*”. In addition, the conclusions of the Lithuanian Presidency of the Council of the European Union (2nd semester 2013) identified the need for scientific cooperation and technological developments in the field of energy security and military energy efficiency. Hellenic and Italian presidencies (1st and 2nd semesters 2014) are also promoting a Defence Sustainability Concept.

The EUMS Concept Paper on Environmental Protection and Energy Efficiency³ addresses all phases of EU-led military operations and recognized as far back as 2012 the necessity for action. Fuel and Energy are also within the top ten priorities of the European Defence Agency Capability Development Plan⁴ which makes special reference to the need “to analyse practical applications of renewable sources of energy in land installations in a theatre of operations”. The entries in the European Defence Agency Cooperation Data Base (CODABA) show that several Member States plan energy-related acquisitions and are interested in cooperation on issues related to camp energy supply.

Scope of the Contract

The EDA through this contract is purchasing a Smart Energy Supply and Management Network for Energy Efficient Camps (Demonstrator) - SESMN EEC (D) which will be deployed into a low-intensity operational theatre under the lead of one or more Member States and or the EDA.

The Demonstrator is aimed to be used to measure and subsequently highlight the benefits (operational/functional/technical/other) of using energy efficient solutions, including renewable energy, in combination with novel generation, control and energy storage solutions.

Expected output

In practice this would mean that a complete energy supply network (including, among others, folded photovoltaic panels or other renewable source devices and novel storage solutions) will be shipped and assembled in the area of operations. Once assembled, the Demonstrator would operate for 12 weeks, collecting data to examine the following issues:

- How much fuel was saved (mapped to logistic burden) and the potential that renewable energy sources might provide in order to enhance the sustainability of expeditionary capability in CSDP operations;

² http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/140214.pdf

³

http://www.mod.mil.gr/staticsites/greenarmedforces/sidv2/SiD_files/Presentations/FINAL_SID_Presentations_PDF/2-General%20Session%20Speakers/5-EUMS-presentation-SiD.pdf

⁴ <http://www.eda.europa.eu/Aboutus/Whatwedo/capability-development-plan>

- Interoperability of military camps in the field, including interface technologies and plug and play solutions and the impact of alternative sources of supply on operational requirements;
- Shortfalls and priorities in relation to novel technologies, thus developing a common knowledge base on where Member States cooperation and subsequent Research & Technology (R&T) investments should be directed; conclusions on areas where civ/mil synergy on R&T is possible.
- Derive SOPs for the improved use of the Demonstrator and establish framework operational requirements for MS consideration.

Functional Description

Minimum expected configuration:

- Smart energy generation/supply system
- Smart management energy supply/demand system
- Energy storage system
- Integrated renewables (e.g wind turbines, solar panels, wind/solar battery systems etc.)
- Integrated novel/enabling technologies- Hybrid solutions - Modular Topologies (e.g energy storage, renewables, fossil fuels, novel fuels, solar, PV, wind, bio, geo-solar thermal, waste recycling etc.)
- Distribution network
- Low energy consumption appliances (LED lighting etc.) and energy efficient infrastructure for comparison (e.g insulated tents)

The architecture of the SESMN EEC (D) shall incorporate the following types of Functions:

- **Supply**
 - **Sources** – Enables input of energy source carriers including renewables
 - **Conversion** – The means of converting the source carriers
 - **Storage** – The means of storing energy
 - **Distribution** – The distribution carrier of energy
- **Handling**
 - **Utilization** – The conversion of energy to the form that will deliver the desired effect
 - **Platform Management** – The controls and management
 - **Deployment** – The function enabling deployment into theatre

The Smart Energy Supply and Management Network for one camp (using both commercial off-the-shelf products and novel technology solutions) may be integrated into the existing energy supply network of the camp, bearing all or part of the energy load but without putting at risk the 24/7 energy supply of the camp.

SESMN EEC (D) must be capable of running 24 hours a day, 7 days a week and be totally reliable at temperatures below minus 45 degrees Celsius and work reliably and with high efficiency up to at least 55 degrees Celsius at 3000 meters above sea level. System should be capable to function under harsh and extreme conditions, insensitive to vibrations, sandstorms/rain or snow should not have any adverse effect on the system. Acoustic, electronic and thermal signatures must all be low. Easy access for maintenance is vital and a long operational life is demanded with comprehensive first rate support. Details on the requirements are included in the following paragraphs of the technical Specifications.

Additional Benefits-Use of the output

European Council Conclusions: Stimulating dual-use energy efficiency technologies is an explicit tasking of December 2013 EU Council and is directly linked to the very specific energy efficiency focus of the demonstrator.

MS support: Energy efficiency was high in the agenda of the LT and the EL presidencies and continue to be an area of priority for the on-going IT presidency. EDA Member States demonstrated high interest on energy efficient camps. In particular, the impact on capability of the move towards low-carbon will need objective assessment, which could be extracted from the results of the Demonstrator.

Wider Context: EDA proposal is in line with the broader policy context in this field (European Security Strategy, Energy Security Strategy, European Strategy for Smart, Sustainable and Inclusive Growth etc.) which, among others, calls for wide ranging improvements in energy efficiency and use of renewables (decentralisation) to improve resilience. The demonstrator could be set in this context as a specific defence contribution.

Operational benefits/Reduced Risk to Life: Current logistic footprint of operations - where energy supply is still heavily dependent on logistical transports – is subject to various threats causing increased casualty numbers and compromising operational effectiveness. Reduction in fossil fuel consumption would drastically reduce armed forces energy footprint in operations thus reducing the risk to soldiers' life. The demonstrator contributes directly to such output.

Definition of requirements: One of the main blocks to defence investment in sustainable capabilities is the lack of empirical data to support business cases. Through additional simulation processing of the demonstrator results, EDA will support MS efforts to measure the benefits of using energy efficient technologies in deployed camps and thus to better define future requirements (“smart customers”).

Technology Assessment: Through the proposed demonstrator, novel technologies, and integration of different subsystems will be tested and evaluated to support identification of shortfalls and priorities. This will support developing a common knowledge base on where MS cooperation and subsequent R&T investments should be directed. In particular, the demonstrator will uncover areas for future development that are specific to the defence sector as well as capitalising on any dual-use opportunities. Future technologies offering greatest potential to benefit a deployed camp in a variety of climates should be identified.

Interoperability: In addition, the data output of the demonstrator could be used derive operational energy standards on deployed energy efficient camps to improve interoperability (e.g Land deployed Open Systems Architecture)..

Technological and Industrial Perspective, The modular construction of the demonstrator could serve as a catalyst for improved technological and industrial support from European Small Medium Enterprises (SMEs), research centres and academia bringing together several different fields under a prime ‘integrator’ contract approach that reduces individual risks.

Technology Watch and Assessment, These results will be used to support technology watch and assessment and to identify follow-up EDA projects in the field of energy efficiency, renewables, low-carbon technologies, as well as Pooling & Sharing opportunities (e.g. interoperable and interchangeable energy supply systems for camps).

2.1.2 Overview Specification

This Specification provides among others:

- Information on the purpose of SESMN EEC (D) and how and where it will be used;
- Information on what functions SESMN EEC (D) shall have;
- Requirements on the deliverables and their respective delivery scheme;
- Functional and System Requirements for the design and performance of SESMN EEC (D);
- Requirements relating to maintenance schemes and system safety
- Overall quality of the end product as well as how the project shall be run including interaction with the Contracting Authority (EDA).

The content of the specification is conveyed in the following way:

| | |
|------------------------------------|---|
| Information | Text in italic indicates that this content is of informative and descriptive nature. |
| Requirements | All requirements are numbered and come with a prefix in a form of X.X such as 4.3, 3.2.2 etc. |
| Sketches, Pictures and Photographs | Sketches, pictures and photographs are used for informative reasons with the purpose of showing a benchmark of existing concepts, systems, components or similar and/or to provide inspiration. Sketches, pictures and photographs are there not necessarily accurate and therefore shall not be treated as a blue print. |

2.1.3 Definitions

The following types of requirements are used in this specification.

| | |
|-----------------------------|---|
| Mandatory (M) | <p>Indicated with the prefix M of the requirement these requirements must be fulfilled by the Contractor and the total price of the financial offer of the Tenders should include all these requirements.</p> <p>If during the Tender assessment it is concluded that the Tenderer intends not fulfilling all these requirements, these will be considered grounds for disqualification.</p> <p>If the Contracting Authority deems that all or some of these requirements are not met in the deliverables, this could be grounds for not accepting the deliverable</p> |
| Option (O) | <p>Options are requirements for which the Contracting Authority retains the right to purchase or not. The Tenderer must describe all of them in the Tender into detail (e.g content, description, specifications, delivery procedure and timelines, costs) also as an itemised price list.</p> <p>The optional items shall not be included in the t overall costs for mandatory requirements of the financial offer (annex II).</p> <p>The Contractor shall be available to fulfil these requirements according to the terms and conditions included in the Tenders, should the Contracting Authority decide to purchase them. Options shall remain valid for two years</p> |
| Option to the tenderer (Ot) | Options to the tenderer are items which are optional in this case for the tenderers to include or not in the final configuration of the SESMN EEC (D). In case offered, the cost will not be evaluated with the cost of the optional requirements but under the overall cost of the mandatory requirements. Moreover, in case offered, items will be also evaluated under the Technical Award criteria |
| Consumables | Goods which cannot be used for their intended purpose without extinguishing or transforming their substance. This includes goods which must be disposed of to prevent cross contamination, of intelligence / evidence and goods that can only be used once |
| Deployment | A Deployment should be considered to be sending SESMN EEC (D) to a theatre of operations |

2.1.4 Applicable Standards

The following standards (or relevant updates) are the minimum referred to in this specification (in case of equivalents used/proposed should be mentioned in the Tenders). In case of additional standards being used/proposed in the Tenders, these should be clearly indicated.

| | |
|---|---|
| Series 1 freight containers – Classification, dimensions and ratings | ISO 688:1995 |
| Series 1 freight containers – Specification and testing – Part 1: General cargo containers for general purposes | ISO 14961-1:1990 |
| Freight containers – Coding, identification and marking | ISO 6346 |
| System Safety Programme | MIL-STD-882 |
| Demountable Load Carrying Platforms (DLCP) | NATO STANAG 2413 |
| Industrial systems, installations and equipment and industrial products. Structuring principles and reference designations. Basic rules | EN 61346-1:1996 |
| Electromagnetic Compatibility | DEF STAN 59-411 |
| Light and Lighting – Lighting of Work Places: Part 2: Outdoor work places | EN 12464-2 |
| Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow | EN 1717 |
| European Best Practice Guidelines on Cargo Securing for Road Transport | - |
| Extreme Climatic Conditions and Derived Conditions for Use in Defining Design/Test Criteria for NATO Forces Materiel | STANAG 2895 MMS (Edition 1) – 19 February 1990 AC/327 |
| Industrial Systems, Installations and Equipment and Industrial Products – Structuring Principles and Reference Designations – Basic Rules | EN 61346-1:1996 |
| Fixed fire fighting systems. Gas extinguishing systems. Design, installation and maintenance | EN 15004-1:2008 |
| General criteria for the operation of various types of bodies performing inspection | ISO/IEC 17020:1998 |
| Specification for colours for identification, coding and special purposes | BS 381C:1996 |
| Requirements for Electrical Installations | BS 7671:2008 |
| Environmental Handbook for Defence Materiel | DEF STAN 00-35 |
| BREEAM standard | Technical Manual: SD202 Version: 2012 Issue: 0.2 Issue Date: 21/08/2013 |

| | |
|--|---|
| Electrical installations of buildings - Requirements for special installations or locations | IEC 60364-7-740 |
| Salt mist corrosion testing of photovoltaic (PV) modules | IEC 61701 |
| Photovoltaic system performance monitoring – Guidelines for measurement | IEC 61724 |
| Photovoltaic (PV) systems – Characteristics of the utility interface | IEC 61727 |
| Photovoltaic modules | IEC 61730 |
| Protection against electric shocks - common aspects for installation and equipment | IEC 61140 |
| Environmental and Performance Tests for Fuze and Fuze Components | MIL-STD-331C |
| Measurement of Radio Frequency Spectrum Characteristics | MIL-STD-449D |
| Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment | MIL-STD-461F |
| Electromagnetic Environmental Effects – Requirements for Systems | MIL-STD-464A |
| High Altitude Electromagnetic Pulse (HEMP) Environment. | MIL-STD-2169B |
| Environmental testing | STANAG 4370 |
| EDA EDSTAR Best Practice Recommendations ⁵ | EG 01, 03, 04, 06, 07, 08, 11, 13, 14, 15, 16, 17, 18 |
| Maintainability Prediction Handbook | MIL-HDBK-472 |

2.1.5 List of Acronyms

The following acronyms are used in this specification

| | |
|--------|-----------------------------|
| Ao | Operational Availability |
| CDP | Capability Development Plan |
| CDR | Critical Design Review |
| CODABA | Cooperation Data Base |
| COTS | Commercial off-the-shelf |
| CP | Change Proposal |

⁵ http://www.eda.europa.eu/EDSTAR/Std_Recomm.aspx

| | |
|---------------|---|
| CSDP | Common Security and Defence Policy |
| DVE | Detailed Visual Examination |
| EDA | European Defence Agency |
| EDSTAR | European Defence Standards Reference System |
| EL | Hellas (Greece) |
| EUMS | European Union Military Staff |
| EXU | Exchangeable Units |
| FOS | Follow-on support |
| HMI | Human Machine Interface |
| IT | Italy |
| ITVM | Inspection, Test and Verification Meetings |
| KoM | Kick-off meeting |
| LT | Lithuania |
| MDT | Mean Down Time |
| MS | Member States |
| MTBF | Mean Time Between Failure |
| MTTR | Mean Time To Repair |
| MTW | Mean Time Waiting |
| NAo | Non-Availability |
| PDR | Preliminary Design Review |
| PRM | Progress Review Meeting |
| R&T | Research and Technology |
| SESMN EEF (D) | Smart Supply and Management Network for Energy Efficient Camps (Demonstrator) |
| SMEs | Small and Medium Enterprises |
| SOA | System Operational Availability |
| SOP | Standard Operating Procedure |
| STANAG | Standardisation Agreement |
| TFU | Total Time Requirement for Preventive Maintenance |

2.2 Deliverables and Time Frame

2.2.1 Deliverables

Basis to define the expected time-frame of all actions/deliverables will be the date when the contract will be signed by the last party (To)

| No. | Type | Requirement |
|---------|------|--|
| 2.2.1.1 | M | <p>Within two weeks after the kick-off meeting (To+4 weeks) the Contractor shall submit for EDA's approval:</p> <ul style="list-style-type: none"> • Quality Management Plan • Inspection, Test and Verification Plan |
| 2.2.1.2 | M | By To+2 months, a Parametric model of measuring the benefits of using the SESMN EEC (D) shall be delivered in accordance with section 2.4.7 of the Technical Specifications |
| 2.2.1.3 | M | <p>By To+5 months the following shall be delivered:</p> <ul style="list-style-type: none"> • Delivery of the SESMN EEC (D) including functional demonstration to an address in Europe (<i>address to be confirmed during the project</i>) • SESMN EEC (D) warranties • 1 Set of Spare Parts absolutely necessary for the SESMN EEC (D) demonstration period • 1 Set of consumables absolutely necessary for the SESMN EEC (D) demonstration period • SESMN EEC (D) System Documentation |
| 2.2.1.4 | M | Measurement of the benefits of using the SESMN EEC (D) (operational/technical) in a deployed military camp. Results to be included in the Final Report of the Contract in accordance with section 2.12.4.3 of the Technical Specifications |
| 2.2.1.5 | O | Detailed training programme in accordance with section 2.6 of the Technical Specifications |
| 2.2.1.6 | O | Delivery and set-up of the SESMN EEC (D) to an address in a low-intensity operational theatre non-European environment (for pricing purposes Mali-Koulikoro training camp is to be assumed) in accordance with section 2.4.5.3, 2.4.5.4 and 2.4.5.5 of the Technical Specifications |
| 2.2.1.7 | O | 12 months of consumable items in accordance with section 2.7.7 of the Technical Specifications |
| 2.2.1.8 | O | One-day demonstration of the SESMN EEC (D) to EDA and Member States representatives, at the place of deployment, including proposed demonstration programme in accordance with section 2.4.7.7 of the Technical Specifications |

| | | |
|----------|---|--|
| 2.2.1.9 | O | <p>Maintenance package including all or some of the following services (in any case ensuring complete, efficient and low-cost maintenance of the SESMN EEC (D) without causing over-burden to the military personnel of the camp where the network will be deployed) :</p> <ul style="list-style-type: none"> • Training of military personnel/technicians (linked also to the section 2.6 of the Technical Specifications) • On the spot local support (e.g Clerk of Works-CoW) • Telephone technical support • Remote monitoring and control • Emergency technical support • Spare parts (linked also to the section 2.7.7 of the Technical Specifications) • FOS plan <p><i>(Tenderers may propose additional or different than the above mentioned maintenance services but in any case ensuring complete, efficient and low-cost maintenance of the SESMN EEC (D) without causing over-burden to the military personnel of the camp where the network will be deployed)</i></p> |
| 2.2.1.10 | M | <p>Meetings (linked also to the section 2.12 of the Technical Specifications):</p> <ul style="list-style-type: none"> • Kick-off meeting two weeks after the date of the contract signature from the last party (To+ 2 weeks), at EDA premises in Brussels • Progress review meetings as follows: <ul style="list-style-type: none"> - To+3 months - To+5 months (at the place in Europe where the SESMN EEC (D) will be delivered) - To+8 months - To+11months • On To+12 months Final Results presentation, at EDA premises in Brussels • Preliminary and Critical Design Review meetings • Inspection, Test and Verification meetings <p><i>(Above list includes the minimum expected meetings to be conducted throughout the contract. Tenderers in the proposed management and Consultation Plan may include additional meetings or combine activities as long as this will have a positive impact on the efficiency of the management of the contract)</i></p> |
| 2.2.1.11 | M | <p>To+12 months a Final Report shall be delivered (35 Hard copies of the Report, 5 hard-copies of a ppt presentation and 50 CD-ROMs) in accordance with section 2.12 of the Technical Specifications</p> |

2.2.2 To Be Submitted in Tender

| Number | Requirement |
|---------|--|
| 2.2.2.1 | <p>The Tenderer shall complete and submit in the Tender a Compliance Check List including all references to the deliverables/requirements in sections 2.2-2.13 (<i>included</i>) with the following columns:</p> <ul style="list-style-type: none"> • Deliverable/Requirement prefix reference • Description • Compliance (YES or NO) • Deviations - Comments • Reference to relevant standards (<i>where applicable</i>) <p>In case of additional features, Tenderers should also attach a specific list with the additional features proving the following information:</p> <ul style="list-style-type: none"> • Deliverable/Requirement prefix reference (<i>Tenderer's reference</i>) • Description • Comments on the expected added value in relation to the Contract objectives • Reference to the relevant standards (<i>where applicable</i>) |
| 2.2.2.2 | <p>A Functional Description of the SESMN EEC (D) shall be submitted including at least descriptions of:</p> <ul style="list-style-type: none"> • Design including technical data, plans, drawings, diagrams, pictures, illustrations etc. • Technologies: Specific reference to the novel technologies are proposed to be integrated/tested in the SESMN EEC (D) • System Safety: Outline description of how safe working systems will be implemented in SESMN EEC (D) incorporating the factors that must be considered. • Platform Management Systems: Ease of operation • Logistic Footprint: Estimated logistic footprint for SESMN EEC (D) (both functional and maintenance related) |
| 2.2.2.3 | Draft Quality Management Plan |
| 2.2.2.4 | Draft Inspection, Test and Verification Plan |
| 2.2.2.5 | Draft Parametric model of measuring the benefits of using the SESMN EEC (D) in a deployed military camp in accordance with section 2.4.7.6 of the Technical Specifications |
| 2.2.2.6 | <p>Draft Standard Operating Procedures (SOPs) with main elements to be considered:</p> <ul style="list-style-type: none"> • Practicality • Completeness • Simplicity • Brevity |

| | |
|-----------------|--|
| | <ul style="list-style-type: none"> • Clarity |
| 2.2.2.7 | Estimated System Operational Availability including calculations, as per section 2.7, and manufacturers' data |
| 2.2.2.8 | Detailed training programme in accordance with the section 2.6 of the Technical Specifications <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.2.2.9 | Proposed maintenance package in accordance with sections 2.6 and 2.7 of the Technical Specifications <i>(Partially optional service but all information should be included in the Tenders)</i> |
| 2.2.2.10 | All information regarding set-up, installation, housing, storage, handling, decommissioning, environment, transportation, marking and labelling requirements of the SESMN EEC (D) in accordance with the Technical Specifications provisions |
| 2.2.2.11 | Details and cost on the delivery and set-up of the SESMN EEC (D) to an address in a low-intensity operational theatre non-European environment (for pricing purposes Mali-Koulikoro training camp is to be assumed) <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.2.2.12 | Details and cost for 12 months of consumable items in accordance with section 2.7.7 of the Technical Specifications <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.2.2.13 | Details and cost for an one-day demonstration of the SESMN EEC (D) to EDA and Member States representatives, at the place of deployment, including proposed demonstration programme (including a draft demonstration programme) <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.2.2.14 | Specific reference should be included in the Tenders concerning Hazardous materials to be included/used in the SESMN EEC (D). Information should be provided at least on: <ul style="list-style-type: none"> • Type of material • Applicable standards/regulations • Provisioned procedures for use/transport/storage/disposal • Risks associated/Mitigation plan |
| 2.2.2.15 | Specific reference should be included in the Tenders concerning possible need for export licences. Information should be provided at least on: <ul style="list-style-type: none"> • Type of system/subsystem/component/part need export licence • Responsible authority to issue the export license including both the production as well as the deployment • Description of the procedures and responsibilities of the parties to be applied regarding both the production as well as the deployment |

| | |
|-----------------|---|
| | <ul style="list-style-type: none">• Risks associated/Mitigation plan |
| 2.2.2.16 | All necessary information concerning the Project Documentation, in accordance with section 2.12.4 of the Technical Specifications |
| 2.2.2.17 | Warranties in accordance with section 2.7.8 of the Technical Specifications |



2.3 Operational- Functional Requirements

2.3.1 Generic requirements for a deployed land camp

- Self-reliant
 - Water
 - Bulk water
 - Potable water
 - Power
 - Waste management
 - Solid waste
 - Water
 - Bodily waste
 - Protection

- Facilities
 - Medical
 - Staff Working Environment (Command and Control)
 - Workshops
 - Accommodation
 - Sleeping
 - Catering
 - Ablutions
 - Welfare

- Vulnerabilities
 - Protection
 - Personnel
 - Stores (Fuel/Water)
 - Re-supply
 - Fuel
 - Water
 - Food

2.3.2 High level functional requirements of an energy supply network in a deployed camp

Proposed solutions in the Tenders should adapt to the high-level functional requirements below.

2.3.2.1 General

| Number | Type | Requirement |
|-----------|------|---|
| 2.3.2.1.1 | M | <p>Energy provision in a deployed military camp consists of three main features:</p> <ul style="list-style-type: none"> • Main Provider– The feature that ensures appropriate supply of energy to all services in normal operating conditions • Transitional Provider– The intermediate feature that ensures that in case of loss of the Main Provider, energy will continue to be supplied to selected services in an uninterrupted fashion until the Emergency Supply feature is operational • Emergency Provider– The feature that supplies selected services for a limited time once the Main Provider has been lost. |

2.3.2.2 Main Provider

| Number | Type | Requirement |
|-----------|------|---|
| 2.3.2.2.1 | M | The Main Provider provides energy to all services during normal operating conditions |
| 2.3.2.2.2 | M | The Main Provider is designed as such that it optimizes availability of energy to all services, particularly in the context of safety and survivability |
| 2.3.2.2.3 | M | The Main Provider minimizes the number of mediums needed for carrying energy and opt for local conversion where energy in a specific form is needed |

2.3.2.3 Transitional Provider

| Number | Type | Requirement |
|-----------|------|--|
| 2.3.2.3.1 | M | A Transitional Provider shall be in place in the case where the Emergency Provider is not operational at the instant when the Main Provider feature has been lost |
| 2.3.2.3.2 | M | The Transitional Provider shall automatically start and ensure sufficient energy for: <ul style="list-style-type: none"> • All critical/essential services • Selected important services • Selected non-important services (those requiring energy to ensure safe shut down) |
| 2.3.2.3.3 | M | The Transitional Provider shall be either: <ul style="list-style-type: none"> • A separate feature fully independent of the Main Provider, or • A feature integrated into the Main Provider in the case where the Main Provider ensures: <ul style="list-style-type: none"> ○ All critical/essential and selected important services are provided with energy from at least two mutually independent energy providers ○ The mutually independent energy providers are separated such that failure or damage to one provider does not affect the other |

2.3.2.4 Emergency Provider

| Number | Type | Requirement |
|-----------|------|---|
| 2.3.2.4.1 | M | The Emergency Provider shall start upon failure of the Main Provider. |
| 2.3.2.4.2 | M | The Emergency Provider shall start automatically and ensure sufficient energy for: <ul style="list-style-type: none"> • All critical/essential services • Selected important services |
| 2.3.2.4.3 | M | The Emergency Provider shall be either: <ul style="list-style-type: none"> • A separate feature fully independent of the Main Provider, or • A feature integrated into the Main Provider in the case where the Main Provider ensures: <ul style="list-style-type: none"> ○ All critical/essential and selected important services are provided with energy from at least two mutually independent energy providers ○ The mutually independent energy providers are separated such that failure or damage to one provider does not affect the other |
| 2.3.2.4.4 | M | The Emergency Provider shall be able to support autonomous operation for duration of 12 hours (Minimum expected) |

2.4 System/Technical Requirements

2.4.1 System Use in an Operational Environment

| Number | Type | Requirement |
|---------|------|--|
| 2.4.1.1 | M | System, through a modular, plug and play design, to be easily integrated into the existing energy supply network of the camp with minimal required reconfiguration of the network |
| 2.4.1.2 | M | Smart energy generation/supply system, to include off-grid/microgrid power inverters with 380V power output, providing decentralised and wave suitable for sensitive electrical equipment energy <i>(Due to the requirement for innovative solutions, Tenderers may propose in their Tenders alternative solutions which ensure the overall requirement of the contract)</i> |
| 2.4.1.3 | M | Tenders shall include at least the following information regarding the proposed energy storage system: <ul style="list-style-type: none"> • Capacity in system • Discharge cycle • Provisioned discharges per day • Cycles in lifetime • Predicted lifetime |
| 2.4.1.4 | M | Solar panels, with flexible/semi flexible and lightweight foil laminates, providing energy efficient and innovative solutions to identified vulnerabilities such as low power, cleaning constraint, minimum sunshine periods etc. <i>(Due to the requirement for innovative solutions, Tenderers may propose in their Tenders alternative solutions which ensure the overall requirement of the contract)</i> |
| 2.4.1.5 | M | Wind turbines, providing energy efficient and innovative solutions to identified vulnerabilities such as exposure to the enemy, quick installation, performance when minimum wind speed etc. <i>(Due to the requirement for innovative solutions, Tenderers may propose in their Tenders alternative solutions which ensure the overall requirement of the contract)</i> |
| 2.4.1.6 | Ot | Other than wind/solar renewables sources of energy <i>(Technical specifications and expected output to be included in the Tenders in case it is offered by the tenderer);</i> |
| 2.4.1.7 | M | Renewable inverters to inverter DC power into AC grid-synchronous power <i>(Due to the requirement for innovative solutions, Tenderers may propose in their Tenders alternative solutions which ensure the overall requirement of the contract)</i> |

| | | |
|----------|---|---|
| 2.4.1.8 | M | Smart energy generation/supply system batteries' (<i>in case proposed in the Tenders</i>), discharged cycle should ensure avoidance of generator's battery voltage ran down due to long periods of inactivity, so as then the generator not to be able to restart automatically |
| 2.4.1.9 | M | In case of master/slave configuration in the proposed by the Tenderers energy generation/supply system, a synchronisation connection should be integrated |
| 2.4.1.10 | M | SESMN EEC (D) design should be such that provisioned renewables to be able to offset the demand, especially when the camp load is highest during the day, thus extending the time-window to discharge the batteries to power the camp and so save energy generation/supply system's running hours |
| 2.4.1.11 | M | SESMN EEC (D) design should provide flexibility in siting the renewables thus adapting to the selected for deployment camp specificities |
| 2.4.1.12 | M | The Conversion Function shall enable efficient conversion of energy: <ul style="list-style-type: none"> • From Source Carrier to Distribution Carrier • Between different forms of the Distribution Carrier |
| 2.4.1.13 | M | The Storage Function shall enable storage of energy in the context of both Source Carriers and Distribution Carriers |
| 2.4.1.14 | M | The capacity of the Storage Function shall be tailored in particular such that the Operational Availability requirements of the SESMN EEC (D) are met |
| 2.4.1.15 | M | Measures shall be provisioned to ensure that energy is stored in a safe way |
| 2.4.1.16 | M | The Distribution Function shall be designed such that it minimizes the types and forms of Distribution Carriers |
| 2.4.1.17 | M | The Distribution Function shall be designed to avoid single points of failure |
| 2.4.1.18 | M | The Distribution Function shall be designed such that the Operational Availability requirements of the SESMN EEC (D) are met |
| 2.4.1.19 | M | The Distribution Function shall distribute energy with high efficiency |
| 2.4.1.20 | M | The Electrical design shall be such that it maximizes the availability of electrical energy to all electrical consumers among the different services |
| 2.4.1.21 | M | The distribution of electrical energy shall minimize the number of networks using different voltages |
| 2.4.1.22 | M | The electrical energy distribution shall optimize the distribution voltage such that it minimizes transmission losses and conversion to the extent possible |
| 2.4.1.23 | M | Electrical design shall be done according to IEC 60364-7-740 (or equivalent) |
| 2.4.1.24 | M | Electrical Safety shall be ensured and made to comply with IEC 61140 (or equivalent) |

| | | |
|----------|---|--|
| 2.4.1.25 | M | System to be supported regarding its maintenance through a combination of local support and remote monitoring and control |
| 2.4.1.26 | M | Both Air and Water cooled systems are accepted |
| 2.4.1.27 | M | Operating sound levels: Up to 40-60 dB (A) |
| 2.4.1.28 | M | EMI levels, IR and thermal signatures should be according to the standards indicted in section 2.1.4 (or equivalents) |
| 2.4.1.29 | M | Distribution network/Connectors should ensure minimized energy losses |
| 2.4.1.30 | M | Distribution network/Connectors design shall ensure: <ul style="list-style-type: none"> • Flexible cables for optimized laying on-site • Use of the same plug procedure • Maintenance-free connection systems • Simple, safe and quick installation • Touch-proof connections • Plug and play as well as modular approach/interfaces |
| 2.4.1.31 | M | SESMN EEC (D) shall ensure compatibility with fossil based logistical fuels |

2.4.2 System Function

| Number | Type | Requirement |
|---------|------|--|
| 2.4.2.1 | M | Energy storage is aimed to perform at least the following functions: <ul style="list-style-type: none"> • Hold surplus power from the energy generation/supply system or renewable sources until needed • Provide a backup power supply for critical systems |
| 2.4.2.2 | M | The smart management energy supply/demand system is aimed to perform at least the following functions: <ul style="list-style-type: none"> • To be used to both for three-phase and single-phase supplies • Prioritisation of critical systems in emergency power situations; system to be possible to be controlled from a central point avoiding manual intervention • Control of power demands in the unit: <ul style="list-style-type: none"> - Switching power demands on and off by centralised user intervention - Switching power demands on and off according to pre-set timers - Switching power demands on and off according to pre-set priority levels and a target demand level |
| 2.4.2.3 | M | Energy storage should not be possible to be affected by high/low temperatures, in accordance with section 2.4.6 of the Technical Specifications |

| | | |
|-----------------|----------|--|
| 2.4.2.4 | M | In case of energy generation/supply system failure, the system should be able to provide emergency power to critical systems in the camp until full powering capability will be restored |
| 2.4.2.5 | M | Energy generation/supply system should be able to run at their most efficient output and then turn off |
| 2.4.2.6 | M | Energy storage system should be able to run the camp from storage and turn generators off |
| 2.4.2.7 | M | Smart energy generation/supply system should be able to provide back-up energy for critical systems |
| 2.4.2.8 | M | Smart management energy supply/demand system should be able to prioritise power to critical systems in emergency |
| 2.4.2.9 | M | Smart management energy supply/demand system should be able to stop smart energy generation/supply system overloads |
| 2.4.2.10 | M | Renewables sources should be able to be integrated into the camp power network and can be plugged anywhere in the unit |
| 2.4.2.11 | M | Renewables sources should be able to increase the security of power supply and provide back-up power to critical systems |
| 2.4.2.12 | M | Smart management energy supply/demand system to be controlled by software |
| 2.4.2.13 | M | Smart management energy supply/demand system should be able to monitor power usage in the unit and set operating rules for the system based on user input through HMI or similar screens |
| 2.4.2.14 | M | Remote monitoring – remote access to the smart management energy supply/demand system |
| 2.4.2.15 | M | SESMN EEC (D) shall provide safe connections in the distribution network |
| 2.4.2.16 | M | SESMN EEC (D) shall be able to anticipate to high transient loads in order to avoid system overloads or malfunctioning such as voltage drops, flickering lights etc. |
| 2.4.2.17 | M | In case of use of microgrids, the following minimum functions should be performed: <ul style="list-style-type: none"> • Power scavenging from the generator, when it is on, to charge batteries • Generate a reference frequency for non-generator led grid, when generator is off • AC/DC bidirectional conversion for charging and discharging batteries • Generator control – auto start and stop • Battery Management |
| 2.4.2.18 | M | SESMN EEC (D) shall be able to provide continuous, stable power supply with no or limited requirement for support |
| 2.4.2.19 | M | SESMN EEC (D) shall enable input of energy from a source carrier |

| | | |
|-----------------|-----------|--|
| 2.4.2.19 | M | SESMN EEC (D) shall ensure compatibility with renewable carriers |
| 2.4.2.20 | Ot | SESMN EEC (D) shall ensure compatibility with other types of hydrocarbon based fuels |

2.4.3 Housing

Since SESMN EEC (D) needs to be deployable and not mobile, there is some flexibility involved in the design. The Tenderers are thus free to explore different kinds of housing alternatives with one prerequisite: SESMN EEC (D) needs to be able to be transported in ISO containers.

| Number | Type | Requirement |
|----------------|-------------|---|
| 2.4.3.1 | M | SESMN EEC (D) exterior(s) shall in all operational modes be painted Camouflage Desert Sand to in accordance with BS381C Colour No 380 <i>(where applicable)</i> <i>(Final decisions on the paint to be applied will be taken upon decision of the place of deployment)</i> |
| 2.4.3.2 | M | The paint shall protect against corrosion and withstand normal habited weather conditions in all climatic regions in accordance with DEF STAN 00-35 (or equivalent) |
| 2.4.3.3 | M | The exterior of SESMN EEC (D) in all operational modes shall be able to cope with strong sunshine and UV radiation without bleaching in accordance with DEF STAN 00-35 (or equivalent) |
| 2.4.3.4 | M | There shall be no bright reflective surfaces |
| 2.4.3.5 | M | SESMN EEC (D) design shall be based on a modular approach in all its operational modes as to ease the practical aspects of among other things setting-up and pulling down the system as well as to be adaptable to future modifications |
| 2.4.3.6 | M | SESMN EEC (D) shall in Storage Mode be configured to fit in containers of reduced height 20-foot type (ISO dimensions: 6096 mm L x 2438 mm W x 2438 mm H) or smaller in accordance with ISO 688:1995 including a total of 20 % spare capacity |
| 2.4.3.7 | M | Provisions shall be made for stowing SESMN EEC (D) and its components in a secure way |
| 2.4.3.8 | M | Provisions shall be made to prevent ingress of liquid and particles due to surrounding weather conditions |

2.4.4 Transportation

SESMN EEC (D) must be designed in such a way that it can be transported by air, land and sea, over rough conditions and with minimal damages. Specific reference should be included in the Tenders regarding to the expected involvement/support by the Contracting Authority and/or the military unit where the SESMN EEC (D) will be deployed

| Number | Type | Requirement |
|----------------|-------------|--|
| 2.4.4.1 | M | SESMN EEC (D) shall in Storage Mode be configured to fit in containers |

| | | |
|----------|---|---|
| | | of reduced height 20-foot type (ISO dimensions: 6096mm L x 2438mm W x 2438mm H) or smaller in accordance with ISO 688:1995 including a total of 20 % spare capacity |
| 2.4.4.2 | M | Appropriate provisions, shall be made for stowing SESMN EEC (D) and its subsystems/components in a secure way during transport |
| 2.4.4.3 | M | Provisions shall be made to prevent ingress of liquid and particles due to surrounding weather conditions during transport |
| 2.4.4.4 | M | Provisions shall be made so that SESMN EEC (D) can be locked in such a way as to prevent break-in |
| 2.4.4.5 | M | SESMN EEC (D) shall be transportable by military and civilian aircrafts including the aircraft type C130 (and C130J) in accordance with IATA regulations |
| 2.4.4.6 | M | SESMN EEC (D) shall be designed such that it can be transported by road and rail vehicles over rough conditions and terrains as well as in accordance to the European Best Practice Guidelines on Cargo Securing for Road Transport |
| 2.4.4.7 | M | SESMN EEC (D) shall in Transport Mode be able to be transported as non-stackable deck cargo on military or civilian vessels. |
| 2.4.4.8 | M | Tenders must indicate explicitly the special tools, specific expertise, means (such as forklift, volumes, weight) or similar information needed for the transportation of the SESMN EEC (D) |
| 2.4.4.9 | M | SESMN EEC (D) shall in Transport Mode enable handling by forklift |
| 2.4.4.10 | M | SESMN EEC (D) shall in Transport Mode enable handling by crane |

2.4.5 System Installation - Set-up – Handling- Decommissioning

This section specifies Contracting Authority's requirements regarding the SESMN EEC (D) installation

| Number | Type | Requirement |
|---------|------|---|
| 2.4.5.1 | M | Modular, plug and play configuration is envisaged in order minimal expertise/specialists presence or use of special tools to be necessary for the SESMN EEC (D) installation. Tenders should clearly describe the System Installation/Set-up process including timelines |
| 2.4.5.2 | M | System documentation to be delivered with the system should include within the User's Guide instructions on the system set-up. Special reference (table) should be included on possible high-skills or special tools which are necessary for the installation (per system/subsystem/part/equipment) |
| 2.4.5.3 | O | The Contractor shall set-up the SESMN EEC (D) in the location where the system will be deployed. The price to be quoted in the Tender <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.4.5.4 | O | Contractor's authorised electrician should inspect all equipment before the system is turned on after the installation in the place of deployment. The process of installation and initial system turn-on will be under contractor's |

| | | |
|---------|---|--|
| | | responsibility. The price to be quoted in the Tender <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.4.5.5 | O | Contractor's authorised electrician should inspect all equipment before and after the decommissioning of the system. The process of decommissioning will be under contractor's responsibility. The price to be quoted in the Tender <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.4.5.6 | M | Special tools required for setting up/decommissioning SESMN EEC (D) shall be included in the Tender |

2.4.6 Environment

The section contains requirements concerning what kind of external environments the SESMN EEC (D) should be capable of operating in.

| Number | Type | Requirement |
|---------|------|---|
| 2.4.6.1 | M | SESMN EEC (D) shall be able to operate in Climatic Zones A1 to C2 inclusive as defined in DEF STAN 00-35 (or equivalent). |
| 2.4.6.2 | M | SESMN EEC (D) shall be designed in all modes to prevent ingress of particles (sand, dust etc.) and liquid (water and snow) |
| 2.4.6.3 | M | SESMN EEC (D) shall be designed in such a way that it resists common micro-organisms such as mould and bacteria as well as insects |
| 2.4.6.4 | M | SESMN EEC (D) shall in Storage Mode be able to be stored in an un-insulated store (-15° C to +55° C) for periods of up to 10 years <i>(Above mentioned is the generic requirement for the SESMN EEC (D). In case of specificities for certain parts of the SESMN EEC (D) such as batteries should be specified in the Tenders)</i> |
| 2.4.6.5 | M | Induced Mechanical Environment: SESMN EEC (D) shall ensure compliance with relevant standards in accordance with section 2.1.4 of the Technical Specifications (or equivalents) |
| 2.4.6.6 | M | Induced Climatic, Chemical and Biological Environment: SESMN EEC (D) shall be designed to handle induced climatic, chemical and biological environments in accordance with relevant standards in section 2.1.4 of the Technical Specifications (or equivalents) |
| 2.4.6.7 | M | SESMN EEC (D) shall be designed to handle Electromagnetic Compatibility in accordance with relevant standards in section 2.1.4 of the Technical Specifications (or equivalents) |

2.4.7 Measurement of the benefits

The section contains requirements concerning the integration/testing/measurement of the benefits of using innovative/energy efficient technologies in land deployment camps

| Number | Type | Requirement |
|---------|------|--|
| 2.4.7.1 | M | SESMN EEC (D) shall integrate novel/innovative/energy efficient technologies concerning the generation/distribution/transmission/storage |

| | | |
|----------------|------------|---|
| | | and management of energy |
| 2.4.7.2 | M | <p>Tenders shall include a Parametric model of measuring the benefits of using the SESMN EEC (D) in a deployed military camp, per technical/technological application/solution used.. Main criteria to be used:</p> <ul style="list-style-type: none"> • Energy consumption • Energy efficiency • Fossil fuel dependency • Survivability • Environmental footprint <p>Draft Parametric Model shall be included in the Tenders for evaluation. At To+2 months and following exchange with EDA, the Contractor shall deliver the final Parametric Model for EDA approval</p> <p><i>(Tenderers may include in the Tenders additional criteria to demonstrate completeness of the measurement of the benefits)</i></p> |
| 2.4.7.3 | M | Tenders should provide all relevant information regarding the Technologies to be integrated/tested throughout the demonstration period as well as the methodology to be applied during the measurement |
| 2.4.7.4 | M | Contractor shall conduct the measurement of the benefits of using the SESMN EEC (D) (operational/technical) in a deployed military camp |
| 2.4.7.5 | M | Results/conclusions of the measurement of the benefits shall be included in the Final Report of the contract in accordance with section 2.12.4.2 of the Technical Specifications |
| 2.4.7.6 | M | <p>Baseline for the measurements will be:</p> <ul style="list-style-type: none"> • Contractor's information/data; such information/data shall be included in the Tenders • EDA information/data to be provided to the Contractor at the KoM • Specific information concerning energy needs and consumption of the selected camp where the SESMN EEC (D) will be deployed (to be provided by EDA to the Contractor) |
| 2.4.7.7 | M-O | <p>One-day demonstration of the SESMN EEC (D) to EDA and Member States representatives, at the place of deployment, including proposed demonstration programme</p> <p><i>(Procurement of the demonstration service is optional / Mandatory is the necessary information to be included in the Tenders including costs)</i></p> <p><i>(Contractor will no bear responsibility for transportation, catering, accommodation etc. of the participants but only for organising and delivering the demonstration including all possible documents/material and personnel required to do so)</i></p> |

2.5 Marking and Labelling

The purpose of this section is to provide requirements for making markings and labels for SESMN EEC (D) in all its operational modes as clear and stringent as possible.

| Number | Type | Requirement |
|--------|------|---|
| 5.1 | M | SESMN EEC (D) shall have the official EDA logo painted on containers/transportation boxes/main systems/subsystems |
| 5.2 | M | SESMN EEC (D) containers shall be marked and labelled in accordance with ISO 688 |
| 5.3 | M | All electrical installations, including documentation and marking and labelling, shall be compliant with relevant standards in section 2.1.4 of the Technical Specifications (or equivalents) |
| 5.4 | M | In those cases applied dangerous-goods/hazardous materials labelling shall be applied |

2.6 Training

All training options below shall be included in the Tenders with possibility to deliver the associated services either in an address in Europe (for pricing purposes Brussels is to be assumed in such case) or in the place of deployment of the SESMN EEC (D) (for pricing purposes Mali-Koulikoro training camp is to be assumed in such case).

| Number | Type | Requirement |
|--------|------|--|
| 2.6.1 | O | Users: A comprehensive training package shall be designed and quoted for, per course of 10 students <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.6.2 | O | Technical: A comprehensive training package shall be designed and quoted for, per course of 10 students <i>(Optional service but all information should be included in the Tenders)</i> |
| 2.6.3 | O | Set-Up: A comprehensive training package for the design, construction, set-up, maintenance and dismantling shall be designed and quoted for, per course of 10 students <i>(Optional service but all information should be included in the Tenders)</i> |

2.7 Operational Reliability and Maintenance

2.7.1 Definitions

The following definitions are applicable to Operational Reliability and Maintenance:

| | |
|---|--|
| Operational Reliability | Operational Reliability is the property of a system, subsystem or component, to be able to carry out specified performance during given conditions without performance impairment due to faults and maintenance |
| Operational Availability (A_o) | Operational Availability is the percentage of time for which the system will operate properly. Operational Availability considers total down time, which includes administrative and supply times. $A_o = \frac{8760 - TFU}{8760} \times \frac{MTBF}{MTBF + MDT}$ |

| | |
|---|---|
| | <p>TFU = Total Time Requirement for Preventive Maintenance</p> <p>MDT = MTTR + MTW</p> <p><i>(The availability of components and subsystems should be a balance of both inherent availability and proposed equipment redundancies)</i></p> |
| <p>System Operational Availability (SOA)</p> | <p>This refers to the Operational Availability of the overall SESMN EEC (D)</p> <p>For the purposes of this Tender this will be calculated using the following method:</p> <ol style="list-style-type: none"> 1. All critical components and subsystems will be identified in the Tenders 2. The availability of each component or subsystem will be calculated (using the method above) or stated (using manufacturers' provided information). 3. The Non-Availability (NA_0) of each component or subsystem will be calculated as $NA_0 = 100 - A_0$ 4. SNA_0 will be considered to be the sum of the NA_0 of all critical components 5. SOA will be calculated as $SOA = 100 - SNA_0$ <p>Example:</p> <p>A system is made up of three critical components, A, B and C:</p> <ul style="list-style-type: none"> A has A_0 of 98 % B has A_0 of 97 % C has A_0 of 95 % <p>Therefore</p> <ul style="list-style-type: none"> A has NA_0 of 100 % - 98 % = 2 % B has NA_0 of 100 % - 97 % = 3 % C has NA_0 of 100 % - 95 % = 5 % <p>Therefore</p> <p>$SNA_0 = 2 \% + 3 \% + 5 \% = 10 \%$.</p> <p>Therefore</p> <p>$SOA = 100 \% - 10 \% = 90 \%$</p> |
| <p>Maintainability</p> | <p>Maintainability is the property of the technical system, which defines its ability to be repaired. Maintenance suitability is expressed in Mean Time To Repair (MTTR) and is measured in hours. During repair maintenance MTTR covers time for troubleshooting, repair and post-repair checks. Based on MIL-HDBK-472 (or equivalent) predictions of maintenance suitability can be carried out</p> |
| <p>Maintenance Support</p> | <p>Maintenance Support describes the ability of the maintenance organisation to furnish the required maintenance resources. Maintenance Safety is expressed in Mean Time Waiting (MTW) and is measured in hours</p> |

The categorisation of Spare Parts is defined as based on the following two questions:

- Is the Spare Part used for replacement in equipment (on location) or not?
- Is the Spare Part repairable or not?

The main concept can be therefore visualised as follows:

| | | Repairable? | |
|--|-----|--|--|
| | | Yes | No |
| Replaced in the equipment (on location)? | Yes | EXU (A) <i>Replaceable unit that can be repaired in workshop</i> | RU (C) <i>Replaceable unit that is not repairable</i> |
| | No | EXSU (B) <i>Replaceable sub-unit (in A) that is repairable in workshop</i> | RC (D) <i>Replaceable component (in A or B) that is not repairable</i> |

2.7.2 General

| Number | Type | Requirement |
|---------|------|--|
| 2.7.2.1 | M | The overall design of SESMN EEC (D) shall be such that it makes for easy and quick troubleshooting and fault localisation |
| 2.7.2.2 | M | The philosophy behind repairs shall be such that it makes use of Exchangeable Units (EXU) or Spare Parts to the maximum extent possible |
| 2.7.2.3 | M | The system should be designed so as no technical intervention to be necessary for extended periods in time |
| 2.7.2.4 | M | Measures shall be taken to minimise the logistical footprint of the SESMN EEC (D) (both technical and maintenance related) |
| 2.7.2.5 | M | The overall design of SESMN EEC (D) shall be such that it makes easy the access to any point of systems/subsystems for maintenance/repair (<i>where applicable</i>) |
| 2.7.2.6 | M | In case of use of engine radiators in the design sign of the SESMN EEC (D), the engine radiator should be modular so to be possible to be replaced in minimum time without affecting any other generator subsystem |

2.7.3 Reliability

| Number | Type | Requirement |
|---------|------|---|
| 2.7.3.1 | M | A Hierarchical Functional-Reliability Block Diagram of all components, down to a suitable level to be agreed with EDA, shall be delivered as part of the System Documentation |
| 2.7.3.2 | M | The Functional-Reliability Block Diagram shall provide the following |

| | | |
|----------------|----------|--|
| | | <p>information on the components:</p> <ul style="list-style-type: none"> • ID Tag (unique identifier) • Denomination • Spare Parts Category • Number of Items in the System • Price per Item • Failure Rate (operating, stand-bye, not operating) per hour • MTTR, on system level • Life length (if limited lifetime) • MTTR_{EXU} repair of EXU • Estimated cost per EXU • Spare Part Price |
| 2.7.3.4 | M | The prediction procedure and calculations for Reliability (as per section 2.7.1 of the Technical Specifications) shall be included in the System Documentation in accordance with section 2.11 of the Technical Specifications |

2.7.4 Corrective Maintenance

Corrective Maintenance are actions that require repairs either at location or in the homeland.

| Number | Type | Requirement |
|----------------|------------|--|
| 2.7.4.1 | M | The requirements of the SESMN EEC (D) regarding Corrective Maintenance shall be defined into detail in the Tenders including the MTTR |
| 2.7.4.2 | M | The philosophy behind the Tenderer's proposed Corrective Maintenance measures shall be that it is minimised regarding time and cost |
| 2.7.4.3 | M | The prediction procedure for MTTR shall be stated in the System Documentation as per section 2.11 |
| 2.7.4.4 | M | Repairs shall be able to be carried out with standard tools to the extent possible |
| 2.7.4.5 | M-O | The Tenderers shall indicate special tools required for repair including costs <i>(Procurement of the special tools required is optional / Mandatory is the necessary information on the special tools required for repair)</i> |
| 2.7.4.6 | M | The Tenderers shall indicate specific activities could be conducted through remote viewing and management |
| 2.7.4.7 | M | The Tenders should provide all associated information regarding warranties |

2.7.5 Preventive Maintenance

Preventive Maintenance are procedures and actions done on a regular basis with the purpose of minimising the need for Corrective Maintenance and ensuring that the good state of SESMN EEC (D) is maintained.

| Number | Type | Requirement |
|---------|------|--|
| 2.7.5.1 | M | <p>The Contractor shall indicate the Preventive Maintenance Measures in the Tenders (to be included in the User's Manual as well), that includes at least:</p> <ul style="list-style-type: none"> • Exact activities per system/subsystem/part/equipment/device • Activities planned to be conducted through remote viewing and management as well as on the spot • Time Consumption • Time intervals options (Calendar based/Operational hours) • Required consumables • Required tools and equipment • Associated costs • Warranties |
| 2.7.5.2 | M-O | <p>The activities listed in the Preventive Maintenance Measures shall also indicate if there are any special tools or skills required</p> <p><i>(Procurement of the special tools required is optional / Mandatory is the necessary information on the special tools required for repair)</i></p> |
| 2.7.5.3 | M | <p>The Preventive Maintenance Measures shall be divided into the following categories:</p> <ul style="list-style-type: none"> • Daily Maintenance • Monthly Maintenance • Annual Maintenance • Four/Six/Eight-Year Maintenance <i>(if applicable)</i> • Maintenance Before Storage • Maintenance During Storage • Maintenance for re-instatement |
| 2.7.5.4 | M | <p>The philosophy behind the Tenderer's proposed Preventive Maintenance measures shall be that it is minimised regarding time and cost</p> |
| 2.7.5.5 | M | <p>Daily Maintenance, Monthly Maintenance and Annual Maintenance shall be able to be performed outdoors</p> |
| 2.7.5.6 | Ot | <p>SESMN EEC (D) shall be designed such that integrates built-in Test Equipment to undergo extensive self-tests</p> |

2.7.6 Storage

These requirements deal with SESMN EEC (D) in Storage Mode.

| Number | Type | Requirement |
|---------|------|--|
| 2.7.6.1 | M | All systems/subsystems/parts/components of the SESMN EEC (D) shall be designed such that it can be subjected to long-term storage |
| 2.7.6.2 | M | The Tenders shall in the User Manual include all relevant information including the time and activities to be carried out during storage (maintenance) and those required for re-instatement |

2.7.7 Spare Parts – Consumables

| Number | Type | Requirement |
|---------|------|--|
| 2.7.7.1 | M | The Tenderers shall indicate which units and components need to be obtainable as/for Spare Parts, including costs associated |
| 2.7.7.2 | M | Based on the assessment, the Spare Parts shall be categorised according to the table in section 2.7.1. |
| 2.7.7.3 | M | <p>A list of Spare Parts shall be included in the tenders split in two main categories:</p> <ul style="list-style-type: none"> • Spare parts absolutely necessary for the demonstration period (<i>Mandatory - to be delivered with the SESMN EEC (D)</i>) • Spare parts necessary for follow-on support (FOS) (<i>Optional – to be included in the Tenders with information and associated costs</i>) <p>The list shall contain at least the following information:</p> <ul style="list-style-type: none"> • Price for each Spare Part (if purchased new) and estimated delivery time • For each Spare Part the number of units included in SESMN EEC (D) • Basic production data (drawings etc) for tailored parts • Estimated prices for repair |
| 2.7.7.4 | M | <p>A list of Consumables shall be included in the tenders split in two main categories:</p> <ul style="list-style-type: none"> • Consumables absolutely necessary for the demonstration period (<i>Mandatory - to be delivered with the SESMN EEC (D)</i>) • Consumables necessary for a 12-months period of use (<i>Optional – to be included in the Tenders with information and associated costs</i>) <p>The list shall contain at least the following information:</p> <ul style="list-style-type: none"> • Price for each Consumable and estimated delivery time • For each Consumable the units/parts/system/subsystem is linked to be used • Costs |

2.7.8 Warranties

This section provide requirements regarding warranties and insurances of the SESMN EEC (D)

| Number | Type | Requirement |
|---------|------|--|
| 2.7.8.1 | M | <p>The Tenderers shall provide all information regarding warranties of the SESMN EEC (D) and at least:</p> <ul style="list-style-type: none"> • Which systems/subsystems/part/units/components or devices are obtainable to warranties • Duration • Effectiveness (start) • Level of coverage • Compensations • Procedures applied • Templates of reports required according to the proposed procedures |
| 2.7.8.2 | M | Warranty procedure shall be designed such to minimize the time between the failure of a systems/subsystems/part/units/components or devices until the recovery of its functionality |
| 2.7.8.3 | M | Minimum expected warranty for the overall SESMN EEC (D) is 2 years. Tenderers may propose in their Tenders longer warranties either for the overall or parts of the SESMN EEC (D) (element to be evaluated). Also Tenderers may define warranties upon time and/or alternatives where applied (e.g cycles for batteries, running hours for generators etc.) |

2.8 System Safety Management

System Safety Management aims to define, analyse and evaluate the hazards, which can result in technical risks, operating risks, cause personnel injury, damage equipment or have an adverse effect on the environment.

| Number | Type | Requirement |
|--------|------|--|
| 2.8.1 | M | The System Safety Management activities shall be done in accordance with the MIL-STD 882 (or equivalent) |

2.9 Inspection, Test and Verification

The requirements stated here aim at ensuring that the function of SESMN EEC (D) is in accordance with the Technical Specifications.

| Number | Type | Requirement |
|--------|------|---|
| 2.9.1 | M | <p>The Contractor shall produce an Inspection, Test and Verification Plan in accordance with sections 2.2.1 and 2.2.2 of the Technical Specifications, including at least:</p> <ul style="list-style-type: none"> • Objective of each inspection, test and verification action |

| | | |
|--------------|----------|---|
| | | <ul style="list-style-type: none"> • Methodology • Expected output • Reference to relevant standards (<i>where applicable</i>) |
| 2.9.2 | M | Inspection, Test and Verification Plan shall be planned such to deliver the SESMN EEC (D) functional and shall be designed to cover all parts/systems/subsystems/components of the SESMN EEC (D) |
| 2.9.3 | M | Inspection, Test and Verification Plan shall be designed to cover all modes of the SESMN EEC (D) (e.g functional, storage, transport etc.) |
| 2.9.4 | M | Inspection, Test and Verification Plan, where applicable, shall be scenario based covering at least the following functional scenarios: <ul style="list-style-type: none"> • Use in SESMN EEC (D) Emergency Stop • Use of SESMN EEC (D) in Fuel Shortage and Subsequent smart energy generation/supply system failure |
| 2.9.5 | M | Inspection, Test and Verification Plan shall include a visual inspection by EDA of all visible systems, sub-systems and components of the SESMN EEC (D) |
| 2.9.6 | M | For each Inspection, Test and Verification Procedure the Plan shall include the following information: <ul style="list-style-type: none"> • Number • Relevant requirement in the Technical Specifications • Procedure Title • Object that will be subjected to the procedure (<i>designation, article codes or similar</i>) • Purpose • Procedure Description • Reference to relevant standards (<i>where applicable</i>) • Materiel and Equipment needed to perform the procedure • Acceptance Criteria • Warnings and Precautions |
| 2.9.7 | M | For each Inspection, Test and Verification Procedure a record form shall be produced by the Contractor that correlates with the Plan and that contains the following: <ul style="list-style-type: none"> • Number • Relevant requirement in the specification • Procedure Title • Object subjected to the procedure (<i>designation, article codes or similar</i>) • Empty fields for <ul style="list-style-type: none"> ○ Measured values ○ Non-numerical results ○ Remarks |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> ○ Date and signature of the person in charge of the Procedure. • Materiel and Equipment used to perform the procedure • Reference to relevant standards (<i>where applicable</i>) • Acceptance Criteria • Warnings and Precautions |
|--|--|--|

2.10 Quality

The requirements stated in this chapter are applicable to the Contractor and the Contractor's quality control of subcontractors and consultants.

2.10.1 General

| Number | Type | Requirement |
|----------|------|--|
| 2.10.1.1 | M | The Contractor shall deliver the goods or services in accordance with the contracted price and delivery schedule |
| 2.10.1.2 | M | The Contractor shall be able to present objective facts, which show that the Contractor has maintained control of the Contractor's activities and carried out the inspections/verifications for which the results show that the product fulfils all the requirements |
| 2.10.1.3 | M | The Contractor shall during the entire contract performance supervise and inspect the project in accordance with a quality plan, to ensure that the requirements are met |
| 2.10.1.4 | M | The Contractor shall upon request, give EDA the opportunity to evaluate the efficiency and compliance of the Contractor's Quality Management System at the Contractor's or Subcontractor' premises, be it the entire system or jut limited to certain parts or certain products, which includes granting the EDA access to the results of the Contractor's internals |

2.10.2 Quality Management System

| Number | Type | Requirement |
|----------|------|---|
| 2.10.2.1 | M | The Contractor shall be EN-ISO-9001 certified |

2.10.3 Quality Management Plan

The quality plan is the document, in which the entire Contractor's quality activities and measurements are specified; those the Contractor will perform to fulfil the requirements stated in the Contract

| Number | Type | Requirement |
|----------|------|--|
| 2.10.3.1 | M | The Quality Management Plan shall assure that the quality of the product is verified and documented |
| 2.10.3.2 | M | The Contractor shall produce a Quality Management Plan in accordance with sections 2.2.1 and 2.2.2 of the Technical Specifications |
| 2.10.3.3 | M | The Quality Management Plan shall, at the minimum, include the following |

| | | |
|------------------|----------|---|
| | | <p>sections:</p> <ul style="list-style-type: none"> • Project Management and Consultation Plan • Risk Register • Production Plan • Verification and Validation Matrix • Configuration Management Plan: Procedures and instructions concerning the configuration management • Acceptance Procedures-Plan |
| 2.10.3.4 | M | <p>The Project Management and Consultation Plan shall include:</p> <ul style="list-style-type: none"> • All activities within the project, including their respective resource allocations, time schedules, contacts and process of consultation with stakeholders/information sources and interdependencies. • Internal Project Organisation: <ul style="list-style-type: none"> ○ Hierarchy ○ Roles ○ Responsibilities ○ Mandates • External Dependents: <ul style="list-style-type: none"> ○ Consultants ○ Vendors ○ Subcontractors • Descriptions of the Contractor's acceptance test procedures, at final inspection and delivery, shall be included • Time frames and Deliverables • Activities and Work Breakdown Structure • Meetings/Reports/Contacts with EDA |
| 2.10.3.5 | M | The Risk Register shall contain the identified risks and risk mitigation methods |
| 2.10.3.6 | M | The Production Plan shall include the plan for the production process and flow of material for major activities |
| 2.10.3.7 | M | The Verification Matrix shall consist of a matrix that directly refers to each requirement of the Specification and describes how verification is carried out as well as how the results are documented and accessed |
| 2.10.3.8 | M | The Configuration Management Plan shall include procedures and instructions concerning the configuration management |
| 2.10.3.9 | M | The Acceptance Plan shall include a schedule of all Inspection, Test and Verification procedures that will be performed on the SESMN EEC (D) |
| 2.10.3.10 | M | The Contractor shall make sure the Quality Management Plan is kept up to date during the entire project |

2.11 System Documentation

The System Documentation will provide insight at least into the design of SESMN EEC (D) operating instructions, maintenance instructions and support maintenance.

2.11.1 General

| Number | Type | Requirement |
|----------|------|--|
| 2.11.1.1 | M | EDA shall receive full rights to exploit the documentation of SESMN EEC (D) |
| 2.11.1.2 | M | All documentation shall be delivered according to the delivery scheme stated in section 2.2.1 |
| 2.11.1.3 | M | All documentation shall be in English |
| 2.11.1.4 | O | All documentation shall also be in French <i>(Optional service but all information should be included in the Tenders)</i> |

2.11.2 Documents

| Number | Type | Requirement |
|----------|------|--|
| 2.11.2.1 | M | System Documentation shall consist at least of: <ul style="list-style-type: none"> • User Manual • Repair Manual • Technical Documentation • Basic Data <i>(e.g source information as original supplier and part/stock numbers on all components listed as spare parts or exchangeable units)</i> • Specifications for Tailored Components (including drawings) • Standard Operating Procedures (SOP) • System Safety Report • Maintenance Log |
| 2.11.2.2 | M | User Manual pedagogically designed to convey all aspects of usage including at least: <ul style="list-style-type: none"> • Operation: Setting-up and dismantling of SESMN EEC (D) • Transportation and Handling including • Maintenance • Storage |
| 2.11.2.3 | M | The Repair Manual shall describe repair procedures with regard to SESMN EEC (D) and clearly indicate which parts of SESMN EEC (D) are best suited to be handled by a skilled technician from the manufacturer or similar taking into account warranty issues |
| 2.11.2.4 | M | The Technical Documentation shall consist at least of: <ul style="list-style-type: none"> • Technical description of SESMN EEC (D) • Block diagrams, drawings and circuit diagrams including |

| | | |
|-----------------|----------|---|
| | | <p>information such as measuring points and labelling for all controls (e.g. as per section 2.7.3.1 of the Technical Specifications)</p> <ul style="list-style-type: none"> • General drawings for integrated units such as circuit boards etc • Technical documentation of the instruments, computers etc included. • Trouble shooting |
| 2.11.2.5 | M | The Contractor shall also provide information on Basic Data (e.g. source information as original supplier and part/stock numbers on all components listed as spare parts or exchangeable units) |
| 2.11.2.6 | M | The Contractor shall also provide the Specifications for Tailored Components, if any, that have specifically been designed for the SESMN EEC (D) and that cannot be found off-the-shelf on the market |
| 2.11.2.7 | M | <p>The Maintenance Log shall consist of four different sections:</p> <ul style="list-style-type: none"> • Daily Maintenance • Monthly Maintenance • Annual Maintenance • Four/Six/Eight-Year Maintenance (if applicable) • Maintenance Before Storage • Maintenance During Storage • Maintenance for re-instatement • Prediction procedure and calculations for Reliability and MTTR (as per sections 2.7.1, 2.7.3.4 and 2.7.4.3 of the Technical Specifications) |
| 2.11.2.8 | M | <p>Maintenance Log Forms shall be designed in order for the user to be able to indicate the status of maintenance – at least the following fields shall be included:</p> <ul style="list-style-type: none"> • Date • Location/Operation • Checklist (with boxes for each item that can be ticked) • Comments • Signature |

2.11.3 Delivery Format

| Number | Type | Requirement |
|-----------------|----------|--|
| 2.11.3.1 | M | <p>The final delivery of all system documentation except the Maintenance Log shall include</p> <ul style="list-style-type: none"> • 5 sets of hard copies • 30 sets of soft copies (on CD-ROM) |
| 2.11.3.2 | M | The Maintenance Log shall come in |

| | | |
|-----------------|----------|---|
| | | <ul style="list-style-type: none"> • 1 hard copy • 1 soft copy (only for reproduction and necessary editing) |
| 2.11.3.3 | M | <p>The soft copies shall be in the following formats:</p> <ul style="list-style-type: none"> • Text with embedded images, drawings, lists and tables: <ul style="list-style-type: none"> ○ MS Word ○ Adobe PDF • Images (<i>any of the following</i>) – <ul style="list-style-type: none"> ○ Bitmap (BMP) ○ Compuserve Graphical Interchange Format (GIF) ○ Joint Photographics Expert Group (JPEG) ○ Tagged Image File Format (TIFF) • Drawings – Autodesk DWG • Lists and Tables (<i>e.g. for the Spare Parts List</i>): MS Excel |
| 2.11.3.4 | M | <p>The hard copies of the User Manual, Repair Manual, Technical Documentation, Basic Data and Specifications for Tailored Components shall come as the following:</p> <ul style="list-style-type: none"> • Format: A4 • Binder: Loose-leaf |
| 2.11.3.5 | M | <p>The hard copy of the Maintenance Log shall come as the following:</p> <ul style="list-style-type: none"> • Format: A5 • Binder: Loose-leaf |

2.12 Project Management

The purpose of this section is to provide the organisational and administrative structure for the Project.

2.12.1 Organisation

| Number | Type | Requirement |
|-----------------|----------|---|
| 2.12.1.1 | M | <p>The Contractor and Purchaser (EDA) shall appoint Points of Contacts for the following roles and convey them to each other at the Kick-Off Meeting and in the Quality Management Plan:</p> <ul style="list-style-type: none"> • Project Management • Technical Issues • Contractual Issues |

2.12.2 Contractor-Purchaser Interaction

| | | |
|-----------------|----------|---|
| 2.12.2.1 | M | <p>The following categories of Contractor-Purchaser interaction shall be considered:</p> <ul style="list-style-type: none"> • Kick-Off Meeting • Progress Review Meetings |
|-----------------|----------|---|

| | | |
|-----------------|----------|--|
| | | <ul style="list-style-type: none"> • Preliminary Design Review • Critical Design Review • Inspection, Test and Verification Meetings • Written, Phone or Tele conferences and Oral Communication • Final Presentation |
| 2.12.2.2 | M | A Kick-Off Meeting (KoM) shall be held in To+ 2weeks, to review the the Quality Management Plan and the Inspection, Test and Verification Plan as well as to ensure clarity on the Technical Specification and define Project Management Responsibilities between the Contractor and EDA |
| 2.12.2.3 | M | <p>The Progress Review Meetings (PRMs), of which the form (e.g. meetings, telephone conferences and video conferences) and frequency shall be included in the Tenders and final plan will be agreed during the KoM and adapted to the needs during the course of the Project, shall provide a forum for:</p> <ul style="list-style-type: none"> • Review the status of the Project • Review the projected way forward including milestones and time schedule • Discussions on function and design • Discussions of administrative and contractual issues |
| 2.12.2.4 | M | The Preliminary Design Review (PDR), for which the proposed time and location shall be included in the Tenders with the draft Quality Management Plan and will be discussed at the KoM, shall be a one-off meeting during which EDA will review, give feedback and provide guidance with regard to the Contractor's proposed design. Could be planned back-to-back with a PRM |
| 2.12.2.5 | M | The Critical Design Review (CDR), for which the proposed time and location shall be included in the Tenders with the draft Quality Management Plan and will be discussed during the KoM and PDRs, shall result in a finalised design after which full production can commence. Could be planned back-to-back with a PRM |
| 2.12.2.6 | M | Inspection, Test and Verification Meetings (ITVMs) shall focus on one or a cluster of Acceptance Procedures |
| 2.12.2.7 | M | Written and Oral Communication by telephone, e-mail and telefax shall be the preferred way of carrying out day-to-day Contractor-Purchaser interaction |
| 2.12.2.8 | M | <p>The PRMs, PDR, CDR and ITVMs shall be preceded by an invitation to be sent by the Contractor to the EDA three weeks in advance accompanied with a proposed agenda for the meeting and associated documentation (<i>when necessary</i>).</p> <p><i>(Telephone- and/or Video Conferences can be explored in particular for the PRMs but upon EDA's approval)</i></p> |
| 2.12.2.9 | M | <p>The KoM, PRMs, PDR, CDR and ITVMs shall be chaired by EDA. The Contractor shall provide secretarial functions, which includes among otehrs drafting of the Minutes. The Minutes from all meetings shall reached in two copies, be co-signed by the Contractor and Purchaser</p> <p><i>(EDA holds the right to invite Member States' representatives in all or</i></p> |

| | | |
|------------------|----------|---|
| | | <i>some of the above mentioned meetings)</i> |
| 2.12.2.10 | M | In To+12 the Contractor shall deliver a Final Presentation to EDA and its Member States on the results of the SESMN EEC (D) demonstration, presenting the main elements/information included in the Final Report of the project. The ppt presentation shall be sent to EDA three weeks in advance of the date of the Final Presentation for approval. |

2.12.3 Configuration Management

| | | |
|-----------------|----------|--|
| 2.12.3.1 | M | Changes (e.g. technical and administrative) during the course of the Project shall be dealt with swiftly and formally as to give both parties complete insight into- and control over- the decision making process at the time of a change |
| 2.12.3.2 | M | Either party can initiate a change by submitting a Change Proposal (CP) to the other party using a template to be agreed upon at the KoM (draft template to be proposed by the Contractor). |
| 2.12.3.3 | M | The CP shall include details on project-, technical-, financial, administrative and commercial consequences to form the base for the EDA to either accept or reject the CP, following the provisioned EDA rules/regulations/procedures |
| 2.12.3.4 | M | Following acceptance of CP negotiations between both parties shall take place, suitably in conjunction with PRM or similar, and once agreement has been reached the EDA will issue a decision on implementing the negotiated CP |

2.12.4 Project Documentation

| | | |
|-----------------|----------|---|
| | | |
| 2.12.4.1 | M | <p>The following documentation shall be considered as Project Documentation and the Contractor shall ensure that they are kept up to date during the course of the Project:</p> <ul style="list-style-type: none"> • Quality Management Plan • Management and Consultation Plan • Inspection, Test and Verification Plan • System Documentation • Minutes of Meetings • Change Proposal Records – records that shall be maintained and updated by the Contractor documenting CPs and their respective Activities. • Final Report |
| 2.12.4.2 | M | <p>Final Report shall be delivered in the following format:</p> <ul style="list-style-type: none"> • A draft Executive Summary identifying the key conclusions and recommendations. It should be written in a format and style suitable for Ministers/senior Government officials. It shall not be greater than 4 pages in length, including any annexes. It should be written in Times Roman 12 point with line spacing 1.5. |

| | | |
|-----------------|----------|--|
| | | <ul style="list-style-type: none"> The Final Report shall include in detail all the elements described in section 2.12.4.3 with all the information gathered during the demonstration and concrete/fully justified by the demonstration elements recommendation/proposals. The Final Report should be also written in Times Roman 12 point with line spacing 1.5 |
| 2.12.4.3 | M | <p>Final Report shall include at least the following:</p> <ul style="list-style-type: none"> Description of the demonstration process and the methodologies applied Design guidelines for SESMN EEC (D), upon results during the demonstration period Operational/Cost effectiveness analysis of the SESMN EEC (D), including post-performance analysis of all systems/subsystems/parts/components/devices State of health report Standardisation proposals vis-à-vis existing standards (civil/military) Demonstration report with all incidents-tests-scenarios applied during the demonstration period Maintenance results/conclusions/estimations including, cost/benefit analysis, Technology assessment/performance/evaluation of all technologies applied/used/tested during the demonstration Recommendations for future EDA and/or Member States actions All measurements/data collected throughout the demonstration period shall be part of the Final Report in annexes |

2.13 Conditions for Delivery and Acceptance/Rejection

| Number | Type | Requirement |
|---------------|----------|--|
| 2.13.1 | M | <p>The following conditions shall be met before delivery can commence:</p> <ul style="list-style-type: none"> All inspections, tests and verification have been carried out by the Contractor according to the Technical Specifications and been approved by EDA The Delivery Notification including a list of waivers/deviations, if any, has been sent to EDA by the Contractor for approval early in advance and according to the section 2.12.3 of the Technical Specifications. No waiver can be presented during the Inspection, Test and Verification activity The Certificate of Conformance has been signed and issued by the Contractor |
| 2.13.2 | M | <p>Acceptance/Rejection procedure will be as follows:</p> <ul style="list-style-type: none"> The product will be accepted if the requirements in the contract are fulfilled and the Contractor successfully conduct the approved by EDA Inspection, Test and Verification Plan. The Contractor shall notify EDA, at a reasonable time in advance, stating a time and a place when and where the Inspection, Test |

| | | |
|--|--|---|
| | | <p>and Verification activity will be conducted. Inspection, Test and Verification will be conducted in accordance with section 2.9 of the Technical Specifications</p> <ul style="list-style-type: none"> • If the product will be rejected, the contractor shall, in writing, describe to EDA the corrective actions that have been taken and the subsequent results, before the product is again notified for delivery. In such case a repetition of a part or full Inspection, Test and Verification Plan will be conducted at a time will be approved by EDA, upon Contractor's proposal, but not later than one month after the first Inspection, Test and Verification. All provisions for the repetition of the Inspection, Test and Verification Plan apply as provisioned in the Technical Specifications. The Contractor bears all responsibilities for any damage caused to EDA because of the first Inspection, Test and Verification Plan failure. • In case the Contractor fails to fulfil all contract requirements even after the second Inspection, Test and Verification activity, then EDA will have full right to terminate the contract and provisions of the terms of the contract for termination/damages shall apply. |
|--|--|---|

2.14 Maximum budget

- The maximum total budget for the Mandatory requirements (point(1) in the financial offer) of this contract is 450K €;
- The value of the Optional requirements are not included in the overall price of the contract however the cost quoted in the Tenders will be considered comparing different Tenders during the Financial Evaluation

3 Exclusion and selection criteria

3.1 Exclusion criteria

Participation to this tender is only open to tenderers who are not in one of the situations listed below:

- a) bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- b) have been convicted of an offence concerning their professional conduct by a judgement which has the force of *res judicata*;
- c) have been guilty of grave professional misconduct proven by any means which the contracting authority can justify;
- d) have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- e) have been the subject of a judgement which has the force of *res judicata* for fraud, corruption, involvement in a criminal organization or any other illegal activity detrimental to the Communities' financial interests;
- f) following another procurement procedure or grant award procedure financed by the Community budget, they have been declared to be in a serious breach of contract for failure to comply with their contractual obligations.

In addition to the above, contracts may not be awarded to tenderers who, during the procurement procedure:

- are subject to a conflict of interest;
- are guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the contract procedure or fail to supply this information.

Means of proof required:

Tenderers, including all consortium members and all sub-contractors where applicable, shall provide a declaration on their honour (see model in Annex IV), duly signed and dated, stating that they are not in one of the situations referred to above.

Nota bene:

The tenderer to whom the contract is to be awarded shall provide, within 15 days following notification of award and preceding the signature of the contract, the following documentary proofs to confirm the declaration referred to above:

- For points a), b) and e) a recent extract from the judicial record or, failing that, an equivalent document recently issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied.
- For point d) a recent certificate issued by the competent authority of the State concerned.

Where the document or certificate referred to above is not issued in the country concerned, it may be replaced by a sworn or, failing that, a solemn statement made by the interested party before a judicial or administrative authority, a notary or a qualified professional body in his country of origin or provenance.

3.2 Selection criteria

The tenderers must submit evidence of their legal, economic, financial, technical and professional capacity to perform the contract.

3.2.1 Legal capacity

Requirement

The tenderers, **including all consortium members and all sub-contractors where applicable**, are asked to prove that they are authorised to perform the contract under their national law as evidenced by inclusion in a trade or professional register, or a sworn declaration or certificate, membership of a specific organisation, express authorisation or entry in the VAT register.

Evidence required

Each tenderer, **including every consortium member and every sub-contractor where applicable**, shall provide a duly filled in and signed **Legal Entity Form** (see **Annex V**) accompanied by the documents requested therein.

3.2.2 Economic & Financial capacity

Requirement

The tenderer, **including every consortium member and every sub-contractor where applicable**, must be in a stable financial position and have the economic and financial capacity to perform the contract.

Evidence required

The tenderer which according to the law of the country in which it is established is required to publish the balance sheet shall complete and include in the offer a financial statement form as in **Annex VIII** to these tender specifications. Please observe the following aspects in completing this financial statement:

1. It should be certified by means of a signature of the chief accounting officer of tendering organization.
2. EDA has the right during the tendering process and before awarding the contract to request further evidence on the tenderer's compliance with the economic & financial capacity requirement, in which case balance sheets and profit & loss accounts for the past financial years may be requested.
3. In the case of a consortium submitting an offer, or in case of subcontracting, the financial statement as is **Annex VIII** should be included in the offer for all consortium partners and subcontractors.
4. In the case of a physical person the financial statement as in **Annex VIII** should be included in the offer for where only the lines 16 and 17 need to be filled in and the financial statement can be signed by the physical person only.

3.2.3 Technical and professional capacity

Requirement(s)

- At least 5 years of experience in development/production of energy Generation/Storage/Transmission/Distribution and Management systems/subsystem
- A very good knowledge of the defence sector and more specifically the needs in the context of deployed military land installations/infrastructure and their technical and operational requirements, linked to sustainability in military operations
- An excellent knowledge and experience on Research and Technology in the Energy sector ,including academic expertise, and more specifically on energy efficiency and renewables

Evidence required

The following documents or information must be presented as evidence of compliance with the technical and professional criteria:

- A list of the principal contracts (purchase contracts, service contracts, production, development, studies), major relevant projects and publications that have been carried out in the course of 5 years by the legal entity or the legal entities submitting the offer that correspond and relate (in terms of scope and complexity) to the requirements of the present call for tender;
- Evidence to prove knowledge of the specificities of the defence sector; specific evidence concerning knowledge and understating of sustainability related requirements in military operations linked to energy supply and consumption in deployed military land installations/infrastructure
- Evidence to prove research and technological background and knowledge in the field of energy and environment; a track record related to research, development, surveys, studies and testing on energy efficiency and renewables
- Demonstration of their knowledge of relevant regulations and certification procedures within the energy and environment as well as the defence domain;
- Organisational structure;
- CVs of project team members, using the template in Annex III;
- Information on which parts or tasks of the assignment will be assumed by a consortium partner or a subcontractor. The respective subcontractor or consortium partner should be specified for each part or task.
- Any other document necessary to demonstrate the tenderer's technical and professional capacity, knowledge and experience according to the requirements set in this paragraph.

The technical and professional capacity will be assessed in relation to the combined capacities of all the Consortium members [leader and member(s)] and the subcontractor(s), if any, as a whole.

4 Award of the contract

Only the tenders meeting the requirements of the exclusion and selection criteria will be evaluated in terms of quality and price.

The contract shall be awarded to the tenderer submitting the tender offering the best-value-for-money (best quality-price ratio).

4.1 Technical evaluation

The quality of each technical offer will be evaluated in accordance with the award criteria and the associated weighting as detailed in the evaluation grid below.

| Award Criteria | Maximum Score |
|--|---------------|
| <p><u>Project Management</u></p> <ul style="list-style-type: none"> • Overall understanding of the contract requirements • Selection of optimal approach/methodology to achieve objectives of the contract • Quality Management Plan • Risk management and mitigation plan • Warranties • Project Documentation • Meetings/Reports • Coordination with EDA | 15 |
| <p><u>Project Team</u></p> <ul style="list-style-type: none"> • Balance of expertise (Defence, Energy and Environment, R&T, Testing, Academia) • Internal structure/organisation of the project team (roles, responsibilities & interactions) in charge for the contract | 10 |
| <p><u>Operational/Technical</u></p> <ul style="list-style-type: none"> • Full coverage of the Mandatory Functional/Technical Requirements • Design of the network (modularity/plug and play) • Inspection, Test and Verification process • Operational Availability • Maintenance • Logistic footprint of the proposed solution • System Safety • Training • Deployment/Set-up/Storage/Decommissioning • Optional Functional/Technical Requirements | 50 |
| <p><u>Technologies</u></p> <ul style="list-style-type: none"> • Innovativeness of the proposed solution • Balance of technologies (COTS/novel-conventional/renewables) • Parametric model of benefits' measurement • Demonstration and measurement methodology and process | 25 |
| Total | 100 |

Interviews

The Evaluation Committee does not expect to conduct any interviews.

4.2 Technical proposal

The Tenderers in their bids shall demonstrate the necessary know-how, experience and reliability as described in paragraph 3.2.3 of this document to perform the contract and shall present for evaluation evidence that they are capable to perform the contract in order to deliver of high quality results according to the required deliverables.

Tenders shall also include all detailed information and documentation (incl. technical data, catalogues etc) to allow the Evaluation Committee to assess all the evaluation criteria. The Evaluation Committee reserves the right not to attribute points when insufficient evidence is provided.

4.3 Technical quality threshold

Only tenders scoring 70 points or more (of a maximum of 100) points against the technical award criteria will have their financial proposal evaluated and considered for the calculation of the financial score.

4.4 Financial evaluation

The evaluation will be made on the basis of the price offered in the model financial offer (Annex II) and based on the following formula:

Financial Score for the evaluated tender =

[70% x (Overall Cost for Mandatory Requirements (1) of the tenderer offering the lowest Overall Cost for Mandatory Requirements(1) / Overall Cost of Mandatory Requirements (1) of the evaluated tender)x100]

+

[30% x (Overall Cost for Optional Requirements (2) of the tender offering the lowest Overall Cost for Optional Requirements (2) / Overall Cost of Optional Requirements (2) of the evaluated tender)x100]

Note: Options to the tenderer (Ot) are items which are optional in this case for the tenderers to include or not in the final configuration of the SESMN EEC (D). In case offered, the cost will not be evaluated with the cost of the optional requirements but under the overall cost of the mandatory requirements. (See deference between O and Ot in section 2.1.3).

Where a maximum budget is mentioned in these tender specifications, any tenderer submitting a financial proposal exceeding this budget will be rejected.

4.5 Financial proposal

-The financial proposal should be presented in the format found in Annex II.

-Prices must be quoted in EURO and include all expenses necessary to perform the contract.

-The price quoted is fixed and is subject to NO revision.

-Prices must be quoted free of all duties, taxes and other charges (including VAT) as the EDA is exempt from such charges under Article 3 of the Protocol on the Privileges and Immunities of the European Union.

-Costs incurred in preparing and submitting tenders are borne by the tenderer and shall not be reimbursed.

4.6 Choice of the selected tender

The most economically advantageous tender is established by weighing technical quality against price on an 70/30 basis.

The consolidated score for each candidate shall be calculated as follows:

Consolidated score= Technical Score*0,7+Financial Score*0,3

ANNEX I - DRAFT CONTRACT

(attached as a separate document)

ANNEX II - MODEL FINANCIAL OFFER

Prices should be all-inclusive; the Agency will not pay expenses for any additional costs incurred from the execution of the contract.

Financial proposals exceeding 450 000 EUR for overall costs of Mandatory requirements or not compliant with the structure of this model shall be excluded outright.

| | |
|--|---|
| Name tender: | |
| COST OF ASSIGNMENT, INCLUDING ALL ASSOCIATED EXPENSES AND EXCLUDING VAT | |
| <u>Overall Cost of Mandatory Requirements (1)</u> | € |
| <u>Overall Cost of Optional Requirements (2)</u> | € |

| <u>Individual Optional Requirements</u> | Individual cost of optional requirements |
|---|---|
| 2.2.1.7. | € |
| 2.2.1.9. | € |
| 2.4.5.3 | € |
| 2.4.5.4 | € |
| 2.4.5.5. | € |
| 2.4.7.7. | € |
| 2.6.1. (Delivery in Brussels) | € |
| 2.6.1.(Delivery in Mali) | € |
| 2.6.2. (Delivery in Brussels) | € |
| 2.6.2. (Delivery in Mali) | € |
| 2.6.3. (Delivery Brussels) | € |
| 2.6.3. (Delivery in Mali) | € |
| 2.7.4.5. | € |
| 2.7.5.2. | € |
| 2.11.1.4. | € |
| <u>Overall Cost of Optional Requirements (2)</u> | SUM € |

Name:
(of the Tenderer or authorised representative)

Signature:

Date:

ANNEX III - CURRICULUM VITAE

To be downloaded from the following URL address:

<http://europass.cedefop.europa.eu/en/documents/curriculum-vitae/templates-instructions>

ANNEX IV - DECLARATION ON EXCLUSION CRITERIA

(To be completed and signed by each Consortium member and by each Sub-contractor, where applicable)

The undersigned:

Name of the individual/company/organisation:

Legal address:

Registration number/ID Card No.:

VAT number:

Declares on oath that the individual/company/organisation mentioned above is not in any of the situations mentioned below:

- a) they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- b) they have been convicted of an offence concerning their professional conduct by a judgement which has the force of *res judicata*;
- c) they have been guilty of grave professional misconduct proven by any means which the EDA can justify;
- d) they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- e) they have been the subject of a judgement which has the force of *res judicata* for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
- f) following another procurement procedure or grant award procedure financed by the European Union or the Agency's general budget, they have been declared to be in serious breach of contract for failure to comply with their contractual obligations.
- g) they are subject to a conflict of interest;

they are guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the contract procedure or fail to supply this information

Full name:

Date & Signature:

ANNEX V - LEGAL ENTITY FORM

To be downloaded from the following URL address:

http://ec.europa.eu/budget/info_contract/legal_entities_en.htm

ANNEX VI - FINANCIAL IDENTIFICATION FORM

(attached as a separate document)

ANNEX VII - TENDER SUBMISSION FORM

14.ESI.OP.101

“Smart Energy Camp”

One signed original of this tender submission form must be supplied.

1. SUBMITTED by (i.e. the identity of the Tenderer)

| | Name(s) of legal entity or entities submitting this tender | Nationality⁶ |
|-----------------------------|---|--------------------------------|
| Leader | | |
| Member 2 | | |
| Etc ... ⁷ | | |

2. SUBCONTRACTORS (if applicable)

| | Name(s) of the legal entity or entities identified as sub-contractor(s) | Nationality |
|-----------------------------|--|--------------------|
| Sub-contractor 1 | | |
| Etc ... ⁸ | | |

⁶Country in which the legal entity is registered

⁷ If this tender is being submitted by an individual legal entity, the name of the legal entity should be entered as “Leader” (and all other lines should be deleted)

⁸ Add / delete additional lines for sub-contractors as appropriate

3. CONTACT PERSON for this tender (to act as focal point for all communication which may take place between the EDA and the Tenderer)

| | |
|--------------------------|--|
| Name and position | |
| Organisation | |
| Address | |
| Telephone | |
| Fax | |
| e-mail | |

4. STATEMENT

I, the undersigned, being the authorised signatory of the above Tenderer (including all consortium members, in the case of a consortium), hereby declare that we have examined and accept without reserve or restriction the entire contents of the tender specifications for the tender procedure referred to above.

We are fully aware that, in the case of a consortium, the composition of the consortium cannot be modified in the course of the tender procedure except with the prior written authorisation of the EDA. We are also aware that the consortium members would have joint and several liability towards the EDA concerning participation in both the above procedure and any contract awarded to us as a result of it.

Our tender is subject to acceptance within the validity period stipulated in point 1.7 of the Tender Specifications and is made up of the following documents:

| ENVELOPE A - ADMINISTRATIVE DATA: | |
|--|--------------------------|
| ▪ This Tender Submission Form | <input type="checkbox"/> |
| ▪ The duly filled in, signed and dated Exclusion Criteria Declaration(s) by every legal entity identified under point 1 and point 2 of this Tender Submission Form | <input type="checkbox"/> |
| ▪ The duly filled in, signed and dated Legal Entity Form (<i>using the standard template referred to in Annex V to the Tender Specifications</i>) and the supporting documents requested therein, by every legal entity identified under point 1 and point 2 of this tender submission form | <input type="checkbox"/> |
| ▪ The duly filled in, signed and dated Financial Identification Form (<i>using the standard template in Annex VI to the Tender Specifications</i>) to nominate the bank account into which payments would be made in the event that our tender is successful | <input type="checkbox"/> |
| ▪ Documents proving the economic and financial status (as requested in point 3.2.2 of the Tender Specifications) of every legal entity identified under point 1 and point 2 of this tender submission form | <input type="checkbox"/> |
| ▪ Documents proving our technical and professional capacity (as requested in point 3.2.3 of the Tender Specifications) - One signed original and three copies | <input type="checkbox"/> |
| ▪ Duly authorised signature , i.e. an official document (<i>statutes, power of attorney, notary statement, etc.</i>) proving that the person who signs on behalf of the Tenderer is duly authorised to do so | <input type="checkbox"/> |
| ▪ Our consortium agreement/ duly signed and dated consortium statement by each of the consortium members specifying the company or person heading the project and authorised to submit a tender on behalf of the, as requested in point 1.4 of the tender specifications | <input type="checkbox"/> |
| ENVELOPE B - TECHNICAL PROPOSAL (one signed original and three copies and providing all information requested in point Error! Reference source not found. of these specifications). | <input type="checkbox"/> |
| ENVELOPE C - FINANCIAL PROPOSAL (one signed original using the template in Annex II), which is submitted in a separate, sealed envelope. | <input type="checkbox"/> |

Signed on behalf of the Tenderer

| | |
|------------------|--|
| Name | |
| Signature | |
| Date | |

ANNEX VIII – ECONOMIC AND FINANCIAL CAPACITY

(Please fill in the excel file uploaded together with the tender documents)

Information on financial capacity of the tenderer

When analyzing the submitted simplified financial statements, in the case of doubt and before excluding the company on the sole basis of financial incapacity, EDA will request from the tenderer further information, e.g. complete official financial statements or provisional financial statement at half year.

The numbers in the below cells must be indicated in **ABSOLUTE VALUES** (i.e. as full amounts and not in thousands or similar) and in **EUROS**

The exchange rate to be used for the conversion of the amounts should be the monthly accounting rate of the last month of the financial year as published in the Official Journal of the European Union. <http://ec.europa.eu/budget/inforeuro/index.cfm?fuseaction=home&Language=en>

Tenderer name:

Begin and end of the financial year (eg: 1/1/n - 31/12/n):

| Asset | 2013 | 2012 | 2011 |
|--|-------------|-------------|-------------|
| Long term assets (assets convertible in cash in > than 1 year) | € 0 | € 0 | € 0 |
| Short term assets (current assets convertible in cash in =< than 1 year) | € 0 | € 0 | € 0 |
| Total assets (TOTAL ASSETS SHOULD EQUAL TOTAL LIABILITIES) | € 0 | € 0 | € 0 |
| Liabilities | 2013 | 2012 | 2011 |
| Own capital (Equity) | € 0 | € 0 | € 0 |
| Long term debts (to be repaid in > than 1 year) | € 0 | € 0 | € 0 |
| Short term debts (to be repaid in =< than 1 year) | € 0 | € 0 | € 0 |
| Total liabilities (TOTAL LIABILITIES SHOULD EQUAL TOTAL ASSETS) | € 0 | € 0 | € 0 |
| Profit and loss account data | 2013 | 2012 | 2011 |
| Turnover (sales revenue realized from the day-to-day operations of the entity) | € 0 | € 0 | € 0 |
| Turnover in the filed of the call for tenders | € 0 | € 0 | € 0 |
| Depreciation & amortisation | € 0 | € 0 | € 0 |
| EBITDA (Earnings before interest, taxes, amortisation, depreciation) | € 0 | € 0 | € 0 |
| Net profit (Earnings after interest, taxes, amortisation, depreciation) | € 0 | € 0 | € 0 |
| Main indicators | 2013 | 2012 | 2011 |
| Operational profit margin (EBITDA/turnover) | | | |
| Return on Equity: Rentability of own capital (net profit/own capital) | | | |
| Net working capital (current assets - current liabilities) | | | |
| Current ratio (current assets/current liabilities) | | | |
| Debt ratio - indebttness (debts/total liabilities) | | | |

Declaration by the Chief Accounting Officer of the tenderer:

From my position of the Chief Accounting Officer of the tenderer,

1. I confirm that the information presented in this simplified financial statement are correct and are taken from the official financial statements either finally approved, or from the preliminary financial statements in case these are not yet finally approved (applicable only to the last year statements).

2. I confirm that I am aware that, in the case we are successful tenderer, EDA, before signing the contract, may ask and verify the official financial statements for the last 3 years.

3. I confirm that I have been informed that, under the Procurement rules of the EDA (Council Decision No 2007/643/CFSP of 18 September 2007), tenderers found guilty of false declarations may be subject to administrative and financial penalties in accordance with the conditions laid down in that Decision. In particular, I am aware that the information from this simplified financial statement must be in compliance with the official financial statements which EDA may verify before signing the contract.

Name of Chief Accounting Officer of the tenderer:

Date:

Signature: