

Tender specifications

Attached to the Invitation to tender

Invitation to tender N° EMSA/OP/12/2015 for a contract for a study on the use of ethyl and methyl alcohol as alternative fuels in shipping

1. Introduction

The European Maritime Safety Agency (EMSA) was established under Regulation 1406/2002/EC for the purpose of ensuring a high, uniform and effective level of maritime safety, maritime security prevention of and response to pollution caused by ships as well as response to pollution caused by oil and gas installations. The Agency, as part of its core tasks, shall assist the Commission and the Member States in the effective implementation of relevant binding legal acts. Directive 2012/33/EU of the European Parliament and of the Council of 21 November 2012 amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels (Sulphur Directive) is one of the binding legal acts directly linked to the prevention of pollution by ships which is one of the main objectives of the Agency.

2. Objective, scope and description of the contract

The Agency is assisting the Commission in its work on the implementation of Directive 1999/32/EC as amended by Directive 2012/33/EU as regards the sulphur content of marine fuels (revised Sulphur Directive) and in particular the use of alternative fuels. The entry into force of the revised Sulphur Directive on 1st January 2015 has generated an increasing interest from the shipping industry to the potential of using alternative fuels, such ethyl and methyl alcohol, as an alternative method to comply with the low sulphur requirements.

The main objective of the contract is to provide EMSA with a technical study on the use of ethyl and methyl alcohol (i.e. ethanol and methanol) that, being supported by a risk-based analysis, will evaluate both their potential and constraints as alternative fuels in shipping. In addition, the study shall provide a detailed description of the current applicable standards, the identified regulatory gaps as well as the on-going regulatory development for bunkering and on-board use of such fuels (a so called GAP-analysis), at both national (EU Member States) and international level.

In addition, the study shall provide a better understanding of the research and development status of marine engines (either new designs or retrofits) capable of operating on ethanol or methanol, while recognising the need to study some elements in depth in order to facilitate, but also to safeguard, the use of such fuels on-board ships.

The technical study shall, at the minimum, cover the following tasks.

Task 1: Provide a state of play on the use of ethyl and methyl alcohol in the shipping sector

The first task is to provide a set of information regarding the current and potential use of ethyl and methyl alcohol by the shipping sector and shall contain:

1. An inventory of past, current and future projects, particularly in the EU domain. This inventory shall contain a list of contacts of the companies or research centres involved in the projects. An overview of the identified projects and summary regarding the outcomes of these projects.

The contractor should consider, at least, the following sources:

- SPIRETH Project ("Alcohol (spirits) and ethers as marine fuel") - methanol as marine fuel.
 - Methanol: The marine fuel of the future' - COMMISSION DECISION 2012-EU-21017-S - in the field of the trans-European transport network (TEN T).
2. A description of the chemical and physical properties of the referred fuels such as, but not limited to toxicity, density, heating/calorific values (i.e. energy density), flashpoint, flammability, auto ignition temperature, ignition energy, as well as types of safety hazards and concerns these properties represent to personnel and propriety/materials. A brief comparison with conventional marine fuels and LNG shall be carried out.
 3. A description of its availability, sustainability and suitability, having in mind their emission reduction potential (mainly for SOx but also in relation to NOx, PM, GHG and Black carbon) as well as any negative impact to the environment its production and/or use may cause (i.e. any kind of both land-based and ship-source pollution).
 4. Based on past cost trends, current and foreseen price indications, a cost and economic analysis shall be provided, in comparison with the use of compliant fuel (MDO/MGO), HFO combined with an Exhaust-Gas Cleaning System i.e. 'scrubber' and LNG, on the capital/investment and operational/running costs for different ship types, different types of trade (coastal - short sea vs international - deep sea) while distinguishing new-builds from retrofits.

Task 2: Provide a detailed description of the existing standards/regulations/guidelines related to bunkering and use of ethyl and methyl alcohol as well as those currently under development.

The second task shall include the following:

1. A complete overview of current applicable standards/regulations/guidelines, as well as the on-going regulatory development for bunkering and on-board use of such fuels (a so called GAP-analysis), at both national (EU Member States) and international level. These standards/regulations/guidelines shall encompass goal/functional, technical/design, operational, training and related certification and approval aspects.

The contractor should consider, at least, the following sources:

- Draft IMO International Code of Safety for Ships using Gases or other Low-Flashpoint Fuels (IGF Code) and draft guidelines for ships using ethyl or methyl alcohol currently under development in its latest public version.
 - IMO Documents/Submissions BLG 17/8/3 and BLG 17/INF.10 (Additional information on Methyl/Ethyl as marine fuel - Risk management plan and GAP-analysis) by Sweden.
 - Any other existing ships' national/international rules (e.g. National Legislation, Classification Societies Rules).
2. Further to the on-board constraints, a number of land-based limitations could limit and delay the development of this alternative. Therefore, an analysis based on technical, operational, safety and legal aspects/requirements of existing practices of the bunker market shall be provided. Following this analysis, the contractor shall evaluate the availability and suitability of the existing storage and bunkering facilities or any other potential small scale distribution infrastructure/system to ships. The potential need for treatment for impurities and related costs shall also be accounted and estimated.

Task 3: Provide a safety assessment of a Methanol fuelled *cargo ship*, engaged either in short-sea (coastal) or deep-sea trade. Provide a safety assessment of a Methanol fuelled *passenger ship*, engaged either in short-sea (coastal) or deep-sea trade. The same assessments shall be carried out for the Ethanol fuelled ships.

In total, eight safety assessments are to be made.

Reference is made to the IMO's Formal Safety Assessment Consolidated Guidelines (IMO MSC 83/INF.2, 2007) on which the 'simplified' safety assessment shall be based on. For all the above described scenarios (i.e. type of fuel, ship and trade specificities) that a ships' lifecycle would encompass from its design/construction and approval/certification to operations and later scrapping, the 'simplified' safety assessment shall contemplate the following steps:

1. Perform a Hazard Identification (HAZID), taking into account the above described scenarios, identifying and qualitatively evaluate the risks from those safety hazards considered to be the most critical events. This analysis shall be presented and summarised in a risk matrix where the most critical events will be evaluated in terms of likelihood of occurrence and consequence. This analysis, while considering safety procedures as well as training and qualification/certification of all staff engaged in ships' operations (e.g. bunkering, maintenance, loading/unloading, etc.), shall differentiate new-builds and retrofits and cover risks related to the on-board personnel (crew) and third-party (passengers or shore personnel).
2. After having performed the HAZID, the main findings shall be listed preferably in a table format, clearly identifying the hazards, causes, possible consequences, safeguards and barriers, risk control/reducing measures and finally the risk screening (to be found in the risk matrix).
3. Provide recommendations on the basis of the outcomes of Tasks 3.1 and 3.2 and assess the need to perform further risk-based analysis or an FSA (formal safety assessment).

Task 4: Present the outcome of the study

The results of the study shall be presented to stakeholders and regulators in a draft final report. This could be realised within the framework of the European Sustainable Shipping Forum¹. The meeting will be organised by EMSA/European Commission and most probably will be held in Brussels. The cost for the contractor's participation to this event will be covered by the current contract.

3. Contract management responsible body.

The European Maritime Safety Agency - Unit B.3, in charge of Marine Environment & Port State Control - will be responsible for managing the contract.

4. Project Planning

The project should respect the following planning:

- Signature of the Contract
- Kick-off meeting
- 1st Interim Report (completion of tasks 1 and 2)
- 1st Interim Meeting (tele or videoconference)
- 2nd Interim Report (completion of task 3)
- 2nd Interim Meeting (tele or videoconference)
- Draft Final Report (total completion of tasks 1 to 3)
- External Meeting with Stakeholders and Regulators
- Final Report (overview of the completion of all tasks, taking into account the feedback received from the external meeting with Stakeholders and Regulators)

Three copies of the reports shall be supplied on paper and one copy in electronic format using Microsoft Word or other Office compatible tools. EMSA may publish the results of the work undertaken. For this purpose, the tenderer must ensure that there are no restrictions based on confidentiality and/or intellectual property rights expected from third parties. Should the tenderer intend to use study data, which cannot be published, this must be explicitly mentioned in the offer. The language in which the study (including all reports) is to be submitted is English only.

5. Timetable

The project should respect the following timetable:

- Signature of the Contract - beginning of June 2015 (estimated)
- Kick-off meeting - no later than 1 week after the signature of the contract

¹ Commission Decision of 24.9.2013 on setting-up the group of experts on maritime transport sustainability - The European Sustainable Shipping Forum (ESSF) - C(2013) 5984 final.

- 1st Interim Report (completion of tasks 1 and 2) - no later than 10 weeks after the signature of the contract
- 1st Interim Meeting (tele or videoconference) - at a date to be agreed conveniently between the contracting parties during the execution of the contract to discuss to the first interim report
- 2nd Interim Report (completion of task 3) - no later than 20 weeks after the signature of the contract
- 2nd Interim Meeting (tele or videoconference) - at a date to be agreed conveniently between the contracting parties during the execution of the contract to discuss to the first interim report
- Draft Final Report (total completion of tasks 1 to 3) - no later than 22 weeks after the signature of the contract
- External Meeting with Stakeholders and Regulators - (November 2015 at the latest to be decided during the course of the project, having in mind the ESSF meetings schedule for 2015)
- Final Report (overview of the completion of all tasks, taking into account the feedback received from the external meeting with Stakeholders and Regulators) - no later than 25 weeks after the signature of the contract

6. Value of the Contract

The maximum budget available for this contract is of 80.000 (eighty thousand) Euro excluding VAT.

7. Terms of payment

Payments shall be issued in accordance with the provisions of the **draft service contract** available on the Procurement Section under the call to tender EMSA/OP/12/2015 on the EMSA website at the following address: www.emsa.europa.eu

8. Terms of contract

In drawing up a bid, the tenderer should bear in mind the terms of the draft service contract.

EMSA may, before the contract is signed, either abandon the procurement or cancel the award procedure without the tenderers being entitled to claim any compensation.

9. Financial guarantees

Not applicable.

10. Sub-contracting

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners he shall indicate in his offer which part will be subcontracted, as well as the name and qualifications of the subcontractor or partner. (NB: overall responsibility for the work remains with the tenderer).

The tenderer must provide required evidence for the exclusion and selection criteria on its own behalf and when applicable on behalf of its subcontractors. The evidence for the selection criteria on behalf of

subcontractors must be provided where the tenderer relies on the capacities of subcontractors to fulfil selection criteria. The exclusion criteria will be assessed in relation to each economic operator individually. Concerning the selection criteria, the evidence provided will be checked to ensure that the tenderer and its subcontractors as a whole fulfil the criteria.

11. Requirements as to the tender

Bids can be submitted in any of the official languages of the EU. The working language of the Agency is English. Bids must include an English version of the documents requested under point 14.5 & 15 of the present tender specifications.

The tenderer shall complete Tenderer's checklist.

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners (Joint Offers) he shall indicate in his offer by completion of the form - Information regarding joint offers and subcontracting.

The tender must be presented as follows and must include:

Signed cover letter indicating the name and position of the person authorised to sign the contract and the bank account on which payments are to be made.

Financial Form completed, signed and stamped; available on the Procurement Section (Financial Form) on the EMSA Website at the following address: www.emsa.europa.eu

Legal Entity Form completed, signed and stamped and requested accompanying documentation, available on the Procurement Section (Legal Entity Form) on the EMSA Website at the following address: www.emsa.europa.eu

Tenderers are exempt from submitting the Legal Entity Form and Financial Form requested if such a form has already been completed and sent either to EMSA or any EU Institution previously. In this case the tenderer should simply indicate on the cover letter the bank account number to be used for any payment in case of award.

Part A: all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the points **13, 14.2-14.3** of these specifications (part of the Exclusion criteria)

Part B: all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the **Economic and Financial capacity** (part of the Selection criteria) set out under point **14.4** of these specifications;

Part C: all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the **Technical and professional capacity** (part of the Selection Criteria) set out under point **14.5** of these specifications.

Part D: all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the **Award Criteria** set out under point **15** of these specifications;

Part E: setting out **prices** in accordance with **point 12** of these specifications.

12. Price

- Prices must be provided per task (1 to 4) as referred in section 2 of this document, and one total price for all tasks.
- The total price of all tasks shall be taken in consideration for the evaluation of the price in section 15.

- Prices must be all-inclusive.
- Prices must be quoted in Euro.
- Prices must be fixed amounts, non-revisable and remain valid for the duration of the contract.
- Under Article 3 and 4 of the Protocol on the privileges and immunities of the European Union, EMSA is exempt from all duties, taxes and other charges, including VAT. This applies to EMSA pursuant to the Regulation 1406/2002/EC. These duties, taxes and other charges can therefore not enter into the calculation included in the bid. The amount of VAT must be shown separately.

13. Joint Offer

Groupings, irrespective of their legal form, may submit bids. Tenderers may, after forming a grouping, submit a joint bid on condition that it complies with the rules of competition. Such groupings (or consortia) must specify the company or person heading the project and must also submit a copy of the document authorising this company or person to submit a bid.

Each member of the consortium must provide the required evidence for the exclusion and selection criteria. The exclusion criteria will be assessed in relation to each economic operator individually. Concerning the selection criteria the evidence provided by each member of the consortium will be checked to ensure that the consortium as a whole fulfils the criteria.

If awarded, the contract will be signed by the person authorised by all members of the consortium. Tenders from consortiums of firms or groups of service providers, contractors or suppliers must specify the role, qualifications and experience of each member or group.

14. Information concerning the personal situation of the service provider and information and formalities necessary for the evaluation of the minimum economic, financial and technical capacity required

14.1 Legal position – means of proof required

When submitting their bid, tenderers are requested to complete and enclose the **Legal Entity Form** and requested accompanying documentation, available on the Procurement Section (Legal Entity Form) on the EMSA Website at the following address: www.emsa.europa.eu

14.2 Grounds for exclusion - Exclusion criteria

To be eligible for participating in this contract award procedure, tenderers must not be in any of the following exclusion grounds:

- 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 contracting authority 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 Union financial interests;
- f) they have been the subject of the administrative penalty for being guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the procurement procedure or failing to supply an information, or being declared to be in serious breach of his obligation under contract covered by the budget.

14.3 Evidence to be provided by the tenderers

For this purpose the Declaration on Honour available on the Procurement Section on the EMSA Website (www.emsa.europa.eu) shall be completed and signed.

Please note that the tenderer to whom the contract is to be awarded shall provide additional proof evidencing eligibility.

For situations described in (a), (b) and (e), production of a recent extract from the judicial record is required or, failing that, a recent equivalent document issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied. Where the tenderer is a legal person and the national legislation of the country in which the tenderer is established does not allow the provision of such documents for legal persons, the documents should be provided for natural persons, such as the company directors or any person with powers of representation, decision making or control in relation to the tenderer.

For the situation described in point (d) above, recent certificates or letters issued by the competent authorities of the State concerned are required. These documents must provide evidence covering all taxes and social security contributions for which the tenderer is liable, including for example, VAT, income tax (natural persons only), company tax (legal persons only) and social security contributions.

For any of the situations (a), (b), (d) or (e), where any document described in two paragraphs 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.

If the tenderer is a legal person, information on the natural persons with power of representation, decision making or control over the legal person shall be provided only upon request by the contracting authority.

When the tenderer to be awarded the contract has already submitted relevant evidence to EMSA, it remains valid for 1 year from its date of submission. In such a case, the reference of the relevant project(s) should be mentioned and the Contractor is required to submit a statement of confirmation that their situation has not changed.

14.4 Economic and financial capacity – Selection criteria

Requirements:

- The tenderer must be in stable financial position and the economic and financial capacity to perform the contract

Evidence:

- Financial statements for the last three years for which accounts have been closed.
- Statement of overall turnover and turnover relating to the relevant services for the last three financial years.
- Tenderers are exempt from submitting the documentary evidence if such evidence has already been completed and sent to EMSA for the purpose of another procurement procedure and still complies with the requirements. In this case the tenderer should simply indicate on the cover letter the procurement procedure where the evidence has been provided.
- If, for some exceptional reason which EMSA considers justified, a tenderer is unable to provide one or other of the above documents, he may prove his economic and financial capacity by any other document which EMSA considers appropriate. In any case, EMSA must at least be notified of the exceptional reason and its justification in the tender. EMSA reserves the right to request any other document enabling it to verify the tenderer's economic and financial capacity.

14.5 Technical and professional capacity – Selection criteria

Requirements:

- The tenderer must have the technical and professional capacity to perform the contract.
- Evidence of knowledge in ship design, construction, operation, approval and certification.
- Evidence of knowledge of national (EU MS) and international standards/regulations/guidelines, as well as of the on-going regulatory development for bunkering and on-board use of alternative fuels in shipping.
- Evidence of experience from previous research projects in the field of alternative fuels and the encountered challenges in this area.
- Evidence of their real case knowledge of the marine fuel bunker and alternative sectors.
- Evidence of their ability to conduct cost and other economic analysis.
- Evidence of their ability to perform risk and safety analysis/assessments.
- Evidence of the extent of the team's professional experience which has been gained throughout the professional career in the sector. The project leader should have a minimum of 5 years of practical-professional experience related to shipping sector and marine fuels.

Evidence:

- To evidence all the above, tenderers should provide, within their bid, detailed curriculum vitae of each member of the team responsible to carrying out each part the work, including his or her educational background, degrees and diplomas, professional experience (including references to previous studies and projects), research work, publications and linguistic skills.

15. Award criteria

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

The contract will be awarded to the tenderer who submits the most economically advantageous bid (the one with highest score) based on the following quality criteria and their associated weightings:

Quality evaluation criteria in their order of importance as weighted by percentage (70%)

1. **Quality of proposed methodology** for the different tasks (1-4) referred to in section 2 of this document. It must include detailed proposals of how the project as a whole would be carried out, including key milestones, deliverables and date by which the tenderer will have completed the tasks. ($W_1 = 40\%$)
2. **Quality of the proposed team** based on professional merit of the team, team structure, and the distribution of the tasks within the team. ($W_2 = 30\%$)

And the price criterion and associated weighting:

3. Price of the bid ($W_{price} = 30\%$).

For all bids evaluators will give marks between 0-10 (half points are possible) for each quality criterion.

The score is calculated as

$$S = SQ + SP$$

where:

The average quality for quality criterion i is

$$Q_i = \frac{1}{\text{number of evaluators}} * \sum_{\text{evaluator}} \text{mark of the evaluator for quality criterion } i$$

The overall weighted quality is

$$Q = \sum_i Q_i * W_i$$

The score for quality is

$$SQ = \frac{Q}{Q \text{ of the bid with highest } Q} * 100 * \sum_i W_i$$

The score for price is

$$SP = \sum_i \frac{\text{lowest Price}_i \text{ of all bids}}{\text{Price}_i} * 100 * W_{\text{Price}_i}$$

Only bids that have reached a minimum of 60% for Q_1 , a minimum of 60% for Q_2 , etc. will be taken into consideration when calculating the score for quality SQ , score for price SP and score S .

Only bids that have reached a minimum of 70% for the score S will be taken into consideration for awarding the contract.

16. Contracts will not be awarded to tenderers who, during the procurement procedure:

- a) are subject to a conflict of interest
- b) 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.

17. False declarations

Without prejudice to the application of penalties laid down in the contract, tenderers and contractors who have been guilty of making false declarations concerning situations referred to in points 14 and 15 above or have been found to have seriously failed to meet their contractual obligations in an earlier procurement or grant shall be subject to administrative and financial penalties set out in Article 145 of Commission Delegated Regulation of 29.10.2012 on the rules of application of Regulation (EU) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union.

18. Intellectual Property Right (IPR)

Please consult the contract for IPR related clauses.

If the results are not fully created for the purpose of the contract this should be clearly pointed out by the tenderer in the tender. Information should be provided about the scope of pre-existing rights, their source and when and how the rights to these rights have been or will be acquired.

In the tender all quotations or information originating from other sources and to which third parties may claim rights have to be clearly marked (source publication including date and place, creator, number, full title etc.) in a way allowing easy identification.