

Invitation to tender:

Preparation of a report regarding the physical consequences and financial costs of accidents within the business of extraction of oil, gas and geothermal energy in the Danish subsoil

Office/Departement

Centre for Energy Resources

Date

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1. Purpose

Based on the conclusions in the report the Danish Energy Agency should be able to assess and quantify the physical and financial risks inherent in the individual phases of the lifecycle of the Danish onshore and offshore licenses using a simple and consistent methodology.

An assessment of the likely financial risks of a worst case accident in the individual phases in a license is crucial when determining appropriate levels of insurance coverage and other financial security.

According to section § 30 of the model license and the Danish Subsoil Act section 24 e companies who are working in the upstream oil, gas and geothermal business are obliged to be insured appropriately. The size of the insurances shall be balanced with respect to the risk of the activities and the cost of insurances.

The need for appropriate insurances is amplified by the fact, that co-licensees according to section 31 in the model license are jointly and severally liable for damages, cf. section 35 in the Danish Subsoil Act.

Neither the Danish Subsoil Act nor the model license describes which insurance products companies must take out. These requirements are, however formulated in an "Insurance Declaration" (see annex B). The operator of a license must annually submit this declaration to the Danish Energy Agency.

In the insurance declaration the operator of the license declares, that the companies have taken out insurances for Control of Well (COW) and Third Party Liability (TPL) and that the total insurances of the co-licensees have a certain minimum coverage depending on the activities going on Onshore or Offshore. Also

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the declaration implies that the total coverage has to be higher in case of expensive drillings.

The current requirements have been into force for almost a decade. The Danish Energy Agency has initiated another tender, which runs parallel to this invitation, which aims to investigate if the current insurance requirements are sufficient in size and scope. A prerequisite for assessing whether the insurance requirements are appropriate is to know the financial costs of a worst-case accident, which is the main purpose of this tender.

1.1 Contracting authority

The tender will be carried out by the following party, which is also contracting authority:

Energistyrelsen Amaliegade 44 1256 København K

1.2 The framework for the offer

The framework for the offer is max. 650.000 DKK excl. VAT.

The offer should include all applicable taxes except VAT and all costs, including any costs for travel, food and accommodation, office supplies and material production etc.

According to the wording in the standard contract 50 % of the payment will be made when the DEA has approved the draft report before it enters into public hearing. The payment of the remaining 50 % of the overall budget will be made upon DEA's approval of the final report

1.3 Contractual basis

The standard contract of the Danish Energy Agency will be applied and is attached as Annex A.

2. Background

The issue of safety is a very integrated part of the daily work procedures among companies working in the upstream oil, gas and geothermal business. This is done with good reason as the consequences can be extensive both for the personnel working with the extraction of oil and gas and for the surrounding environment. Besides the physical consequences of accidents the economic consequences for



companies working in the industry and other affected industries can also be significant. The cost of an accident might be significant if it leads to a pollution of the surrounding environment.

According to Danish legislation the economic consequences of pollution must be paid by those who have caused the pollution (i.e. "polluter pays" principle). This principle is stated in section 35 of the Subsoil Act, which in section 1 states that "A licensee shall be liable to pay damages for any loss, damage or injury caused by the activities carried out under the licence, even though such loss, damage or injury was caused accidentally." (Unofficial translation) According to the commentary to section 35 the strict liability includes both damage to property belonging to others and injury to persons, including employees, contractual partners, etc.

It is important that all co-owners of a license have sufficient financial capacity to remedy any damage which might happen as a result of the activities in the license. Companies do not always have a large financial capacity. It is therefore important that companies according to section § 30 of the model license and Danish Subsoil Act section 24 e are insured appropriately. The size of the insurances shall be balanced with respect to the risk of the activities and the cost of insurances¹.

Section 24 e: "A licensee's liability for damages under licences issued pursuant to this Act shall be covered by insurance. The insurance shall provide reasonable cover, in light of the risks involved in the performance of the activity and the premiums to be paid." (Unofficial translation)

The need for appropriate insurances is amplified by the fact, that co-licensees according to section 31 in the model license are jointly and severally liable for damages, cf. section 35 in the Danish Subsoil Act.

Neither the Danish Subsoil Act nor the model license describes which insurance products companies must take out. These requirements are, however formulated in an "Insurance Declaration" (see annex B). The operator of a license must annually submit this declaration to the Danish Energy Agency.

In the insurance declaration the operator of the license declares, that the companies have taken out insurances for Control of Well (COW) and Third Party Liability (TPL) and that the total insurances of the co-licensees have a certain minimum coverage depending on the activities going on Onshore or Offshore. Also the declaration implies that the total coverage has to be higher in case of expensive drillings.

¹ The issue of financial capacity is covered in article 4 in the EU Offshore Safety Directive and implemented in the Danish Subsoil Act in 2015. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0030&from=EN



3. Description of the tasks and its deliveries

3.1 The report

Based on the conclusions in the report the Danish Energy Agency should be able to assess and quantify the physical and financial risks inherent in the individual phases of the lifecycle of the Danish onshore and offshore licenses using a simple and consistent methodology.

The conclusions should be based on model-calculations or empirical results and reflect on the worst case environmental consequences and the associated costs as a result of an onshore or offshore accident.

Companies who are working in the upstream oil, gas and geothermal business should provide sufficient evidence that the financial mechanisms are in place to meet the risks in the individual phases of their activities, should they materialize. Companies should therefore be able to verify that the possible costs of an accident and corresponding financial responsibility (FR) is covered through appropriate insurances and other financial means.

This report should provide the Danish Energy Agency with a tool or methodology which should enable the Danish Energy Agency and the licensees to assess the size of the FR for a license. Accordingly the report should among other include the following:

- An analysis of the physical risks associated with oil and gas activities offshore
 in the Danish sector of the North Sea. The physical risks should be related to
 the lifecycle of an offshore license, including the feasibility study and
 exploration phase of a work programme. The consequences should take into
 account both surface and sub-sea level releases.
- An analysis of the physical risks associated with oil, gas and geothermal
 activities onshore in Denmark. The physical risks should be related to the
 lifecycle of an onshore license, including the feasibility study and exploration
 phase of a work programme.
- The report should provide the Danish Energy Agency with a tool that by using a simple and consistent methodology enables the agency to <u>assess the costs of a</u> <u>possible accident</u> (COW, third party loss, other) and corresponding FR for a specific license. The tool should be relevant for the Danish offshore and onshore sector. In this regard:



- a) The FR should reflect the various phases of a license.
- b) The worst-case model-calculations or empirical results should differentiate between production types (oil, gas geothermal, other) with or without natural flow, type of release (surface and sub-sea level).
- c) Other relevant factors which have importance for the risk of the activities and corresponding costs.
- The report should recommend at least one easily applicable methodology to calculate the size of other financial sources a co-license holder as a minimum should have at its disposal. The calculation should be based on the difference between the abovementioned costs of a worst case accident and the externally determined insurance coverage requirements for COW and TPL. The methodology should take into account, that the individual co-license holders often are engaged in several licenses and with different share in each license.

3.2 Participation in the process

The offer has to take into account that there in addition to the drafting of the report also will be a political process, where the chosen consulting company has to assist the Danish Energy Agency in among other the drafting of hearing answers.

As a part of the project there will be established a monitoring group consisting of representatives of the industry and various government bodies. The group will to some extent follow the progress of work and if relevant submit professional contributions during the drafting period.

Also it is the intention that the consultant company just before the report enters into public hearing will present the draft report and its conclusions to other authorities and industry representatives.

The Danish Energy Agency will be coordinating all contact to the industry, other government authorities, etc. If the offer from the consulting company implies additional assistance by the Danish Energy Agency this should be clearly stated in the offer.

3.3 Timetable

The tender is intended to be initiated Monday the 23rd May 2016.

The offer has to be submitted to the Danish Energy Agency not later than Wednesday the 15th June 2016.



The Danish Energy Agency expects to be able to inform the tenderers about the result of the tender around Friday the 24th June 2016.

Signing of the standard contract of the Danish Energy Agency is expected to be finalized by the end of June 2016.

The first draft of the report is expected to be submitted to the Danish Energy Agency for commenting not later than Sunday 18th September 2016.

A draft of the report will be send into public hearing and should be ready not later than Sunday the 2^{nd} October 2016. The public hearing phase is intended to last for 21 days.

According to the overall timetable the project should be completed by the end of November 2016.

In case that the offer of the tender implies a deviation of the abovementioned timing this should be stated clearly in the offer.

4. Formalities for final delivery

The final product is a report intended for public use.

The owner of the final report will be the Danish Energy Agency. The Danish Energy Agency will be free to use the final report or any extract of the report (including data) for any purpose, which the Danish Energy Agency considers to be relevant.

5. Shaping of the offers

The offer must be submitted in 1 copy in paper form and one electronic copy in pdf format. The offer can be written in Danish or English and must be signed.

5.1. Minimum content of the offer

The offer must contain at least the following:

- Contact information of the offeror
- The offer with a description of the task solution, cf. 3 above.
- A budget with the total cost of the project
- An activity plan with time consumption in total and distributed on the individual tasks and distributed on the individual employees assigned to the project.



• A description of the relevant qualifications of the consultants in relation to the tasks and references to previous relevant assignments.

6. Assignment

The selection of tenderer will be based on the overall award criterion "the most economically advantageous offer". The most economically advantageous offer is identified on the basis of the following sub-criteria:

- 1. The total cost of the tasks (weighting 30 %);
- 2. The quality of the task solution (weighting 30 %)
- 3. Experience with similar tasks (weighting 30 %);
- 4. Staffing and delivery reliability (weighting 10 %)

The offers will be assessed on the basis of point allocated to each sub-criterion. The following scale will be applied. Excellent=10, Very good=8, Good=5, Less good=3, Completely unsatisfactory=0.

Concerning 1: The total cost of the tasks means the contracting authority's evaluation of the tenderer's total price for the offer.

Concerning 2: The quality of the task solution means the contracting authority's evaluation of the tenderer's proposed task solution.

With reference to point 3 the final report (the product) should on the basis of a clear formulated professional assessment include recommendations on the relevant insurance products (including scope of the insurances) which regulatory bodies should require from companies to take out during the individual phases of licenses (granted on the basis of the Danish Subsoil Act).

Specifically the Danish Energy Agency will evaluate the proposal of the tenderer's based on:

- An assessment of the direct applicability of the proposed solution
- The academic content and debt of the proposed solution

Concerning 3: Experience with similar tasks means the contracting authority's evaluation of the tenderer's experience with the subjects that will be covered in the final report.



Concerning 4: Staffing and delivery reliability means the contracting authority's evaluation of the manning in relation to solve the tasks in conjunction with the proposed time frame for the assignment.

7. About the receipt of tenders etc.

The deadline for the receipt of tenders is Wednesday the 15th June 2016 at 09.00.

The offer has to be addressed to:

Energistyrelsen Att.: Michael Bøgh Amaliegade 44 1256 København K E-mail: mib@ens.dk

All bidders will be informed in writing short after the Danish Energy Agency has made its final choice of the consultant. The Danish Energy Agency reserves the right to cancel all or part of the tender or to carry out a new tender if this is required due to objective grounds or reservations. Any reservations by the offeror in relation to the assignment have to be clearly stated in the offer.

Any expenses relating to the preparation of the offer and any possible expenses associated with the contracting is irrelevant for the DEA. The Danish Energy Agency reserves the right to retain the submitted material. The information included in the project description is property of the Danish Energy Agency.

The proposed bids which are submitted on the basis of this tender material will be negotiated confidentially within the framework of "The Access to Public Administration Files Act" (Offentlighedsloven) and "The Law concerning Public Administration" (Forvaltningsloven). The Tenderer is obliged to keep strict confidentiality with respect to any information about the Danish Energy Agency and other stakeholders.