

**Norway-Trondheim: Geological, geophysical and other scientific prospecting services**

OJ S 85/2016 30/04/2016

Contract notice

Services

Directive 2004/18/EC

**Section I: Contracting authority**

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**I.1. Name and addresses**

Official name: Geological Survey of Norway (NGU)

National registration number: 970 188 290

Postal address: Postboks 6315, Sluppen

Town: Trondheim

Postal code: 7491

Country: Norway

Contact person: Marine Geology

For the attention of: Dr Jochen Knies

E-mail: [ngu@ngu.no](mailto:ngu@ngu.no)

Telephone: +47 73904000

Fax: +47 73921620

**Internet address(es):**General address of the contracting authority: <http://www.ngu.no>Address of the buyer profile: <https://kgv.doffin.no/ctm/Supplier/CompanyInformation/Index/1709>Electronic access to information: <https://kgv.doffin.no/ctm/Supplier/Documents/Folder/143486>**Additional information can be obtained from:**

the abovementioned address

**Specifications and additional documents (including documents for competitive dialogue and a dynamic purchasing system) can be obtained from:**

the abovementioned address

**Tenders or requests to participate must be submitted:** the abovementioned address**I.2. Type of the contracting authority**

National or federal agency/office

**I.3. Main activity**

Other: geological and environmental research

**I.4. Contract award on behalf of other contracting authorities**

The contracting authority is purchasing on behalf of other contracting authorities: no

**Section II: Object of the contract**

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**II.1. Description****II.1.1. Title attributed to the contract by the contracting authority**

Consultancy services on migration modelling of hydrocarbons within Petromaks 2, 'Norcrust'.

**II.1.2. Type of contract and place of performance or delivery**

Services

Service category No 27: Other services

Main site or place of performance: Trondheim.  
NUTS code NO061 Sør-Trøndelag

### **II.1.3. Information about a framework agreement or a dynamic purchasing system**

The procurement involves the establishment of a framework agreement

### **II.1.4. Information about framework agreement**

Framework agreement with a single operator

#### **Duration of the framework agreement**

Duration in years: 4

### **II.1.5. Short description of the contract or purchase(s)**

Geological Survey of Norway (NGU) invites bids for a Framework agreement for consultancy services on migration modelling of hydrocarbons within the project Petromaks 2, 'Norcrust'.

#### **A. Background:**

Petromaks 2, Norcrust is a collaborative project lead by the Geological Survey of Norway (NGU). Partners are "Cage — Center for Arctic Gas Hydrate, Environment and Climate" at the University of Tromsø, Statoil ASA, Lundin Norway AS, and ENI Norge and is funded by the Research Council of Norway. Norcrust aims at supporting the industry in search for petroleum prospects on the Norwegian shelf by integrating geological and geochemical data from hydrocarbon seepage sites at the seabed with potential underlying hydrocarbon reservoirs. This requires knowledge of timing of hydrocarbon migration to the sea-floor, ability to distinguish hydrocarbon origin from shallow biogenic and deep thermogenic sources and reliable assessment of the temperature and depth of hydrocarbon formation.

For the hydrocarbon migration modelling task, we aim to integrate active leakage zones at the sea-floor west of Svalbard and in the northern Barents Sea with potential source rocks concepts through migration modelling for improved spatial and temporal constraints on migration, spill and trap filling routes. We aim for a petroleum system analysis software package that numerically models and describes processes of hydrocarbon generation, migration, trapping and leakage to the sea-floor (plus methanhydrate balance) within sedimentary basin over geological times in a geo-framework derived from seismic and well data and builds upon a probabilistic Monte Carlo type modelling approach.

#### **B. Assignment and Description:**

- Design and run a Petroleum System Analysis (PSA) model to quantify the amount, timing and location of methane seepage history at the sea-floor in the Norwegian/Barents Sea derived from thermogenic sources;
- Design and run PSA model exclusively build on Monte Carlo modelling strategies to quantify input and out uncertainties;
- Design a PSA model which considers sea-floor seepage tapping multiple methane pathway options such as leakage from traps / vertical migration / faults leakage;
- Account for geometrically correct fault planes (3D features) — SGR dynamically adjusted over time;
- Account for incorporation of high resolution seismic (many layers — fine stratigraphy at <10m resolution) and allow for high-resolution stratigraphy (many sub-layers);
- Design a PSA model that accounts for dynamic behaviour of methane hydrate stability zone over time;
- Account for methane hydrates in hydrocarbons (HC) bulk mass balance (incl. loss from model via hydrate zone destabilisation);
- Design a PSA model that links new 3D P-cable seismic data with an existing 2D line model into a joint model across the Vesnesa Ridge, north-western Svalbard;
- Design PSA model which are calibrated against;

- Classical PSA parameter (thermal, HC columns, etc.);
  - New PSA parameters (methane leakage rates, saturation of pore space with methane).
- C. Requirements for bidders:
- Demonstrated competence in PSA modelling including methane leakage to sea-floor in the Norwegian Barents Sea;
  - Documented experience building and employing high-resolution stratigraphic lithology concepts (based on well data) within PSA models;
  - Demonstrated experience in building and working with PSA models using faults with realistic geological geometries;
  - Demonstrated experience in stochastic PSA modelling and stochastic result analysis.

The Geological Survey of Norway will evaluate and compare only the Price quoted of those Bids found to be substantially responsive. Detailed evaluation shall be conducted on the basis of:

- Quality / experience in migration modelling of hydrocarbons from the source to leakage zone on the seabed;
  - Quoted hourly rates;
  - Assignment execution plan and references.
- The bid shall be submitted in the following format:
1. Original Bid on paper, dated and signed, in a sealed envelope and clearly marked "Framework agreement for consulting services on modelling of hydrocarbons migration within Petromaks 2 "Norcrust" Project;
  2. 1 copy in PDF format on CD or memory stick;
  3. 1 censored copy in PDF format on CD or memory stick.

Bidder shall prepare an original offer and send it in a sealed envelope. The envelope should then be placed in neutral envelope and sealed. The neutral sealed envelope shall be marked: "Bid: Framework agreement for consulting services on modelling of hydrocarbons migration within Petromaks 2 "Norcrust" Project and delivered within the 27.5.2016 to: Geological Survey of Norway (NGU) (at the reception), Eirikssons vei 39, Lade 7040, Trondheim, Norway.

Bids can optionally be sent by regular mail to:

Geological Survey of Norway (NGU), PO Box 6315, Sluppen, 7491 Trondheim, Norway.

The Bidder holds the risk if the tender does not arrive in time at NGU in Leiv Eirikssons vei 39. Valid tax certificate and HSE declaration shall accompany the tender.

NGU reserves the right to reject the entire, parts of the bid or to enter into negotiation with a selection of the most relevant suppliers. NGU reserves the right to go ahead with new request for bids depending on the size of received quotations, quantity and available budget.

Electronic Invoice:

NGU requires that the suppliers of goods and services have the capacity to send their invoices and credit notes electronically in accordance with the standard "Electronic Trade Format" (Elektronisk handelsformat-EHF).

NGU uses the regulation 'General purchasing terms for government purchases of merchandise (AIS 89)'.

Any question regarding this bidding process should be addresses to Project Leader, Dr Jochen Knies, Phone. +47 73 90 4116, E-Mail: [jochen.knies@ngu.no](mailto:jochen.knies@ngu.no) with a copy to [ngu@ngu.no](mailto:ngu@ngu.no)

Bidders are encouraged to submit a censored version of the bid that may be forwarded to other bidders (on request) without damaging any sensitive business information.

Bidding document is in Norwegian language. Interested parties are expected to be able to read instruction and specifications. Insufficient or erroneous bid is the bidder's own responsibility and it will be rejected.

#### **II.1.6. CPV code(s)**

71351000 Geological, geophysical and other scientific prospecting services

#### **II.1.7. Information about the Government Procurement Agreement (GPA)**

The procurement is covered by the Government Procurement Agreement: yes

#### **II.1.8. Lots**

This contract is divided into lots: no

#### **II.1.9. Information about variants**

Variants will be accepted: no

### **II.2. Scope of the procurement**

#### **II.2.1. Total quantity or scope**

The framework agreement is in the order of 700 000 NOK to 800 000 NOK per year depending on funding availability. The scale is only an estimate.

#### **II.2.2. Information about options**

Options: no

#### **II.2.3. Information about renewals**

This contract is subject to renewal: no

### **II.3. Duration of the contract or time limit for completion**

Start 1.9.2016. Completion 31.8.2020

## **Section III: Legal, economic, financial and technical information**

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### **III.1. Conditions related to the contract**

#### **III.1.1. Deposits and guarantees required**

#### **III.1.2. Main financing conditions and payment arrangements and/or reference to the relevant provisions governing them**

Tax certificate for paid taxes and VAT according to form RF-1244 (Norwegian suppliers). The certificate shall not be older than 6 months from the deadline expires.

— Certified accounts for 2014 and 2015 confirmed by an auditor.

#### **III.1.3. Legal form to be taken by the group of economic operators to whom the contract is to be awarded**

#### **III.1.4. Contract performance conditions**

The performance of the contract is subject to particular conditions: yes

Description of particular conditions: Demonstrated capability and experience in migration modelling of hydrocarbons from the source to leakage zone on the seabed.

### **III.2. Conditions for participation**

#### **III.2.1. Suitability to pursue the professional activity, including requirements relating to enrolment on professional or trade registers**

List and brief description of conditions: (1) Company registration certificate;

(2) Tax certificate for VAT (National requirements);

(3) Tax certificate for revenue taxes (National requirement);

(4) HES statement in compliance with the regulation (National requirement).

### **III.2.2. Economic and financial ability**

List and brief description of conditions: (1) The company's most recent annual report including newest information of relevance to the company's accounting figures;  
(2) Statement of the company's turnover from recent years with relevance to this contract.

### **III.2.3. Technical and professional ability**

List and brief description of conditions:

- (1) Overview of the company's total manpower;
- (2) Overview of the principal deliveries effected in the past 3 years, with the values, dates and recipients;
- (3) A statement of the health, safety and environment policy;
- (4) A statement of the quality assurance / quality control;
- (5) Certificate issued by an accredited certification body or equivalent documentation.

### **III.2.4. Information about reserved contracts**

#### **III.3. Conditions specific to services contracts**

#### **III.3.1. Information about a particular profession**

Execution of the service is reserved to a particular profession: no

#### **III.3.2. Information about staff responsible for the performance of the contract**

Obligation to indicate the names and professional qualifications of the staff assigned to performing the contract: yes

## **Section IV: Procedure**

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### **IV.1. Type of procedure**

#### **IV.1.1. Type of procedure**

Negotiated

Some candidates have already been selected (if appropriate under certain types of negotiated procedures) no

#### **IV.1.2. Information about the limits on the number of candidates to be invited**

Envisaged minimum number 3

Objective criteria for choosing the limited number of candidates: Experience in migration modelling of hydrocarbons on the seabed.

#### **IV.1.3. Information about reduction of the number of solutions or tenders during negotiation or dialogue**

Recourse to staged procedure to gradually reduce the number of solutions to be discussed or tenders to be negotiated no

### **IV.2. Award criteria**

#### **IV.2.1. Award criteria**

The most economically advantageous tender in terms of Criteria below

1. A. Quality / experience in migration modelling of hydrocarbons from the source to leakage zone on the seabed
2. Offered hourly price
3. Assignment organization and references

**IV.2.2. Information about electronic auction**

An electronic auction will be used: no

**IV.3. Administrative information****IV.3.1. File reference number attributed by the contracting authority**

16/00165

**IV.3.2. Previous publication concerning this procedure**

no

**IV.3.3. Conditions for obtaining specifications and additional documents or descriptive document**

Payable documents: no

**IV.3.4. Time limit for receipt of tenders or requests to participate**

27.5.2016 - 15:00

**IV.3.5. Estimated date of dispatch of invitations to tender or to participate to selected candidates****IV.3.6. Languages in which tenders or requests to participate may be submitted**

Other: Norwegian.

**IV.3.7. Minimum time frame during which the tenderer must maintain the tender****IV.3.8. Conditions for opening of tenders****Section VI: Complementary information**

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**VI.1. Information about recurrence**

This is a recurrent procurement: no

**VI.2. Information about European Union funds**

The procurement is related to a project and/or programme financed by European Union funds:  
no

**VI.3. Additional information**

Bidding documentation available only in Norwegian language.

**VI.4. Procedures for review****VI.4.1. Review body****VI.4.2. Review procedure****VI.4.3. Service from which information about the review procedure may be obtained****VI.5. Date of dispatch of this notice**

27.4.2016