



ROYAL NORWEGIAN  
MINISTRY OF PETROLEUM AND ENERGY

EFTA Surveillance Authority  
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Your ref  
1345589

Our ref  
23/360-

Date  
14 June 2023

**Case No: 89874: Implementation report under the CCS Directive**

We refer to your letter of 8 February 2023 on the above. The response of the Norwegian Ministry of Petroleum and Energy to the questions posed in the reporting outline attached to the Authority letter, is given below:

**Changes, reviews and updates of national implementation legislation**

- 1. Are there changes to national legislation, permitting system or competent authorities that have taken place since the last report on implementation of the CCS Directive in your country?*

Answer:

No changes have been made to the national legislation, permitting system or competent authorities.

- 2. Are there processes in place for storage permit applicants to engage pro-actively with the competent permitting authorities regarding relevant applications? If yes, please provide details.*

Answer:

All companies applying for exploration licences are invited to meet with the Ministry to discuss the geological content of their applications, their financial strength, their technological capacity and their plans for CO<sub>2</sub> storage in the area applied for.

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One storage permit – for the Longship Project – is also in the process of being issued. The competent authority in this respect is the Norwegian Environment Agency (NEA) under the auspices of the Ministry of Climate and the Environment. The Authority has received the draft application as prescribed in Article 10 (1) of the CCS Directive. The NEA is presently discussing the contents of the draft application with the applicant – Northern Lights – in order to ensure that the final application is fully in line with the requirements of the Directive.

In addition, the Norwegian authorities have a general duty to provide guidance in accordance with the Public Administration Act Section 11. The purpose of such guidance is to enable the parties to safeguard their interests in specific cases in the best possible way. Applied to the storage permit for the Longship Project, NEA has held several preparatory meetings with the storage operator prior to the application being submitted.

3. *Please provide the name, email address and telephone of the contact point at the competent authority responsible for fulfilling the duties established under the Directive.*

Answer:

In the Ministry of Petroleum and Energy:

- Mette Agerup, [Mette-Gravdahl.Agerup@oed.dep.no](mailto:Mette-Gravdahl.Agerup@oed.dep.no), + 47 900 58 574, and
- Christian Bredvei Gusland, [Christian-Bredvei.Gusland@oed.dep.no](mailto:Christian-Bredvei.Gusland@oed.dep.no), + 47 915 90 488.

In the Ministry of Climate and the Environment: Natalie Winger, [natalie.winger@kld.dep.no](mailto:natalie.winger@kld.dep.no), +47 415 55 919.

In the Norwegian Environment Agency: Ann Mari Vik Green, [ann.mari.vik.green@miljodir.no](mailto:ann.mari.vik.green@miljodir.no), +47 922 47 457.

4. *Are there any issues that the competent authority would like to discuss with other competent authorities in relation to the practical implementation of the Directive and in particular the national permitting procedures in the Information Exchange Group under the auspices of Article 27 (2)?*

Answer:

The issue of financial security is important to the industry, and also to the authorities. This is an issue that should always, in our opinion, be subject to improvement and further discussion. The same would apply to the degree of detail to be required of closure of a storage site in the provisional post-closure plan to be submitted as part of an application for a storage permit in accordance with Article 7 (8) of the Directive.

#### **Selection of areas for storage sites (Article 4)**

5. *Which areas are determined from which storage sites may be selected pursuant to Article 4 (1) until April 2023?*

Answer:

Within the areas on the Norwegian Continental Shelf (NCS) that are open for petroleum activities, there may in principle be potential for storage sites for CO<sub>2</sub>. In practice, however, Norway will not as a main rule allow storage of CO<sub>2</sub> in reservoirs that have contained oil and gas but that have now been depleted, or reservoirs that have potential for containing oil and gas. Such reservoirs could still be valuable as oil and gas reservoirs, and if depleted, they would normally not be considered to be secure from potential leakage of CO<sub>2</sub> if it were to be stored here.

So in practice, saline aquifers are preferred for selection as storage sites.

6. *Will additional areas be determined from which storage sites may be selected in the period until the next report at the end of 2027, if so, which geological type of areas are considered) e.g. saline aquifers, depleted or not depleted oil & gas fields, mafic rocks) from a geological point of view and what are the next steps?*

Answer:

As described above, preferably saline aquifers in those parts of the NCS which are open for petroleum activities, may be selected as storage sites. In the Norwegian part of the North Sea, the total expected capacity for storage of CO<sub>2</sub> could be around 70 billion tons. For this reason, no additional areas on the NCS are considered for CO<sub>2</sub> storage for the time being.

7. *Are there information about environmental and/or health risks relating to the geological storage of CO<sub>2</sub> in accordance with the applicable Community legislation available to the public?*

Answer:

Separation and storage of CO<sub>2</sub> as part of production of natural gas has taken place on the NCS since 1996 at the Sleipner field, and since 2007 at the Snøhvit field. Actual storage of CO<sub>2</sub> captured from industrial processes for permanent storage will not start in Norway until late 2024. However, until today the authorities have neither received, nor acquired any information about any environmental and/or health risks relating to storage of CO<sub>2</sub> on the NCS. The same holds true for the storage site included in the Longship Project, which is planned to start up in 2024.

### **Exploration permits (Article 5)**

8. *Are there areas or specific sites where no exploration permits are required to generate the information necessary for selection of storage sites, pursuant to Article 5?*

Answer:

In Norway, all activities related to the selection and use of sites on the NCS for storage of CO<sub>2</sub> are subject to a licence (permit).

A reconnaissance licence is non-exclusive and could cover a fairly large area. Such licence is issued for the purpose of geological mapping of the area in question and thereby considering whether there is potential for storage of CO<sub>2</sub>.

An exploration licence is exclusive and is subject to the company holding the licence accepting to carry out a work obligation (acquire seismic data/interpret seismic data/drill an exploration well) to see whether the location in question is suitable for storage of CO<sub>2</sub>. An exploration licence may be awarded for a maximum of 10 years – normally 4-5.

A company wanting to develop a storage site must apply for an exploitation licence. Companies holding an exploration licence will have priority for the award of an exploitation licence. The holder of an exploitation licence must submit a plan for development and operation of the storage site to the Ministry of Petroleum and Energy for approval. This plan shall consist of an impact assessment and a plan describing the development solution chosen.

Before start of injection of CO<sub>2</sub>, the holder of the exploitation licence must apply to the NEA for a storage permit as described in the Directive Article 7. Adequate financial security is a prerequisite for a storage permit to be issued. Such security shall be considered and agreed by both the Ministry of Petroleum and Energy and the Ministry of Climate and the Environment. In addition, start of injection is subject to an injection consent from the Ministry of Petroleum and Energy.

9. *How many exploration permits have been given pursuant to Article 5 since your last reporting?*

Answer:

Three exploration permits were awarded in 2022. Two are for areas in the North Sea and one is for an area in the Barents Sea. Till date in 2023, two more exploration permits have been awarded – both in the North Sea.

### **Storage permits applications (Article 10)**

10. *Member States shall make the permit applications available to the Commission (for Norway: The Authority) within one month after receipt. Are there any plans of potential operators to apply for storage permits pursuant to Article 7? If yes, please provide an approximate timing.*

Answer:

One application for a storage permit has been submitted to the NEA by Northern Lights for the Longship Project. This application was made available to the Authority on 5 January 2023. Other applications are expected to follow in the next two to three years.

**Third-party fair and open access (Article 21)**

11. *What measures – if any – have been taken to ensure that potential users are able to obtain fair and open access to transport networks and to storage sites for the purposes of geological storage of the produced and captured CO<sub>2</sub> (Article 21)*

Answer:

Article 21 of the Directive has been implemented in the Storage Regulation of 2014, Section 5-12. This provision authorizes the Ministry of Petroleum and Energy to decide – on objective and non-discriminatory terms – that facilities and storage sites owned by a company licenced under the Storage Regulation, shall also be used by others to the extent there is free capacity available. “Others” in this respect are third parties in need of capacity in, e.g., storage sites and infrastructure such as pipelines.

In practice, however, the owner of the facility or storage site in question will offer any free capacity to potential users on commercial terms. Agreements entered into in this respect between the owner of the facility or storage site in question and the user of free capacity, are subject to approval by the Ministry of Petroleum and Energy. The reasons that can be given for any refusal of use, are the ones stated in Article 21 of the Directive.

On this background, our assumption is that there will be little need for the Ministry to make such decisions on use of capacity as mentioned above. We have applied the same system in the petroleum sector for many decades, and our experience is that commercial negotiations in this respect work well. As long as owners of facilities and storage sites have free capacity to offer, it is in their interest to do so. And they know from long experience that the terms must be fair and reasonable – otherwise the terms may be overturned by the Ministry.

12. *Are you aware that prospective transport operators and/or storage operators have refused access to their facilities on the grounds of lack of capacity?*

Answer:

We are not aware of any case till date where operators of transport facilities or storage sites have refused access to such facilities due to lack of capacity.

13. *What measures – if any – have been taken to ensure that the operator refusing access on the grounds of lack of capacity or a lack of connection makes any necessary enhancements as far it is economic to do so or when a potential customer is willing to pay for them? (Article 21)*

Answer:

We have included a provision in our Storage Regulation that allows us to address this issue, ref. the Storage Regulation Section 5-12 fourth paragraph:

*A licensee owning a facility described in an approved plan for development and operation, may deny others to use it due to lack of capacity. The denial shall be duly reasoned. If the licensee owning the facility denies others the use of it due to lack of capacity, the Ministry of Petroleum and Energy may still oblige the licensee owning the facility to improve its capacity to the extent this is economically viable, or the party wishing to use the increased capacity is willing to pay for the necessary capacity improvement. The Ministry may, however, only make such decision if the capacity improvements in question are not assumed to adversely affect the environmental safety of storing CO<sub>2</sub>.*

The storage of CO<sub>2</sub> in Norway as part of CO<sub>2</sub> capture from industrial processes is still in its initial phase. Till date, only one storage site is being developed, and no actual injection of CO<sub>2</sub> has started. To our knowledge, companies licenced under the Storage Regulation are working hard to create a sound and fruitful commercial development of sites for permanent storage of CO<sub>2</sub> and, as appropriate, transportation networks on the NCS. The companies operating storage sites do so in accordance with licences and permits awarded in accordance with the Storage Regulation, and they consequently know the rules that apply. Any company being in doubt as to what rules apply in this respect are welcome to meet with the Ministry of Petroleum and Energy for detailed guidance on the applicable provisions and how they shall be applied in practice.

**Transboundary cooperation (Article 24)**

*14. Is there any experience or plans for transboundary CO<sub>2</sub> transport or CO<sub>2</sub> storage sites or storage complexes? Please provide details on the status of preparations, if any*

Answer:

Norway experiences an increasing interest from European countries to permanently store CO<sub>2</sub> captured in their countries on the NCS. Our Government has decided that such export of CO<sub>2</sub> to Norway shall be subject to bilateral agreements between Norway and the exporting country. These agreements will address the transfer of responsibility for any leakage or other incidents between Norway and the exporting country along the value chain for the CO<sub>2</sub> to be exported, and to which country obligations to report and monitor CO<sub>2</sub> leakages apply in accordance with EU legislation and international obligations. In addition, the bilateral agreement will form the basis for commercial agreements between Norwegian companies licenced under the Storage Regulation and companies from the exporting country.

The Norwegian Government has approved a model agreement for such bilateral agreements, and this model agreement will form the basis for our negotiations with other countries.

Presently, we are in the final stages of negotiating a bilateral agreement with Sweden, and active talks are ongoing with Denmark and Belgium. Other countries have also requested that talks on such bilateral agreements may be initiated as soon as possible.

### **CO<sub>2</sub> capture readiness (Article 33)**

*15. How many combustion plants with a rated electrical output of 300 MW or more have received a permit since the last implementation report? What was the outcome of the assessment under Article 36 of Directive 2010/75/EU? In case of negative assessment, have the combustion plants set aside suitable space irrespectively? Please provide detail for each permit according to Annex 2.*

Answer:

No combustion plants have received a permit (in fact, there are no combustion plants in Norway with a rated electrical output of 300 MW or more).

### **Further questions**

*16. What other national programmes are in place or planned to support research, demonstration and deployment of CCS?*

Answer:

The research and demonstration programme CLIMIT has been running since 2005. The programme consists of two support schemes; CLIMIT R&D and CLIMIT Demo, run by the Research Council of Norway and Gassnova respectively. Gassnova has the overall coordination responsibility and heads the program secretariat. The programme is directed towards companies, research institutes and academia. CLIMIT aims for a balanced project portfolio and supports technology projects spanning from basic research to demonstration. CLIMIT's budget in 2023 is 13,5 mill. Euro.

The Test Center Mongstad (TCM) was established near the Mongstad refinery on the West Coast of Norway in 2012. The purpose is to make the TCM available to anyone wanting to test their technologies for CO<sub>2</sub> capture. TCM is owned by the Norwegian State through Gassnova (73,9 %), Equinor (8,7 %), Shell (8,7 %) and Total Energies (8,7 %). [The main objective of TCM is to test, verify and demonstrate different technologies related to cost-efficient and industrial scale CO<sub>2</sub> capture.](#)

Although not a programme, the Longship project, which is financially supported by the Norwegian State, aims to demonstrate and deploy CCS. The project shall contribute to the development of CCS in order to reach long term climate goals in Norway and the EU in a cost-effective manner. In the short-term, Longship's objective is to demonstrate that CCS, as a climate mitigation tool, can be implemented – technically, regulatory and commercially. It

will also demonstrate that CCS is safe, by monitoring injection wells and by avoiding emissions from the capture site. Longship will reduce the cost of future projects by sharing knowledge and experiences, and by establishing an infrastructure for CO<sub>2</sub> transport and storage, with spare capacity.

*17. Are there any ongoing national or European research projects that may have a relevance to the Directive?*

Answer:

We are not directly aware of any national or European research projects that may have relevance for the Directive.

*18. Are there other plans to support further appraisal of CO<sub>2</sub> storage sites, to prepare for transport infrastructure or for CO<sub>2</sub> hubs and clusters?*

Answer:

There are presently no plans for further economic support to CO<sub>2</sub> storage activities, as these activities are to take place on a commercial basis.

Interested companies are, however, at all times encouraged by Norwegian authorities to consider possibilities for establishing new CO<sub>2</sub> injection capacity and transport facilities and will be awarded the necessary licences in that respect if they are qualified for the task at hand and the business case presented is commercially sound.

Yours sincerely

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Deputy Director General

Mette Gravidahl Agerup  
Assistant Director General

*This document is signed electronically and has therefore no handwritten signature*