



EUROPEAN  
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## **COMMISSION OPINION**

**of 20.1.2016**

**on a draft permit for the permanent storage of carbon dioxide in the depleted Goldeneye gas condensate field located in blocks 14/28b, 14/29a, 14/29e, 20/3b, 20/4b and 20/4c on the United Kingdom Continental Shelf, in accordance with Article 10(1) of Directive 2009/31/EC of 23 April 2009 on the geological storage of carbon dioxide**

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## 1. LEGAL FRAMEWORK

Article 10 of the Carbon Capture and Storage (CCS) Directive<sup>1</sup> requires Member States to inform the Commission of applications for carbon dioxide (CO<sub>2</sub>) storage permits, draft storage permits and related material taken into account when making a decision on the award of permits.

The Oil and Gas Authority (OGA) is the competent authority of the United Kingdom for issuing CO<sub>2</sub> storage permits.

The prospective operator Shell U.K. Limited submitted an application to the OGA for a storage permit on 23 April 2015. On 29 April 2015, the OGA submitted the application to the Commission. On 24 August 2015, the OGA submitted a draft storage permit to the Commission for its opinion. The information submitted by the UK was not sufficient for the Commission to issue an opinion. Consequently, the Commission requested clarifications and additional information on various elements of the draft permit, application and accompanying documentation on 11 September and again on 8 October 2015. The OGA submitted these on 25 September and 12 October 2015 respectively. At this stage, the Commission deemed the file complete.

## 2. THE PROJECT

The project is intended to provide permanent storage of carbon dioxide in the depleted Goldeneye gas condensate field on the United Kingdom Continental Shelf. The CO<sub>2</sub> would be injected over a period of 15 years maximum, starting not earlier than 1 January 2019.

The source of CO<sub>2</sub> is the Peterhead power station in Aberdeenshire. CO<sub>2</sub> will be injected into the gas field using existing wells. The precise location of the storage site is defined and the storage complex includes the storage site and the overlaying strata.

In 2014, a review of the application by the British Geological Survey and Heriot-Watt University confirmed that the risk of leakage is negligible and that there is no significant environmental or health risk.

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<sup>1</sup> Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC, OJ L 140, 5.6.2009, p.114.

The monitoring plan includes details of the parameters to be monitored, the technologies to be used and the spatial and temporal aspects of it. The application provides assurance that corrective action plans are sufficiently developed in the event of significant irregularities developing within the site.

Closure of the storage site will take place when 15 Mt CO<sub>2</sub> has been injected over a period of 15 years or the maximum reservoir pressure of 379 bara has been reached. A provisional post-closure plan has been submitted and will be updated based on actual operations, modelling, and monitoring over the injection period.

Financial security will be provided to cover all obligations falling under the storage permit, including those for the closure of the storage site and the period until the licence is terminated, and liabilities for temporary continuation of operations if the permit is withdrawn. The financial security will be approved by the competent authority before CO<sub>2</sub> injection starts. According to the provisional post-closure plan, elaborated by the prospective operator and annexed to the permit, the post-closure monitoring period is foreseen for five years and request for transfer of responsibility is planned by the prospective operator after data is processed at approximately six years after closure. The competent authority reassured the Commission that by annexing the provisional post-closure plan to the permit, it does not agree to a transfer of responsibility after six years. The competent authority would consider the request to transfer the responsibility only if the surveys previewed in the plan demonstrate containment of the stored CO<sub>2</sub> and no irregularities are detected, which could be as early as six years. Nevertheless, it appears, from the documentation submitted by the competent authority, that the calculation of financial security will be carried out on the basis of a post-closure monitoring period of six years, rather than the minimum of 20 years foreseen pursuant to Article 18(1)(b) of the Directive.

An environmental impact assessment was carried out and concluded that the major part of the project presents a minor or negligible environmental impact. For some aspects with a high or moderate environmental impact, potential mitigation actions have been proposed. However, an assessment of the effects of substances other than CO<sub>2</sub> that may be present in leaking CO<sub>2</sub> streams is not included.

### **3. COMMISSION OPINION**

In accordance with Article 10 of the CCS Directive and based on its review of the draft permit, the Commission concludes that the draft storage permit fulfils the requirements of the CCS Directive save as outlined below. Moreover, the prospective operator appears technically and financially competent and capable of carrying out the planned CO<sub>2</sub> storage operation at the proposed storage site.

The Commission considers that, to prevent any negative impacts on the environment, an assessment of the effects of substances other than CO<sub>2</sub> that may be present in leaking CO<sub>2</sub> streams must be included in the Environment Statement before consent to the project is granted. Moreover, the Commission considers that financial security must be based on a post-closure monitoring period of 20 years in accordance with Article 18(1)(b) and Article (19)(1) of the CCS Directive.

Done at Brussels, 20.1.2016

*For the Commission*  
*Miguel ARIAS CAÑETE*  
*Member of the Commission*

